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HIGHLAND HILLSBORO STP JACKSON, JOSHUA 2011/05/11

Hillsboro Corresp

Ohio | Environmental Protection Agency

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

May 11, 2011

Mayor & Council
City of Hillsboro
130 North High Street
Hillsboro, OH 45133

RE: Hillsboro WWTW/Compliance Evaluation Inspection
NPDES Permit No. OH0020389/OEPA PERMIT NO. 1PC00100*ID

Ladies & Gentlemen:

On May 5, 2011, I conducted a NPDES Compliance Evaluation Inspection at the City of Hillsboro wastewater treatment works (WWTW). Brandon Leeth (ORC), Bob Creamer, Brian Williamson, Bryan Shumacher, and Randy Barr (Collections Chief) all represented the City during the inspection. The purpose of the inspection was to evaluate compliance with the terms and conditions of the NPDES Permit. A copy of the report is provided within.

As noted in the report, all evaluated areas received "Satisfactory" ratings with the exception of the "Effluent/Receiving Waters" section which was given a rating of "Unsatisfactory" (due to numerous effluent violations that have occurred during construction). There are items for correction highlighted throughout the report.

Thank you for your time extended during the inspection process. If you have any questions, please feel free to contact me by phone at (937) 285-6029 or by e-mail at joshua.jackson@epa.state.oh.us.

Respectfully,

Joshua Jackson
Environmental Specialist II
Division of Surface Water

Cc: Brandon Leeth, City of Hillsboro

Enclosures

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OhioEPA

State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PC00100*ID	OH0020389	5/5/2011	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Hillsboro WWTW 1520 North High Street Hillsboro, Highland County	9:00 a.m.	9/1/2009
	Exit Time	Permit Expiration Date
	1:30 p.m.	7/31/2012
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Brandon Leeth, WWTW Supt. (ORC) Bob Creamer and Brian Williamson, Class III Ops.	937-393-4831	
Name, Address and Title of Responsible Official	Phone Number	
Ralph Holt, City Administrator City of Hillsboro 130 North High Street Hillsboro, OH 45133	937-393-5219	

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	U	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
S	Collection System				

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

See attached report.

Inspector	Reviewer
5-11-11	5/11/11
Joshua Jackson Date Division of Surface Water Southwest District Office	Martyn Burt Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Permit # : 1PC00100*ID
NPDES #: OH0020389

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) Flows and loadings conform with NPDES permit.....	Y
(c) Treatment processes are as described in permit application...	Y
(d) All discharges are permitted.....	Y
(e) Number and location of discharge points are as described in permit.....	Y
(f) Storm water discharges properly permitted.....	Y

Comments/Status:

All contaminated storm water is directed back to the head of the WWTW.

Section F: Compliance

(a) Any significant violations since the last inspection.....	Y
(b) Appropriate Non-compliance notification of violations.....	Y
(c) Permittee is taking actions to resolve violations.....	Y
(d) Permittee has a compliance schedule.....	Y
(e) Compliance schedule contained in...NPDES Permit Compliance Schedule	
(f) Permittee is in compliance with schedule.....	Y
(g) Has biomonitoring shown toxicity in discharge since last inspection	N

Comments/Status:

WWTW is under construction and antipates completion ahead of the NPDES permit compliance

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a) Standby power available.....generator ☒ or dual feed ☐..... Y

i. What does the back-up power source operate.....

Existing generator operates all WW components; however, some components need to be switched over manually. The new generator set up will be automated.

ii. How often is the generator tested under load.....

1/year under load. It is run for 30 minutes every Monday.

(b) Which components have an alarm system available for power or equipment failures.....

An autodialer system notifies staff in the event of a power outage and when wastewater begins to fill the first EQ tank.

(c) All treatment units in service other than backup units..... N

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

Calendar. Supt. will be preparing a preventative maintenance schedule in an Excel document for when the WWTW is completed.

(e) Any major equipment breakdown since last inspection..... N

(f) Operation and maintenance manual provided and maintained..... Y

(g) Any plant bypasses since last inspection..... Y

(h) Any plant upsets since last inspection..... Y

Comments/Status:

Two old clarifiers have been taken down for upgrade. The two new clarifiers were running at the time of the inspection. The new 1.5 million-gallon EQ basin was online.
Construction will be moving to the influent pump station and EQ pumps will serve as influent pumping for the WWTW.
WWTW upgrade was designed to eliminate wet weather bypassing.

