



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

Re: Wood County
Bowling Green WWTP
NPDES Permit

June 3, 2013

Mr. Brian O'Connell, P.E.
Director of Utilities
City of Bowling Green
P.O. Box 388
Bowling Green, Ohio 43402

Dear Mr. O'Connell:

On April 25, 2013, a compliance inspection of the Bowling Green Wastewater Treatment Plant (WWTP) was conducted by Patricia Tebbe. Mr. Doug Clark was present and provided information on plant operation and maintenance. The inspection included a walkthrough of the plant and completion of the enclosed checklist. An inspection of the WWTP's laboratory was also done. Mr. Matt Cox was present and provided information on laboratory technique and procedures. A completed checklist for the laboratory inspection is also enclosed.

At the time of the inspection, all major components were in operation. A new screw pump was installed in September 2012 in order to maintain discharge capacity (30 MGD) of the WWTP during wet weather.

The media and rock were changed in the biofilter recently and each tank for the ATAD system is being cleaned and repaired as necessary, one at a time. It is hoped that these maintenance steps will eliminate odor complaints. Some of the media from the final effluent filters needs replacing.

The only effluent violations noted in this past year have been for Mercury in October 2012 and April 2013. Staff of the WWTP is investigating the cause of the high Mercury samples including consulting with Jones and Henry on sampling technique and determining the cause of high sample blanks.

If you have any questions, please contact Patricia Tebbe at (419) 373-3016.

Sincerely,

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

PAT/jlm
Enclosures

pc: Mayor and Council, City of Bowling Green
Doug Clark, Superintendent, WWTP
John Bella, Assistant Superintendent, WWTP
Matt Cox
ec: Tracking

Permit # : 2PD00009
 NPDES #: OH0024139



State of Ohio Environmental Protection Agency
 Northwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
2PD00009	OH0024139	04/25/13	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Bowling Green WWTP 901 North Dunbridge Road Bowling Green, OH 43402	10:05 am	8/1/2011
	Exit Time	Permit Expiration Date
	1:00 pm	12/31/2015
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Doug Clark, Superintendent John Bella, Asst. Superintendent	419-354-6274	
Name, Address and Title of Responsible Official	Phone Number	
Mayor and Council, City of Bowling Green 304 N. Church St. PO Box 388 Bowling Green, OH 43402	419-354-6246	

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	S	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)	
Inspector	Reviewer
 Patricia A. Tebbe, P.E. Division of Surface Water Northwest District Office Date 5/28/13	 Thomas Poffenbarger, P.E. Water Quality Engineer II/Unit Supervisor Division of Surface Water Northwest District Office Date 5/29/13

Permit # : 2PD00009
NPDES #: OH0024139

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

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Correct name and location of receiving waters..... Y
- (c) Product(s) and production rates conform with permit application (Industries)..... N
- (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
- (h) All discharges are permitted..... Y
- (i) Number and location of discharge points are as described in permit..... Y

Comments/Status:

New Influent Screw Pump installed

Section F: Compliance Schedules/Violations

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

Comments/Status:

Section G: Operation & Maintenance (con't)

Record Keeping:

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

Daily log (operators) is hard bound and computer records for time, maintenance
- (c) Log book(s) kept onsite (in an area protected from weather)..... Y
- (d) Log book contains the following:
 - I. Identification of treatment works..... Y
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... Y
 - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... Y
 - IV. Laboratory results.....(documented on bench sheets)... Y
 - V. Identification of person making log entries..... Y
- (d) Has the operator of record submitted written notification to the permittee, Ohio EPA and (if applicable) any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

Collection System:

- (a) Percent combined system: 30%
- (b) Any collection system overflows since last inspection..... Y
 (CSO x and/or SSO)
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (d) CSO O&M plan provided and implemented..... N/A
- (e) CSOs monitored and reported in accordance with permit..... Y
- (f) Portable pumps used to relieve system (SSOs)..... Y
- (g) Lift station alarms provided and maintained..... Y
- (h) Are lift stations equipped with permanent standby power or equivalent..... Y
- (i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection..... Y
- (j) Any complaints received since last inspection of basement flooding N
- (k) Are any portions of the sewer system at or near capacity..... Y

Section H: Sludge Management

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

Comments/Status:

Dried sludge taken to Palmer Bros for soil blending (class A)

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary flow measuring device operated and maintained..... Y
Type of device: Ultrasonic & Parshall flume X Ultrasonic & Weir Weir
Calculated from effluent
- (b) Calibration frequency adequate Y
- (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 X monthly other

Comments/Status:

b - calibration done monthly

Section I: Self-Monitoring Program

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
- (d) Sample collection procedures are adequate..... Y
 - (i) Samples refrigerated during compositing..... Y
 - (ii) Proper preservation techniques used..... Y
 - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y
- (f) Adequate records maintained of sampling date, time, location, etc. Y

Laboratory:

