



**Environmental
Protection Agency**

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

RE: Williams County
Bryan WWTP
NPDES Permit

April 5, 2012

Mayor and Council
City of Bryan
103 North Beach Street
Bryan, Ohio 43506

Dear Mayor and Council:

On March 15, 2012, Mr. Jason Ko conducted a Compliance Evaluation Inspection of your wastewater treatment plant. Mr. Ric Homier was present and provided information regarding the operation of the facility. This inspection was conducted to evaluate compliance with the facility's National Pollutant Discharge Elimination System (NPDES) permit No. 2PD00018 (OH0020532).

At the time of the inspection, all major treatment components were in service. The final discharge from the treatment plant was visually clear. We did not collect effluent samples during this inspection.

Your current NPDES permit will expire on July 31, 2013. Please note that this NPDES permit (Part I, Item C) requires the City to comply with four implementation schedules with specific milestones as follows:

- (1) Municipal Construction Schedule – eliminate raw sewage overflows at the holding ponds by August 2013 (on-going);
- (2) Municipal Compliance Schedule – installed permanent warning signs at the two holding pond sanitary sewer overflows (completed);
- (3) Capacity, Management, Operation & Maintenance Programs – submitted on October 7, 2010 (completed);
- (4) Municipal Pretreatment Schedule – submitted technical justification of local industrial user limits to Ohio EPA, Central Office Pretreatment Unit by February 2009 (completed).

Mayor and Council
April 5, 2012
Page Two

The results of U.S. EPA DMR-QA Study #31 indicated that all test parameters were rated acceptable. We encourage your continued participation in the QA Program to assure the accuracy and reliability of your monthly monitoring data. Please note that a Performance Audit Inspection of your in-house laboratory is being scheduled for this year. We also conducted a cursory review of your dissolved oxygen meter in your in-house laboratory and the General Lab Criteria form is enclosed.

Our review of your Discharge Monitoring Reports (4/1/2011 to 3/1/2012) indicated one effluent violation. Please refer to the enclosed violation table. Our completed inspection report is enclosed with this letter. If you have any questions, please call Mr. Jason Ko of our office at 419-373-3021.

Yours truly,



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

JK/jlm

Enclosures

pc: Ric Homier, Bryan WWTP

ec: Inspection Tracking

NPDES COMPLIANCE INSPECTION REPORT

Section A: National Data System Coding

Permit #	NPDES	Yr/Mo/Day	Inspection Type	Inspector	FacType
2PD00018	OH0020532	2012/03/15	C	S	P

Section B: Facility Data

Name and Location of Facility Inspected City of Bryan WWTP 1521 Evansport Road Bryan, OH 43506	Entry Time 9:30 A.M.	Permit Effective Date 8/1/2008
	Exit Time 11:30 A.M.	Permit Expiration Date 7/31/2013

Name(s) and Title(s) of On-Site Representative(s) Mr. Ric Homier, Superintendent	Phone Number(s) (419) 636- 8741
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Name, Address and Title of Responsible Official Mayor and Council City of Bryan 103 North Beech Street Bryan, OH 43506	Phone Number (419) 636-4232
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Section C: Areas Evaluated During Inspection (S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

<u>S</u> Permit	<u>S</u> Flow Measurement	<u>N</u> Pretreatment
<u>S</u> Records/Reports	<u>S</u> Laboratory	<u>S</u> Compliance Schedules
<u>S</u> Operations & Maintenance	<u>S</u> Effluents	<u>S</u> Self-Monitoring Program
<u>S</u> Facility Site Review	<u>S</u> Sludge Storage/Disposal	<u>N</u> Other

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

- *Plant effluent directly from the WWTP (Outfall 002) was discharging to Pigeon Run
- * The Schedule of Compliance in the NPDES permit contained 4 items with specific time frames:
 - 1)Municipal Construction Schedule –eliminate raw sewage overflows at the holding ponds by 8/2013
 - 2)Municipal Compliance Schedule – installed permanent warning signs at sanitary overflows (completed)
 - 3)Capacity, Management, Operation & Maintenance Program (CMOM) –submitted on 10/ 7/2010
 - 4)Municipal Pretreatment Schedule - evaluated the local industrial user limitations by 2/2009 (completed)
- * Review of your Discharge Monitoring Reports (4/1/2011 – 3/1/2012) indicated one effluent violation

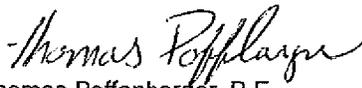


Jason Ko
Name(s) and Signature(s) of Inspector(s)

