Ohio EPA
40 years and moving forward
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

Re: **Notice of Violation**
Hicksville WWTP
NPDES Permit 2PB00042/ OH0025771
Compliance Evaluation Inspection
Defiance County

December 20, 2012

Mr. Kent Miller
Village Administrator
Hicksville WWTP
111 North Main Street
Hicksville, Ohio 43526

Dear Mr. Miller:

On December 10, 2012, a Compliance Evaluation Inspection (CEI) was conducted at the wastewater treatment plant (WWTP) serving the Village of Hicksville. Ohio EPA representatives present for the inspection included Kaitlyn Ruza and Dana Martin-Hayden from the Division of Surface Water. Village of Hicksville representatives present for the inspection included Ron Daniels, Superintendent of the WWTP, and Jeff Rumple, Operator. The purpose of the inspection was to evaluate compliance with the terms and conditions of your National Pollutant Discharge Elimination System (NPDES) permit and to evaluate the operation and maintenance of the plant. Please see the enclosed inspection report that was completed during our visit.

Besides the December 10, 2012, inspection, this letter also documents the findings of a reconnaissance inspection that occurred on October 15, 2012. During this reconnaissance inspection of the WWTP, the effluent was observed to be clear and odorless. In addition, Mr. Daniels and Mr. Rumple relayed that due to the hydraulics of the flow control structure at combined sewer overflow (CSO) #3, the Village has decided not to install automated controls in the structure as planned. The goal of automating the valves within this flow control structure was to minimize the amount of wastewater discharging to the stream and maximize the volume of wastewater flow reaching the WWTP. However, it is our understanding that automating the valves will not accomplish this goal given the elevation and design of the valves. In addition, the WWTP grit chamber floods if the valves within this flow control structure are adjusted.

As detailed in our June 25, 2012, letter, the Village of Hicksville was unable to obtain funding for replacement and separation of the Village's sanitary sewer collection system. You are in violation of your NPDES permit Part I, C – Schedule of Compliance, A.2.a. for failure to submit detail plans to our office by December 1, 2011, for the sewer separation work. The Village of

Hicksville has contracted Mr. Adam Voris of EMH&T out of Columbus, to conduct a study to characterize the Village of Hicksville sewer collection system and its interaction with the local hydrology. The Village hopes to define smaller scale construction projects that they are able to immediately fund. The goal is to reduce CSO pollutant loading to the stream as quickly as possible, while constructing sewer system improvements that do not increase the local flooding issues that have been documented on the north side of the Village. During our inspection, we were informed that all of the pumps stations, except the two on the south side of town, have issues with river intrusion during large storm events.

Please inform this office in writing, within 30 days. with a written plan of action that will be taken to return the Village to compliance with the compliance schedule contained in your NPDES permit. Please be advised that if these violations of your compliance schedule continue to occur and if satisfactory progress is not made, we will have no choice but to recommend escalated enforcement action to achieve compliance.

If you have any questions or comments concerning the enclosed inspection report, please contact Dana Martin-Hayden at 419-373-3067 or e-mail at Dana.Martin-Hayden@epa.ohio.gov.

Sincerely,

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

DMH/jlm

ec: Dana Martin-Hayden, DSW - NWDO
Caitlin Ruza, DSW - CO
Tracking

NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING				
Permit #	NPDES #	Inspection Type	Inspector	Facility Type
2PB00042	OH0025771	CEI	S	1
Inspection Date	Entry Time	Exit Time	Notice of Violation	Significant Non-Compliance
12/10/2012	10:15	3:20	Yes	No

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Hicksville WWTP 500 South Bryan Street Hicksville, OH 43526	8/1/2009
	Permit Expiration Date
	7/31/2014
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Roan Daniels, Superintendent Jeff Rumple, Operator	(419) 542-7645
Name and Title of Responsible Official	Phone Number
Miller, Kent, Village Administrator	(419) 542-8095

