



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

June 11, 2010

Mayor & Council
Village of Glendale
30 Village Square
Glendale, OH 45246

RE: Village of Glendale WWTW/Compliance Evaluation Inspection, NPDES
Permit No. OH0020141/ OEPA Permit No. 1PB00012*FD and Notice of
Violations

Ladies and Gentlemen:

On May 26, 2010, I conducted an NPDES Compliance Evaluation Inspection at Village of Glendale Wastewater Treatment Works. Mike Heuer (operator of record) and Kevin Bell were present for the facility. The purpose of the inspection was to evaluate compliance with the terms and condition of the facility's NPDES permit.

A copy of the inspection report is enclosed. As indicated on the attached NPDES Compliance Evaluation Inspection Report, numerous areas evaluated received below "Satisfactory" ratings. **Please pay attention to the "Items Requiring Correction" (shown in bold type) within the report.**

If you have any questions, please contact me by phone at (937) 285-6028 or by e-mail at michelle.waller@epa.state.oh.us.

Respectfully,



Michelle Waller
Environmental Specialist II
Division of Surface Water

Enclosures

Cc: Mike Heuer, Village of Glendale (with enclosures)
Walter Cordes, Village of Glendale (with enclosures)



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
1PB00012*FD	OH0020141	5/26/2010	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Village of Glendale WWTW 528 East Sharon Road Glendale, Hamilton County	9:40AM	6/1/2006
	Exit Time	Permit Expiration Date
	11:50AM	5/31/2011
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Mike Heuer, Operator of Record	(513) 771-7200 (513) 200-8510 (cell)	
Kevin Bell		
Name, Address and Title of Responsible Official	Phone Number	
Walter Cordes 30 Village Square Glendale, OH 45246	(513) 771-7200	

Section C: Areas Evaluated During Inspection					
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)					
S	Permit	M	Flow Measurement	N	Pretreatment
M	Records/Reports	M	Laboratory	U	Compliance Schedule
S	Operations & Maintenance	U	Effluent/Receiving Waters	M	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal		Other
N	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
Please see attached.	
Inspector	Reviewer
<i>Michelle Waller</i> 6/11/10	<i>Martyn G Burt</i> 6/11/10
Michelle Waller Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

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:

Section F: Compliance

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

Comments/Status:

Compliance checked from January 2009 to April 2010. Numerous permit limit violations and several frequency violations were reported. See attached report.

C.) Glendale is having issues trying to balance the phosphorus and nitrogen manually, causing violations of each of these parameters. Glendale will soon start adding ferric chloride to help resolve this issue.

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.....

The whole plant is powered by the backup generator (including the offices and onsite lift station).

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

The generator is run every Friday for 30 minutes.

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

When it becomes operational, SCADA has a dialer which will call. Currently the only way to know the power is out at the plant when it is not staffed is through a call received by the operators stating power is out at the Water Treatment Plant. The Little Creek lift station has an alarm.

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

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

A calendar is used for maintenance (set up on a monthly schedule).

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

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

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

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

Comments/Status:

SCADA is still not functioning, so the plant is still being operated in manual mode.

(c). The grit system is not in service. The cyclone is vacuummed out 2-3 times a year.

(e). The ram press and biophos mixer are currently down for repair. The manual bar screen is being used.

(g). Operator of Record estimates plant bypasses are down approximately 75%.

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).... N/A
- (f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met.....N/A
- (g) Operator of Record log book provided..... Y
- (h) Format of log book (e.g. computer log, hard bound book)
Hard bound book.
- (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..... N
 - 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)... N
 - 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..... N

Comments/Status:

The Operator of Record logbook recorded the time in for operators, but numerous days did not have a recorded out time. **Begin recording the time the operator leaves the plant in the Operator of Record logbook.** This will be necessary to satisfy the hours for staffing requirements.

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..... 1
 - ii. How many pump stations have telemetered alarms..... 1
 - iii. How many pump stations have operable alarms..... 2
- (b) Any chronic collection system overflows since last inspection..... N
- (c) Regulatory agency notified of all overflows..... Y
- (d) Are there CSOs in the collection system..... N
if so, what is the LTCP status.....

N/A

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

N/A

- (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..... N

Comments/Status:

I&I work done at Glendale in the last year includes: - 3 spot repairs, replacement of some storm sewer, cleaning, flow testing on West Sharon Road (the main area of concern).

Section H: Sludge Management

- (a) Method of Sludge Disposal...
 - Land Application
 - Haul to Another NPDES Permittee
 - 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.....

Adequate amount of storage in two digesters.

- (a) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
- (b) Any complaints received in last year regarding sludge..... N
- (c) 5/8" screen at headworks for facilities that land apply sludge..... N/A
- (d) Are sludge application sites inspected to verify compliance with NPDES permit..... N/A
- (e) Is a contractor used for sludge disposal..... Y
If so, what is the name of the contractor.....

Rumpke

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

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

Flume with an ultrasonic.

- (b) Flow meter calibrated annually N
(Date of last calibration: At least 2 years ago.)