4/4/12

Date

Ohio EPA, Northwest District Office



Thomas Poffenbarger, P.E.
Name and Signature of Reviewer

3/29/12

Date

Ohio EPA, Northwest District Office

Sections E thru K: Complete on all inspections as appropriate. N/A - Not Applicable N/E - Not Evaluated

Section E: Permit Verification

	Yes	No	N/A	N/E
INSPECTION OBSERVATIONS VERIFY THE PERMIT				
(a) CORRECT NAME AND MAILING ADDRESS OF PERMITTEE	<u>X</u>	___	___	
(b) CORRECT NAME AND LOCATION OF RECEIVING WATERS	<u>X</u>	___	___	
(c) PRODUCT(S) AND PRODUCTION RATES CONFORM WITH PERMIT APPLICATION (INDUSTRIES)	___	___	<u>X</u>	
(d) FLOWS AND LOADINGS CONFORM WITH NPDES PERMIT PERMIT APPLICATION/BRIEFING MEMO	<u>X</u>	___	___	
(e) TREAT PROCESSES ARE AS DESCRIBED IN PERMIT APPLICATION/BRIEFING MEMO	<u>X</u>	___	___	
(f) NEW TREATMENT PROCESS(ES) ADDED SINCE LAST INSPECTION	___	<u>X</u>	___	
(g) NOTIFICATION GIVEN TO STATE OF NEW, DIFFERENT OR INCREASED DISCHARGES	___	___	<u>X</u>	
(h) ALL DISCHARGES ARE PERMITTED	<u>X</u>	___	___	
(i) NUMBER AND LOCATION OF DISCHARGE POINTS ARE AS DESCRIBED IN PERMIT	<u>X</u>	___	___	

COMMENTS/STATUS:

Section F: Compliance Schedules/Violations

	Yes	No	N/A	N/E
(a) ANY SIGNIFICANT VIOLATIONS SINCE THE LAST INSPECTION	___	<u>X</u>	___	
(b) PERMITTEE IS TAKING ACTIONS TO RESOLVE VIOLATIONS	___	___	<u>X</u>	
(c) PERMITTEE HAS COMPLIANCE SCHEDULE	<u>X</u>	___	___	
(d) COMPLIANCE SCHEDULE CONTAINED IN <u>NPDES - Part I.C</u>	<u>X</u>	___	___	
(e) PERMITTEE IS MEETING COMPLIANCE SCHEDULE	<u>X</u>	___	___	

COMMENTS/STATUS:

(d) The Schedule of Compliance in the NPDES permit contained 4 items with specific time frames

- 1)Municipal Construction Schedule –eliminate raw sewage overflows at the holding ponds by 8/2013
- 2)Municipal Compliance Schedule – installed permanent warning signs at sanitary overflows
- 3)Capacity, Management, Operation & Maintenance Program (CMOM) – submitted on by10/2010
- 4) Municipal Pretreatment Schedule - evaluated the local industrial user limitations by 2/2009

(e) City completed Items 2, 3 & 4 of the Compliance Schedule

Section G: Operation and Maintenance

TREATMENT WORKS:

	Yes	No	N/A	N/E
TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED				
(a) STANDBY POWER AVAILABLE GENERATOR <u>X</u> DUAL FEED <u> </u>	<u>X</u>	<u> </u>	<u> </u>	
(b) ADEQUATE ALARM SYSTEM AVAILABLE FOR POWER OR EQUIPMENT FAILURES	<u>X</u>	<u> </u>	<u> </u>	
(c) ALL TREATMENT UNITS IN SERVICE OTHER THAN BACKUP UNITS	<u>X</u>	<u> </u>	<u> </u>	
(d) SUFFICIENT OPERATING STAFF PROVIDED # SHIFTS <u>2</u> DAYS/WEEK <u>5</u>	<u>X</u>	<u> </u>	<u> </u>	
(e) OPERATOR HOLDS UNEXPIRED LICENSE OF CLASS REQUIRED BY PERMIT CLASS: <u>III</u>	<u>X</u>	<u> </u>	<u> </u>	
(f) ROUTINE AND PREVENTIVE MAINTENANCE SCHEDULED/PERFORMED ON TIME	<u>X</u>	<u> </u>	<u> </u>	
(g) ANY MAJOR EQUIPMENT BREAKDOWN SINCE LAST INSPECTION	<u> </u>	<u>X</u>	<u> </u>	
(h) OPERATION AND MAINTENANCE MANUAL PROVIDED AND MAINTAINED	<u>X</u>	<u> </u>	<u> </u>	
(i) ANY PLANT BYPASSES SINCE LAST INSPECTION	<u>X</u>	<u> </u>	<u> </u>	
(j) REGULATORY AGENCY NOTIFIED OF BYPASSES <u> </u> ON MORS <u> </u> 800 NO.	<u>X</u>	<u> </u>	<u> </u>	
(k) ANY HYDRAULIC AND/OR ORGANIC OVERLOADS EXPERIENCED SINCE LAST INSPECTION	<u> </u>	<u>X</u>	<u> </u>	