SECTION C: AREAS EVALUATED DURING INSPECTION		
Key: S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated		
M	NPDES Compliance	Schedule of Compliance violation of part I, C. A. 2.a
S	Operations & Maintenance	
S	Facility Site Review	
U	Collection System	
S	Flow Measurement	
S	Receiving Waters	
S	Laboratory	Need Log book for standards and temp calibrations

Comments:
Sewer system characterization and relation to local hydrology study being conducted and priority list of smaller scale projects planned

Signatures	
Dana Martin-Hayden 12/19/12	Thomas Poffenbarger 12/19/12
Dana Martin-Hayden, Inspector Date Compliance & Enforcement Division of Surface Water Northwest District Office	Thomas Poffenbarger, P.E., Reviewer Date Compliance & Enforcement Supervisor Division of Surface Water Northwest District Office

Compliance Data for Hicksville WWTP between 4/1/2012 to 12/1/2012

Summary

Permit Effluent Limit Violations: 2
Permit Effluent Code Violations: 0
Permit Effluent Frequency Violations: * 6
Compliance Schedule Violations: 2

Limit Violations

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2012	001	Nitrogen, Ammonia (NH3	7D Conc	2.55	2.93	7/15/2012
September 2012	001	Oil and Grease, Freon	1D Conc	10.0	17.	9/5/2012

Frequency Violations

Reporting Period	Station	Parameter	Sample Frequency	Expected	Reported	Violation Date
June 2012	901	Fecal Coliform	1/Quarter	1	0	6/1/2012
June 2012	601	Nickel, Total Recovera	1/Quarter	1	0	6/1/2012
June 2012	601	Zinc, Total Recoverabl	1/Quarter	1	0	6/1/2012
June 2012	601	Cadmium, Total Recover	1/Quarter	1	0	6/1/2012
June 2012	601	Lead, Total Recoverabl	1/Quarter	1	0	6/1/2012
June 2012	601	Copper, Total Recovera	1/Quarter	1	0	6/1/2012

Missing Compliance Schedule Milestones

Schedule Due Date	Completion Date	Event Code	Schedule Type	Schedule Milestone
December 2011		1299	Construction	Final Plan Submitted

*The facility has 4 missing data reports.

Station	Required Report Period	DMR Received
001	November 2012	No
601	November 2012	No
801	November 2012	No
901	November 2012	No

Flow Data for Hicksville WWTP between 4/1/2012 and 12/1/2012

	Date	Flows (MGD)
Ten Highest Flows	7/19/2012	1.300
	4/30/2012	1.226
	10/17/2012	1.092
	5/1/2012	1.064
	10/30/2012	0.983
	10/18/2012	0.963
	8/9/2012	0.844
	5/2/2012	0.781
	7/24/2012	0.750
	9/5/2012	0.716
Average Flow Rate		0.420

SECTION D: PERMIT VERIFICATION

(a) Correct name and mailing address of permittee ..... Y
(b) Correct name and location of receiving waters ..... Y
(c) Products and production rates conform with permit application ..... Y
(d) Flows and loadings conform with NPDES permit ..... Y
(e) Treatment processes are as described in permit application ..... Y
(f) New treatment process added since last inspection ..... N
(g) Notification given to State of new, different or increased discharges ..... Y
(h) All discharges are permitted ..... N
(i) Number and location of discharge points are as described in permit ..... Y

Comments: g,h,i) during televising from Defiance Avenue to WWTP, operators discovered storm line picking up the via ducts (new CSO is 200' north of CSO#004)

SECTION E: COMPLIANCE

(a) Any significant violations since the last inspection ..... Y
(b) Permittee is taking actions to resolve violations ..... Y
(c) Permittee has a compliance schedule ..... Y
(d) Permittee is meeting compliance schedule ..... N

Comments:
The Village of Hicksville has attempted to get funding twice for the construction work proposed in their approved CSO LTCP. However, due to current very high sewer rates and the scope of the project, which includes replacement of all the sewer lines, the project was not funded. As a result, the Village has purchased flow meters and contracted with a consulting firm to help them quantify the volume of combined sewage and storm water discharging from the CSOs in the system. Due to concerns with flooding on the north side of town, the Village is now conducting a hydrological study of the surrounding area and the available capacity in the streams to remove storm water once storm sewer lines are separated from the sanitary sewer lines. In addition, an in depth study of the sewer lines is being done to help the Village plan lower cost sequencing of smaller projects to reduce the discharge of combined storm and sanitary waste water in the streams.