Section G: Operation & Maintenance con't

Record Keeping/Operator of Record:

(a) Wastewater Treatment Works classification (OAC 3745-7)..... III
(b) Operator of Record holds unexpired license of class required by Permit..... Y
(c) Copy of certificate of Operator of Record displayed on-site..... Y
(d) Has the Operator of Record submitted an ORC Notification form.. Y
(e) Minimum operator staffing requirements fulfilled (OAC 3745-7).... Y
(f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met..... Y
(g) Operator of Record log book provided..... Y
(h) Format of log book (e.g. computer log, hard bound book)

Hard bound

(i) Log book kept onsite (in an area protected from weather)..... Y
(j) 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 operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)..... Y
  iv. Laboratory results (unless documented on bench sheets)... Y
  v. Identification of person making entries..... Y
(k) Has the Operator of Record submitted written notifications 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

Comments/Status:

Section G: Operation & Maintenance con't

Collection System:

(a) Are there pump stations in the collection system..... Y
  i. How many publicly-owned pump stations equipped with permanent standby power or equivalent.....7
  ii. How many pump stations have telemetered alarms.....7
  iii. How many pump stations have operable alarms.....7

(b) Any chronic collection system overflows since last inspection..... Y
(c) Regulatory agency notified of all overflows..... Y
(d) Are there CSOs in the collection system..... N
if so, what is the LTCP status.....

(e) How are CSOs monitored (chalk, block, level sensor, etc.).....

(f) Portable pumps available for collection system maintenance..... Y
(g) RDII Program established and active..... Y
(h) Any WIB complaint received since last inspection..... Y
(i) Is there a WIB response plan..... Y
(j) Is any portion of the collection system at or near dry weather capacity..... Y

Comments/Status:

The south lift station has overflowed after significant wet weather events since the last inspection. The City is continuing to work on inflow and infiltration reduction; particularly in the area tributary to the lift station.
This past year the City inspected all buildings and noted around 20% had downspouts that went into the ground. This coming year they plan to dye test these building to determine whether the downspouts are discharging to the sanitary sewer. If it is confirmed that the downspout is connected to the sanitary sewer, the City will give the residents a specified amount of time to disconnect from the sewer and properly plug the line.
The area tributary to the lift station on E. US route 50 will be CCTV'd this year. Depending on the results, approximately 1/2 to 3/4 mile of sewer main could be relined or replaced.

Permit # : 1PC00100*ID
NPDES #: OH0020389

Section H: Sludge Management

(a) Method of Sludge Disposal... ☒ Land Application
☐ Haul to Another NPDES Permitee
☐ Haul to a Mixed Solid Waste Landfill

(b) Has amount of sludge generated changed significantly since the last inspection..... Y

(c) How much sludge storage is provided at the plant.....
Over 4 months of storate (geotextile woven bags)

(d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y

(e) Any complaints received in last year regarding sludge..... N

(f) 5/8" screen at headworks for facilities that land apply sludge..... N

(g) Are sludge application sites inspected to verify compliance with NPDES permit..... Y

(h) Is a contractor used for sludge disposal..... N
If so, what is the name of the contractor.....

Class B Sewage Sludge (monitoring station 581)

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 – Aerobic Bench Scale Analysis	Option 4 – Specific Oxygen Uptake Rate	Option 5 – Aerobic Time and Temperature	Option 6 – Alkali Addition	Option 7 – >75% Percent Solids without Unstabilized	Option 8 - >75% Percent Solids with Unstabilized	Option 9 – Land Injection	Option 10 – Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	☒	☐	☐	☐	☐	☐	☐	☐	☐	☒

Comments/Status:
Since smaller digester was brought on-line, the quantity of sludge has been reduced.

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):
influent magnetic meter.

(b) Flow meter calibrated annually ..... Y
(Date of last calibration: 5/3/2011)

(c) 24-hour recording instruments operated and maintained..... Y

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

(e) All discharged flow is measured..... Y

Comments/Status:

New effluent magnetic meter will be installed as part of the upgrade.

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

Sampling:

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

(b) Parameters and sampling frequency agree with permit..... Y

(c) Permittee uses required sampling method..... N
(see GLC page)

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

Comments/Status:

Both composite samplers have been taken out of commission due to construction. Operations staff have been utilizing manual composites for both influent and effluent samples (combining three different grab samples during the work shift).

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

Laboratory:

General

(a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... Y

(b) Do SOP's include the following if applicable..... Y

- Title
- Scope and Application
- Summary
- Sample Handling and Preservation
- Interferences
- Apparatus and Materials
- Reagents
- Procedure
- Calculations
- Quality Control
- Maintenance
- Corrective Action
- Reference (Parent Method)

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of know precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

(c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y

(d) If alternate analytical procedures are used, proper approval has been obtained..... Y

(e) Analyses being performed more frequently than required by permit. N

(f) If (e) is yes, are results in permittee's self-monitoring report..... N/A

(g) Satisfactory calibration and maintenance of instruments/equipment. Y (see score from GLC page)

(h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: All except temp., DO and pH

Lab name: Belmont Laboratories

Discharge Monitoring Report Quality Assurance (DMRQA)

(a) Participation in latest USEPA quality assurance performance sampling..... Y
Date: July 2010

(b) Were any parameters "Unsatisfactory"..... N

(c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall # 001
Outfall Description: Effluent from post aeration basin contain some solids as the WWTW was receiving high flows in excess of 4 MGD.