COLLECTION SYSTEM:

	Yes	No	N/A	N/E
(a) PERCENT COMBINED SYSTEM <u>0</u> %				
(b) ANY COLLECTION SYSTEM OVERFLOWS SINCE LAST INSPECTION (CSO <u> </u> SSO <u> </u>)	<u>X</u>	<u> </u>	<u> </u>	
(c) REGULATORY AGENCY NOTIFIED OF OVERFLOWS (SSOs)	<u> </u>	<u> </u>	<u>X</u>	
(d) CSO O AND M PLAN PROVIDED AND IMPLEMENTED	<u>X</u>	<u> </u>	<u> </u>	
(e) CSOs MONITORED AND REPORTED IN ACCORDANCE WITH PERMIT	<u>X</u>	<u> </u>	<u> </u>	
(f) PORTABLE PUMPS USED TO RELIEVE SYSTEM	<u>X</u>	<u> </u>	<u> </u>	
(g) LIFT STATION ALARM SYSTEMS PROVIDED AND MAINTAINED	<u>X</u>	<u> </u>	<u> </u>	
(h) ARE LIFT STATIONS EQUIPPED WITH PERMANENT STANDBY POWER OR EQUIVALENT	<u>X</u>	<u> </u>	<u> </u>	
(i) IS THERE AN INFLOW INFILTRATION PROBLEM (SEPARATE SEWER SYSTEM) OR WERE THERE ANY MAJOR REPAIRS TO COLLECTION SYSTEM SINCE LAST INSPECTION	<u>X</u>	<u> </u>	<u> </u>	
(j) ANY COMPLAINTS RECEIVED SINCE LAST INSPECTION OF BASEMENT FLOODING	<u>X</u>	<u> </u>	<u> </u>	
(k) ARE ANY PORTIONS OF THE SEWER SYSTEM AT OR NEAR CAPACITY	<u> </u>	<u>X</u>	<u> </u>	

COMMENTS/STATUS:

Treatment Works:

- (a) Test run weekly
- (d) 2 hour on weekends

Collection System:

- (j) City Engineering Dept. is investigating sewer system

Section H: Sludge Management

(a) SLUDGE MANAGEMENT PLAN (SMP)

SUBMITTED DATE _____ APPROVAL # _____ NOT SUBMITTED _____ N/E

	Yes	No	N/A	N/E
(b) SLUDGE MANAGEMENT PLAN CURRENT	_____	_____	_____	<u>X</u>
(c) SLUDGE ADEQUATELY DISPOSED (METHOD: _____)	_____	_____	_____	<u>X</u>
(d) IF SLUDGE IS INCINERATED, WHERE IS ASH DISPOSED OF _____	_____	_____	_____	_____
(e) IS SLUDGE DISPOSAL CONTRACTED (NAME: _____)	_____	_____	_____	<u>X</u>
(f) HAS AMOUNT OF SLUDGE GENERATED CHANGED SIGNIFICANTLY SINCE LAST INSPECTION	_____	_____	_____	<u>X</u>
(g) ADEQUATE SLUDGE STORAGE PROVIDED AT PLANT	_____	_____	_____	<u>X</u>
(h) LAND APPLICATION SITES MONITORED AND INSPECTED PER SMP	_____	_____	_____	<u>X</u>
(i) RECORDS KEPT IN ACCORDANCE WITH STATE AND FEDERAL LAW	_____	_____	_____	<u>X</u>
(j) ANY COMPLAINTS RECEIVED IN LAST YEAR REGARDING SLUDGE	_____	_____	_____	<u>X</u>
(k) IS SLUDGE ADEQUATELY PROCESSED (DIGESTION, DEWATERING, PATHOGEN CONTROL)	_____	_____	_____	<u>X</u>

COMMENTS/STATUS:

Section I: Self-Monitoring Program

Part 1. Flow measurement

	Yes	No	N/A	N/E
(a) PRIMARY FLOW MEASURING DEVICE PROPERLY OPERATED & MAINTAINED	<u>X</u>	_____	_____	_____
TYPE OF DEVICE: _____ PARSHALL FLUME _____ ULTRASONIC & WEIR _____ WEIR _____ CALCULATED FROM INFLUENT <u>X</u> OTHER (Specify <u>magnate- effluent</u>)				
(b) CALIBRATION FREQUENCY ADEQUATE (Date of last calibration <u>9/11</u>)	<u>X</u>	_____	_____	_____
(c) SECONDARY INSTRUMENTS (totalizers, recorders, etc.) PROPERLY OPERATED AND MAINTAINED	<u>X</u>	_____	_____	_____
(d) FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGES OF FLOWS	<u>X</u>	_____	_____	_____
(e) ACTUAL FLOW DISCHARGED IS MEASURED	<u>X</u>	_____	_____	_____
(f) FLOW MEASURING EQUIPMENT INSPECTION FREQUENCY: <u>X</u> DAILY _____ WEEKLY _____ MONTHLY _____ OTHER				

COMMENTS/STATUS:

(b) Recommend that flow meter be calibrated annually

Part 2. Sampling

	Yes	No	N/A	N/E
(a) SAMPLING LOCATION(S) ARE AS SPECIFIED BY PERMIT	<u>X</u>	___	___	___
(b) PARAMETERS AND SAMPLING FREQUENCY AGREE WITH PERMIT	<u>X</u>	___	___	___
(c) PERMITTEE USES REQUIRED SAMPLING METHOD	<u>X</u>	___	___	___
(d) SAMPLE COLLECTION PROCEDURES ARE ADEQUATE	<u>X</u>	___	___	___
(i) SAMPLES REFRIGERATED DURING COMPOSITING	<u>X</u>	___	___	___
(ii) PROPER PRESERVATION TECHNIQUES USED	<u>X</u>	___	___	___
(iii) CONTAINERS AND SAMPLE HOLDING TIMES PRIOR TO ANALYSES CONFORM WITH 40 CFR 136.3	<u>X</u>	___	___	___
(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 and maintenance records)	<u>X</u>	___	___	___
(f) ADEQUATE RECORDS MAINTAINED OF SAMPLING DATE, TIME, EXACT LOCATION, ETC.	<u>X</u>	___	___	___

COMMENTS/STATUS:

Part 3. Laboratory

	Yes	No	N/A	N/E
GENERAL				
(a) EPA APPROVED ANALYTICAL TESTING PROCEDURES USED (40 CFR 136.3)	<u>X</u>	___	___	___
(b) IF ALTERNATE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED	___	___	<u>X</u>	___
(c) ANALYSES BEING PERFORMED MORE FREQUENTLY THAN REQUIRED BY PERMIT	___	<u>X</u>	___	___
(d) IF (c) IS YES, ARE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT	___	___	<u>X</u>	___
(e) COMMERCIAL LABORATORY USED	<u>X</u>	___	___	___
(1) PARAMETERS ANALYZED BY COMMERCIAL LAB				

Jones & Henry - Metals, TKN, O&G & Sludge
A&L Labs - Sludge fecal & Soils
Enviro Science- Bioassay

QUALITY CONTROL/QUALITY ASSURANCE

(f) QUALITY ASSURANCE MANUAL PROVIDED AND MAINTAINED	<u>X</u>	___	___	___
(g) SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT	<u>X</u>	___	___	___
(h) ADEQUATE RECORDS MAINTAINED	<u>X</u>	___	___	___
(i) RESULTS OF LATEST USEPA QUALITY ASSURANCE PERFORMANCE SAMPLING PROGRAM DATE : <u>2011</u> <u>X</u> SATISFACTORY <u>___</u> MARGINAL <u>___</u> UNSATISFACTORY				

COMMENTS/STATUS:

Section J: Effluent/Receiving Water Observations

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	VISIBLE FLOAT SOLIDS	COLOR	OTHER
002	--	--	--	--	--	Clear	--

COMMENTS/STATUS:

Outfall 001 did not discharge

Section K: Multimedia Observations

	Yes	No	N/A	N/E
(a) ARE THERE INDICATIONS OF SLOPPY HOUSEKEEPING OR POOR MAINTENANCE IN WORK AND STORAGE AREAS OR LABORATORIES	___	<u>X</u>	___	___
(b) DO YOU NOTICE STAINING OR DISCOLORATION OF SOILS, PAVEMENT, OR FLOORS	___	<u>X</u>	___	___
(c) DO YOU NOTICE DISTRESSED (UNHEALTHY, DISCOLORED, DEAD) VEGETATION	___	<u>X</u>	___	___
(d) DO YOU SEE UNIDENTIFIED DARK SMOKE OR DUSTCLOUDS COMING FROM SOURCES OTHER THAN SMOKESTACKS	___	<u>X</u>	___	___
(e) DO YOU NOTICE ANY UNUSUAL ODORS OR STRONG CHEMICAL SMELLS	___	<u>X</u>	___	___
(f) DO YOU SEE ANY OPEN OR UNMARKED DRUMS, UNSECURED LIQUIDS, OR DAMAGED CONTAINMENT FACILITIES?	___	<u>X</u>	___	___

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

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	OUT	
	Stormwater Overflows	OUT	2 holding ponds
	Alternate Power Source	S	A standby generator tested weekly
Preliminary	Maintenance of Collection Systems	S	
	Pump Station	IN	3 screw pumps and 1 running
	Ventilation	-	
	Bar Screen	IN	Flow sensor used for autostart
	Disposal of Screenings	S	Landfill
	Comminutor	Out	Standby
	Grit Chamber	OUT	
	Disposal of Grit	OUT	
Primary	Settling Tanks	IN	2 tanks, both in use (Overhaul will be completed in 10/1/12)
	Scum Removal	IN	
	Sludge Removal	IN	
	Effluent	S	
Sludge Disposal	Digesters - Anaerobic	IN	2 primary @ 95 °F & 1 secondary
	Temperature and pH	S	
	Gas Production	S	
	Heating Equipment	IN	2 heat exchangers
	Sludge Pumps	IN	3 RAS, 1 WAS & 2 Raw
	Sludge holding Tank	OUT	2 tanks prior to the press in use 2/week
	Sludge Thickener	IN	1 units
	Disposal of Sludge	S	Land application - Class A
Centrifuge/Dryer	OUT	2 centrifuge units and 1 dryer in use 2/week	
Other	Flow Meter and Recorder	IN	
	Records	S	
	Lab Controls	S	
	Chemical Treatment	IN	Alum added at the end of aeration tanks; polymer at the centrifuge
Secondary-Tertiary <small>List items as</small>	Aeration	IN	All 4 in use; brown w/ good roll
	Secondary Settling	IN	All 2 in use
	Blower	IN	4 units; 2 running
	Polishing Ponds	Out	2 units discharge via Outfall 001
Disinfection	Effluent	S	Clear
	Disinfection System	Out	
	Effective Dosage	Out	
	Contact Time	Out	
	Contact Tank	IN	
	Dechlorination	Out	

Get New Data

Permit No.	Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
2PD00018*MD	May 2011	002	00610	Nitrogen, Ammonia (NH3	7D Qty	21	26.6159	5/15/2011

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 type="checkbox"/> Yes	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments :

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained ²	<input 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 type="checkbox"/> No	
• Other	• Thermometer temperature in 0.5° C increments ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° F ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments :

General Lab Criteria

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	
	• Logbook maintained ²	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

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 ²	<input type="checkbox"/> Yes	<input checked="" 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: Membrane is replaced 1/month. A log book must be maintained.

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Incubator (CBOD/ E-Coli)				
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use ¹ (E-Coli)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature checked / recorded daily ² (CBOD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ^{o12}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ^{o22}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Temperature Log (thermometer reads to 0.5 Celsius). ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: :

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.5 Celsius). ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer held in water bath. ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius. ¹³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. ¹⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) 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. ²	<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				
• 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	
	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing ¹⁸	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: :				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Logbook being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No		

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator:				
• General criteria	• Properly working seals.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets				
• General criteria	• Date(s) ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Analyst initials ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Blue or black ink pen ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration information ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

General Lab Criteria

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 ²	<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 type="checkbox"/> Yes	<input type="checkbox"/> No	
	• 10 to 30 minutes time based on material being sterilized ²⁶	<input 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 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 type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<input 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:

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Final Effluent Temperature Monitoring			
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Thermometer reads in increments of at least 0.1° C ⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			
Number of Criteria Rated:			1
			Acceptable
			Marginal
			Unacceptable
			Total Number of Areas Rated
			1
<p>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).</p>			
<p>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).</p>			
<p>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).</p>			
Consider recommending PAI Audit from DES when:		>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable	

Notation of Referenced Method

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

General Lab Criteria

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

Preservation and Holding Times						
Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	6h	48h
TSS	P, G	200	G, C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH 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

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH ₃ 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