The Ammonia violation in July was a data entry error that the Village will be correcting in the Ohio EPA database. The oil and grease violation occurred on a day when some of the sanitary sewer lines were being jetted.

SECTION F: OPERATION AND MAINTENANCE

(a) Standby power available ..... Y
If yes, what type?
(b) Adequate alarm system available for power or equipment failures ..... Y
(c) All treatment units in service other than backup units ..... N
(d) Wastewater Treatment Works classification II
(e) Operator of Record holds unexpired license of class required by Permit .. Y
Class held: Ron Daniels class II and Jeff Rumple class II
(f) Copy of certificate of Operator of Record displayed on-site ..... Y
(g) Minimum operator staffing requirements fulfilled ..... Y
(h) Routine and preventative maintenance scheduled and performed ..... Y
(i) Any major equipment breakdown since last inspection ..... N
(j) Operation and maintenance manual provided and maintained ..... Y
(k) Any plant bypasses since last inspection ..... NA
(l) Regulatory agency notified of bypasses ..... NA
By MOR X☐ and/or Spill Hotline (1-800-282-9378) ☐
(m) Any hydraulic or organic overloads since last inspection ..... Y

Comments:
c) UV out – Winter
h) April review and update the PM schedules

SECTION G: RECORD KEEPING

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

_____

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

Comments:

SECTION H: COLLECTION SYSTEM

a) Percent combined system: 90-95
b) Any collection system overflows since last inspection .....
   CSO X☐ SSO X☐
c) Regulatory agency notified of overflows ..... Y
d) CSO O&M plan provided and implemented ..... Y
e) CSOs monitored and reported in accordance with permit ..... Y
f) Portable pumps are used to relieve system ..... Y
g) Lift station alarms provided and maintained ..... Y
h) Lift stations equipped with permanent standby power or equivalent ..... N
i) Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection ..... Y
j) Any complaints received since last inspection of basement flooding ..... Y
k) Are any portions of the sewer system at or near capacity ..... Y
l) Are operations changed during high-flow events? ..... Y

Comments:
g)visual – police and neighbors help notify WWTP when pump visual alarms are triggered
h) portable generators
j) 1
k)2" rainfall in 24 hours October 30-31st flooded a good portion of the town

l)go into storm procedure with the oxidation ditch when the flows to the plant are greater than 1750 gallons per minute. Historically, the plant was just able to sustain this flow for 3 days.

SECTION I: SLUDGE MANAGEMENT

a) Sludge management plan (SMP) last audited by Ohio EPA:
Audit Date:

b) Sludge adequately disposed ..... Y
Method: Landfilled and Land Applied

c) If sludge is incinerated, where is ash disposed of ..... NA

d) Is sludge disposal contracted ..... Y
Name:Allied Waste and Caleb Yoder for Land Application

e) Has amount of sludge generated changed significantly ..... N

f) Adequate sludge storage provided at plant ..... Y

g) Records kept in accordance with State and Federal law ..... Y

h) Any complaints received last year regarding sludge ..... N

i) Is sludge adequately processed (digestion, pathogen control) ..... Y

Comments:

SECTION J: SELF-MONITORING PROGRAM

a) Primary flow measuring device operated and maintained ..... Y
Type of device: Ultrasonic Device location: Disinfection Tank

b) Calibration frequency adequate ..... yearly
Date of last calibration: planned 12/11/12 Gilson Engineering

c) Secondary instruments operated and maintained ..... Y

d) Flow measurements equipment adequate to handle full range of flows .... Y

e) Actual flow discharged is measured ..... Y

f) Flow measuring equipment inspection frequency _____ Daily

g) Sampling location(s) are as specified by permit ..... Y

h) Parameters and sampling frequency agree with permit ..... Y

i) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e. continuous monitoring instrumentation, calibration and maintenance records) ..... Y