General

- (a) EPA approved analytical testing procedures used (40 CFR 136.3). Y
- (b) If alternate analytical procedures are used, proper approval has been obtained..... Y
- (c) Analyses being performed more frequently than required by permit. Y
- (d) If (c) is yes, are results in permittee's self-monitoring report..... Y
- (e) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: metals, O & G, sludge, nitrates/nitrites, TDS, MBA, hardness, low level Hg, fecal in sludge
Lab name: Jones & Henry; Alloway for bioassay

Quality Control/Quality Assurance

- (f) Quality assurance manual provided and maintained..... Y
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y
- (h) Adequate records maintained..... Y
- (i) Results of latest USEPA quality assurance performance sampling program: Y Satisfactory Marginal Unsatisfactory
Date: DMRQA 31

Comments/Status:

Alloway tests surfactants for Lubrizol and bioassay

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	0	0	0	0	0	0	0

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:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
• 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 type="checkbox"/> Yes	<input checked="" 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:				
<hr/>				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	• 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 checked="" type="checkbox"/> Yes	<input 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: Thermometer calibrated once per year				
<hr/>				
Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
• 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 type="checkbox"/> No	A
	• 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	

General Lab Criteria

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• 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	Acceptable?		Rating
Incubator (CBOD/ E-Coli)				
• 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 ° ¹²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ° ²²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature correction information posted on incubator ¹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb) 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: Quanti-tray used

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
• 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 checked="" type="checkbox"/> Yes	<input 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	

General Lab Criteria

Comments:			
Criteria	Standard Methods Requirement		Rating
Chlorine Meter	Acceptable?		
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	A
	• 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained. ⁹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments: Not Applicable			

Criteria	Standard Methods Requirement		Rating
Ammonia Meter	Acceptable?		
• 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	A
	• Log book being maintained ⁹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec. ¹⁷	<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		Rating
Sample Collection/Handling	Acceptable?		
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	A
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

General Lab Criteria

<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Composite samples refrigerated during sample collection¹⁴ 	<input checked="" type="checkbox"/> Yes	<input 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: P, TSS, CBOD₅, NH₃

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
<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	A
	<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	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets				
<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	A
	<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:

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 type="checkbox"/> No	
	<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 type="checkbox"/> No	
	<ul style="list-style-type: none"> • Log book being maintained⁹ 	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: Not applicable

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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	<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	

General Lab Criteria

• 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used ¹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	• Log book being maintained ⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Comments: Temperature Calibration/Documentation on computer

Number of Criteria Rated:	Acceptable	11
	Marginal	
	Unacceptable	
Total Number of Areas Rated		11

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
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General Lab Criteria

Notation of Referenced Method

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

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

Preservation and Holding Times

Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH3-N	P, G	500	G, C	Analyze as soon as possible or add 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

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

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

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

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection		
	Safety Features	S	Facility fenced
	Bypasses	OUT	
	Stormwater Overflows	OUT	4 MG Equalization/Wet Weather Basin
	Alternate Power Source	S	Black Start – not tested in past year, AMP power station next to WWTP
Preliminary	Maintenance of Collection Systems		Separate division
	Influent Pump Station	In	4 raw pumps; normal flows 2 in use
	Bar Screen	In	2 mechanical, 1 in, rotate use at pump station
	Disposal of Screenings	S	To landfill
	Grit Chamber	In	Aerated, hand skim occasionally; generate one box of waste/10 days
	Disposal of Grit	S	To landfill
	Septage Receiving Station	In	Raptors (screening) rebuilt; fill a bin with grit and solids in 10 days
Primary	Settling Tanks	In	2 available, 1 in; rotate seasonally, use second during high flows
	Scum Removal	In	Skimmings to sludge screen building
	Sludge Removal	In	
	Effluent	S	
Sludge Disposal	Digesters	In	2 ATAD; have been cleaning each of the reactor tanks; Addressing odor complaints 3 sludge storage – have about 60% capacity available Biofilter media replaced
	Sludge Pumps	In	5 RAS – rotated daily, normally 2 on line; 2 WAS – not in
	Centrifuge	In	Used 3 days/week – 2 truckloads
	Disposal of Sludge	S	Take to Palmer Bro, compost facility
	Bar Screens to ATAD	In	Alternate use
Other	Flow Meter and Recorder	In	Doppler ultrasonic – meter on effluent
	Records	S	
	Lab Controls	S	QA/QC program; see lab review form
	Chemical Treatment	In	Ferrous chloride added to end of aeration, used to precipitate P
Secondary-Tertiary List items as required	Aeration Tanks (conv. activated sludge)	In	6 units, two trains of three each; good color and air; go to step feed when flow is > 12 MGD otherwise conventional activated sludge
	Final Clarifiers	In	2 units
	Media Filters	In	4 in, 2 out, washing media for cleaning
	Blowers	In	4 units; 1 in, exercise blowers quarterly
	Screw pumps	In	3 units; one in; third added in September, 2012
Disinfection	Effluent	S	9.2 MGD at time of inspection
	Disinfection System	In	UV – four banks, two channels
	Effective Dosage		
	Contact Time	S	
	Contact Tank	S	
	Septic Receiving Station	In	Receive about 18 loads per day