Receiving Stream: Clear Creek
Receiving Stream Description: no noticeable solids accumulations attributed to the WWTW

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:

Inspection Findings

The City of Hillsboro wastewater treatment works (WWTW) is designed to treat and discharge an average daily design flow of 1.2 million gallons/day (MGD). A review of discharge monitoring report (DMR) data for January 2010 – February 2011 shows an average daily flow of 1.25 MGD. The current NPDES permit contains a compliance schedule requiring the upgrade of the WWTW in order to eliminate bypassing and NPDES violations.

Ohio EPA approved the detailed plans for upgrade/expansion to the WWTW on July 22, 2009. At the time of the inspection, construction was approximately 65% completed and staff anticipate substantial completion will occur by the end of 2011. According to the NPDES compliance schedule, the WWTW upgrade/expansion shall be completed by no later than June 1, 2012.

EFFLUENT LIMIT VIOLATIONS

(Period of Review: January 2010 – February 2011)

7D = Weekly 30D = Monthly 1D = Daily
Conc. = Concentration (mg/l) Qty.= Quantity (Kg/Day)

Reporting Period	Parameter	Limit Type	Limit	Reported Value
April 2010	pH, Minimum	1D Conc	6.5	6.3
May 2010	pH, Minimum	1D Conc	6.5	6.4
June 2010	Dissolved Oxygen	1D Conc	7.0	6.
June 2010	Phosphorus, Total (P)	7D Qty	6.8	8.1323
August 2010	Dissolved Oxygen	1D Conc	7.0	6.2
August 2010	Dissolved Oxygen	1D Conc	7.0	6.3
September 2010	Nitrogen, Ammonia (NH3)	30D Conc	1.5	3.92954
September 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.3	4.16333
September 2010	Nitrogen, Ammonia (NH3)	30D Qty	6.8	11.0379
September 2010	Nitrogen, Ammonia (NH3)	7D Qty	10.5	12.8137
September 2010	Dissolved Oxygen	1D Conc	7.0	6.9
September 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.3	7.99667
September 2010	Nitrogen, Ammonia (NH3)	7D Qty	10.5	21.9320
September 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.3	3.91
October 2010	Nitrogen, Ammonia (NH3)	7D Conc	2.3	3.473
January 2011	Mercury, Total (Low Level)	30D Conc	12	37.615
January 2011	Mercury, Total (Low Level)	30D Qty	0.00008	.00018

*An explanation of the violations shown above was submitted by Brandon Leeth in a timely manner.

Chain-of-Custody Forms

Chain-of-Custody forms for samples taken from the Hillsboro WWTW to Belmont Labs should have signatures of every person who comes into contact with the sample from the time the sample is collected at the Hillsboro WWTW until the final analysis is completed at Belmont Labs. Standard Methods 1060(B)(2) states, *"Properly designed and executed chain-of-custody forms will ensure sample integrity from collection to data reporting. This includes the ability to trace possession and handling of the sample from the time of collection through analysis and final disposition."* As it stands now, it does not appear that the signature of the laboratory technician is on the current Chain-of-Custody form; this must be corrected without delay. Completed (properly signed) chain-of-custody forms must then be kept at the Hillsboro WWTW.

General Lab Criteria

Criteria	Standard Methods Requirement			Rating
Dissolved Oxygen Meter		Acceptable?		
• 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: Staff will purchase bound logbook to record all laboratory-related maintenance items and will document equipment calibration on the bench sheets.
SOP for DO was written but final steps of calibration process were left off. Staff will make the corrections.

Criteria	Standard Methods Requirement			Rating
Refrigerator		Acceptable?		
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.5 Celsius).[5]	☒ Yes	☐ No	**NR**
• 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: Staff had not yet calibrated the thermometer for the refrigerator with the NIST Traceable thermometer. This should be done annually.
The thermometer was in a container for a water bath but the water level was so low that the probe was not immersed in it. This was corrected at the time of inspection.
Staff records refrigerator temperatures daily when samples are being collected. They should records the temperature when the sample is placed in the refrigerator and when it is removed.
Samples should also have evidence tape (with sample collector's initials) to ensure the samples were not tampered with from the time they are collected until they are taken away for testing.

General Lab Criteria

Criteria	Standard Methods Requirement			Rating
Sample Collection/Handling		Acceptable?		
• 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: Manual composites are utilized since both automatic samplers are out of commission due to plant construction.
WWTW should develop SOP for sample collection/cleaning of sample equipment.

Criteria	Standard Methods Requirement			Rating
Bench sheets		Acceptable?		
• General criteria	• Date(s)[2]	☒ Yes	☐ No	**NR**
	• 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: Spoke to Mr. Leeth about bench sheet corrections (including calibration info and analyst initials)

General Lab Criteria

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

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	14	Method 1060A, Item 1
2	Method 1020-A, Item 1	15	Method 4500-Cl I, Item 2
3	Method 1020-B, Item 10	16	Method 4500-Cl I, Item 4
4	Method 2540-B, Item 2	17	Method 4500-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

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

General Lab Criteria

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