Comments:

SECTION K: Laboratory

a) EPA applicable analytical testing procedures used (40 CFR 136.3) ..... Y
b) If alternate procedures are used, are they properly approved? ..... NA
c) Analysis performed more frequency ..... Y
If yes, are results recorded in permittee's report? ..... Y
d) Commercial laboratory used:
Name: IFM - Alloway
Parameters analyzed: IFM- BOD and Ammonia, Ginosko or Alloway – Oil and Grease, Metals, Nitrates, Cyanide, low level Mercury (Hicksville does the Temp, DO, PH and TSS analysis)
e) Quality assurance manual provided and maintained ..... Y
f) Calibration and maintenance of instruments is satisfactory? ..... Y
g) Results of last U.S. EPA quality assurance ..... Y
Date:8/24/12 acceptable for TSS and pH

Comments:

SECTION L: EFFLUENT/RECEIVING WATER OBSERVATIONS

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

Comments:

SECTION M: 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

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights [1,2]	☐ Yes	☐ No	**NR**
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used.[3]	☐ Yes	☐ No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum[1]	☐ Yes	☐ No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable)[1]	☐ Yes	☐ No	
	• Must be able to measure to 0.1 grams[4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
	• Log book maintained[2]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				
• Temperature Recordkeeping	• Temperature recorded with each use[4]	☐ Yes	☐ No	**NR**
	• Log book maintained[2]	☐ Yes	☐ No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]. Correction factor posted on thermometer / equipment[1]	☐ Yes	☐ No	
• Other	• Thermometer temperature in 0.5° C increments[5]	☐ Yes	☐ No	
	• Acceptable temperature range is 103° – 105° F [4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ 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]	☐ Yes	☐ No	**NR**
	• Logbook maintained[2]	☐ Yes	☐ No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result[7]	☐ Yes	☐ No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet[2]	☐ Yes	☐ No	
• Buffer Expiration Date	• Buffers must not be expired	☐ Yes	☐ No	
• Other	• Instrument manual available	☐ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[8]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• Calibration Method	• Air or known DO calibration method[10]	☐ Yes	☐ No	**NR**
	• Calibration per manufacturer specification[10]	☐ Yes	☐ No	
• Calibration Frequency / Documentation	• Logbook maintained[2]	☐ Yes	☐ No	
	• Calibration verification required at least once each day the meter is used.[3]	☐ Yes	☐ No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)[11]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
Comments: *I*				

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]	☐ Yes	☐ No	**NR**
	• Acceptable temperature range (CBOD) is 20° C ±1.0 °[12]	☐ Yes	☐ No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 °[22]	☐ Yes	☐ No	
	• Logbook maintained [2]	☐ Yes	☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1, 2]	☐ Yes	☐ No	
	• Temperature correction information posted on incubator[1]	☐ Yes	☐ 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]	☐ Yes	☐ No	
• Other	• Instrument manual available	☐ Yes	☐ No	
	• Temperature Log (thermometer reads to 0.5 Celsius).[1]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.5 Celsius).[5]	☐ Yes	☒ No	**A**
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1, 2]	☐ Yes	☒ No	
• Other	• Thermometer held in water bath. [1]	☒ Yes	☐ No	
	• Refrigerator temperature ≤6° Celsius.[13]	☒ Yes	☐ No	
	• Do not store volatile solvents, food, or beverages.[14]	☒ Yes	☐ No	

Comments: ***Need NIST traceable thermometer. Record the calibration data in a log for all the other thermometers in the plant which are calibrate to the NIST thermometer .***

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV[15]	☐ Yes	☐ No	**NR**
	• 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]	☐ Yes	☐ No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification[16]	☐ Yes	☐ No	
	• Standards used for calibration not expired	☐ Yes	☐ No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	☐ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☐ Yes	☐ No	
	• Log book being maintained.[2]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ 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]	☐ Yes	☐ No	**NR**
	• Log book being maintained[2]	☐ Yes	☐ No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	☐ Yes	☐ 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]	☐ Yes	☐ No	
	• Standards used for calibration not expired	☐ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☐ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[18]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ 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]	☐ Yes	☐ No	**NR**
• Chain of Custody	• Chain of custody (description, date, time, signature).[19]	☐ Yes	☐ No	
• Other	• Composite samples refrigerated during sample collection[14]	☐ Yes	☐ No	
	• Equipment blanks utilized[14]	☐ Yes	☐ No	
	• SOP for cleaning of sampling equipment	☐ Yes	☐ No	
	• Logbook being maintained[2]	☐ Yes	☐ No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
• General criteria	• Properly working seals.	☒ Yes	☐ No	**A**
	• Desiccant fresh (blue color)	☒ Yes	☐ No	
• Documentation	• Log book being maintained[2]	☒ Yes	☐ No	

Comments: ***The desicator container should be dated on the outside and logged into book with other standards that are numbered and logged when they come into the lab. In addition, all the standards that have exceed the expiration dates must be removed from the lab and properly disposed.***

Criteria	Standard Methods Requirement	Acceptable?		Rating
Bench sheets				
• General criteria	• Date(s)[2]	☒ Yes	☐ No	**A**
	• Analyst initials[2]	☒ Yes	☐ No	
	• Blue or black ink pen[2]	☒ Yes	☐ No	
	• Calibration information[2]	☒ Yes	☐ No	
	• Equations, calculations, units for all measurements, notations, and results present[2]	☒ Yes	☐ No	
	• Corrections, single line through, initialed and dated[2]	☐ Yes	☒ No	

Comments: ***Do not use white out on the lab sheets. Use a single line through, intial and date the mistake. An additional lab sheet can be attached with corrections if there is no room for the corrected data after the single line through has been made.***

General Lab Criteria

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]	☐ Yes	☐ No	**NR**
	• Incubator temperature 44.5° C ± 0.2° [21/24]			
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer [1, 2]	☐ Yes	☐ No	
	• Log book being maintained [2]	☐ Yes	☐ No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) [1, 5]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Autoclaves/Steam Sterilizers				
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C [25]	☐ Yes	☐ No	**NR**
	• 10 to 30 minutes time based on material being sterilized[26]	☐ Yes	☐ 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]	☐ Yes	☐ 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]	☐ Yes	☐ No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer [1,2]	☐ Yes	☐ No	
	• Log book being maintained [2]	☐ Yes	☐ No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, or capsules [1]	☐ Yes	☐ No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement			Rating
Final Effluent Temperature Monitoring		Acceptable?		
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer [1,2]	☐ Yes	☐ No	**NR**
	• Thermometer reads in increments of at least 0.1° C [5]	☐ Yes	☐ No	
	• Log book being maintained [2]	☐ Yes	☐ No	
Comments:				

Number of Criteria Rated:	Acceptable	*3*
	Marginal	*0*
	Unacceptable	*0*
	Total Number of Areas Rated	*3*

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

Notation of Referenced Method

1 Method 9020-B, Item 3
2 Method 1020-A, Item 1
3 Method 1020-B, Item 10
4 Method 2540-B, Item 2
5 Method 2550-B, Item 1
6 Method 1020-A, Item 1
7 Method 4500-H B, Item 4
8 Method 4500-H B, Item 2
9 Method 1020-B, Item 2
10 Method 4500-O B, Item 3
11 Method 4500-O G, Item 3
12 Method 5210-B, Item 5
13 CFR 136.3, Table II
14 Method 1060A, Item 1
15 Method 4500-Cl I, Item 2
16 Method 4500-Cl I, Item 4
17 Method 4500-NH3 D, Item 4
18 Method 4500-NH3 D, Item 2
19 Method 1060-B, Item 2
20 Method 1060-B, Item 1
21 Method 9222D, Item 1
22 Method 9223 B, Item 2
23 Method 9223 B, Item 3
24 Method 1603, Item 2
25 Method 9030-B, Item 3
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 ≤6° C	6h	48h
TSS	P, G	200	G, C	Refrigerate ≤6° 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 ≤6° 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 ≤6° C	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate ≤6° C	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate ≤6° C	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate ≤10° 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 ≤6° C	28 d	28 d

Approved Standard Methods

CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH3 D
Total Residual Chlorine, DPD Colorimetric Method	Std Methods 4500-Cl G
Total Suspended Solids, Dried at 103-105 °C	Std Methods 2540-D
Dissolved Oxygen, Membrane Electrode Method	Std Method 4500-O G
pH, Electrometric Method	Std Methods 4500-H+ B
Fecal Coliform, Membrane Filter Procedure	Std Methods 9222D
Escherichia Coli, Enzyme Substrate Test	Std Method 9223B
Escherichia Coli Membrane Filtration Procedure	EPA Method 1603
Oil and Grease	USEPA 1664A or Std Methods 5520B
Metals, general	USEPA 200, Std Methods 3111B or C, or 3120B
Volatiles (Purgeables by purge and trap)	USEPA 6210, Std Methods 624
Semi-Volatiles (Base/Neutrals and acids)	USEPA 6410, Std Methods 625
Pesticides	USEPA 6410 and 6630, Std Methods 608

Form Approved

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

OMB No. 158-R0035

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

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	Need to pump out the old plant.
	Buildings	S	
	Potable Water Supply Protection		
	Safety Features		
	Bypasses	OUT	
	Storm Water Overflows		
	Alternate Power Source	S	Generator – Tested Weekly- 1480 hp – will sequence through plant – alarmed
Preliminary	Maintenance of Collection Systems		
	Pump Station	IN	3 Pumps – 3300 gal/min – Variable Speed Drives
	Ventilation	IN	
	Bar Screen	OUT	5/8" bar spacing – available for back up
	Disposal of Screenings	S	Williams County Landfill or land applied
	Mechanical Bar Screen	IN	Malhr Mechanical Bar Screen
	Grit Chamber	IN	Vortex -rotating mechanical disk
	Disposal of Grit	IN	Vortex – rotating mechanical disk
	Degritter & Auger	IN	
Primary	Settling Tanks		
	Scum Removal		
	Sludge Removal		
	Septage Stor. Tank w/fine screen & grit trap	IN	bleed WW to front of plant – septage stored in old plant digester
	Oxidation Ditch	IN	3 / 3 Rings-RAS&RAW added to outer ring (inner ring for storm flow if flow >1750)
			All rings a dark chocolate brown color and well aerated - all 3 rings aerated
Sludge Disposal	Digesters	IN	2 / 2 - 1.3 MG capacity - chocolate brown when well mixed by aerators – 3 hour cycle
	Temperature and pH		
	Vacuum Truck		
	Heating Equipment		
	Sludge Pumps	IN	2 RAS-1 WAS-(set up to run as WAS or RAW) – 1 for sludge beds or for septage accept
	Drying Beds	IN	3 Beds used for the WWTP sludge – 1 bed is used for the jet vac-truck sludge & storage
			1 ready for more storage
	Disposal of Sludge		Landfilled at Williams County Landfill and Land Applied
	Blowers	IN	5-3 for large sludge tanks, 1 septage, 1 post aeration
Other	Flow Meter and Recorder	IN	Ultrasonic Weir
	Records	S	
	Lab Controls	S	
	Chemical Treatment	IN	Addition of Aluminum Sulfate (1 gal/hour) at oxidation ditch effluent
Secondary-Tertiary List items as	Settling Tank	IN	2 / 2–Clear effluent – no odors-skimmer doing well– no algae on weirs – pin floc present
	Post Aeration	IN	Clear and small bubbles - very slight green color in tank
Disinfection	Effluent	S	Clear and no odor – algae present in stream, Upstream slightly turbid
	Disinfection System – UV	IN	
	Effective Dosage	N/A	
	Contact Time	N/A	
	Contact Tank	IN	
	Dechlorination	N/A	