- (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:

There is a flow meter on the EQ as well. **Schedule calibration for the flow meter. Calibration of the flow meter is required annually.**

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..... Y
(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:

Influent and effluent composite samplers did not have thermometers inside the refrigerators. Thermometers are required to show proper temperatures for samples taken. **Place thermometers in water baths inside the composite samplers and begin recording the temperature daily on a log sheet.**

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..... N
- (b) Do SOP's include the following if applicable:..... N
 - Title
 - Procedure
 - Scope and Application
 - Calculations
 - Summary
 - Quality Control
 - Sample Handling and Preservation
 - Maintenance
 - Interferences
 - Corrective Action
 - Apparatus and Materials
 - Reference (Parent Method)
 - Reagents

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

- (h) Commercial laboratory used..... Y
 Parameters analyzed by commercial lab: All parameters except pH, DO,
 hardness and temperature.
 Lab name: MASI

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance
 sampling..... N
 Date:
- (b) Were any parameters "Unsatisfactory"..... N/A
- (c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall # 001

Outfall Description: Final effluent.

Receiving Stream: Town Run

Receiving Stream Description: No oil sheen, grease, visible foam or floating solids were observed. Effluent appeared clear.

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

Inspection Findings

1. Permit Violations:

(Period of Review: January 2009 – April 2010)

Limit Violations Reported:

Reporting Period	Parameter	Limit Type	Limit	Reported Value
May 2009	Nitrogen, Ammonia (NH3)	30D Conc	1.0	10.2125
May 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	9.6
May 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	7.45
May 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	6.3
May 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	17.5
May 2009	Nitrogen, Ammonia (NH3)	30D Qty	2.84	25.3917
May 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	23.6755
May 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	38.7216
May 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	10.7308
May 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	28.4387
June 2009	Total Suspended Solids	30D Qty	34.1	34.2372
June 2009	Total Suspended Solids	7D Qty	51.1	90.3668
June 2009	Nitrogen, Ammonia (NH3)	30D Conc	1.0	2.0875
June 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	5.15
June 2009	Nitrogen, Ammonia (NH3)	7D Conc	1.5	2.7
June 2009	Nitrogen, Ammonia (NH3)	30D Qty	2.84	10.1078
June 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	31.1761
June 2009	Nitrogen, Ammonia (NH3)	7D Qty	4.26	7.62261
June 2009	CBOD 5 day	7D Qty	42.6	47.4336
July 2009	Total Suspended Solids	30D Conc	12	13.5
July 2009	Total Suspended Solids	7D Conc	18	29.
July 2009	Total Suspended Solids	30D Qty	34.1	36.9075
July 2009	Total Suspended Solids	7D Qty	51.1	106.907
July 2009	Phosphorus, Total (P)	30D Conc	1.0	2.57
July 2009	Phosphorus, Total (P)	7D Conc	1.5	2.57
July 2009	Phosphorus, Total (P)	30D Qty	2.84	3.7548
July 2009	Dissolved Oxygen	1D Conc	6.0	5.3
August 2009	Total Suspended Solids	30D Conc	12	14.5
August 2009	Total Suspended Solids	7D Conc	18	36.
August 2009	Total Suspended Solids	7D Qty	51.1	52.1875
August 2009	Phosphorus, Total (P)	30D Conc	1.0	3.03
August 2009	Phosphorus, Total (P)	7D Conc	1.5	3.1
August 2009	Phosphorus, Total (P)	7D Conc	1.5	2.96
August 2009	Phosphorus, Total (P)	30D Qty	2.84	3.86774
August 2009	Phosphorus, Total (P)	7D Qty	4.26	4.57607
September 2009	Phosphorus, Total (P)	30D Conc	1.0	2.065
September 2009	Phosphorus, Total (P)	7D Conc	1.5	2.24
September 2009	Phosphorus, Total (P)	7D Conc	1.5	1.89
October 2009	Nitrogen, Ammonia (NH3)	30D Conc	1.0	1.45

October 2009	Nitrogen, Ammonia (NH3	7D Conc	1.5	1.6
October 2009	Nitrogen, Ammonia (NH3	7D Conc	1.5	3.05
October 2009	Nitrogen, Ammonia (NH3	7D Conc	1.5	1.8
October 2009	Nitrogen, Ammonia (NH3	30D Qty	2.84	3.26371
October 2009	Nitrogen, Ammonia (NH3	7D Qty	4.26	4.89987
October 2009	Nitrogen, Ammonia (NH3	7D Qty	4.26	6.35672
November 2009	Nitrogen, Ammonia (NH3	7D Conc	4.5	6.5
January 2010	Nitrite Plus Nitrate,	30D Conc	5.0	6.3
January 2010	Nitrite Plus Nitrate,	30D Qty	14.2	21.6312
January 2010	Nitrite Plus Nitrate,	7D Qty	21.3	28.2467
April 2010	Nitrite Plus Nitrate,	30D Conc	5.0	5.8

Frequency Violations Reported:

Reporting Period	Parameter	Sample Frequency	Expected	Reported
October 2009	Total Suspended Solids	2/Week	2	1
October 2009	Nitrogen, Ammonia (NH3	2/Week	2	1
October 2009	Fecal Coliform	2/Week	2	1
October 2009	CBOD 5 day	2/Week	2	1

Because of the violations reported, an "Unsatisfactory" rating was given for the "Effluent/Receiving Waters" section of this report.

As required in Part III 12 of the NPDES permit for Glendale, all violations of permit conditions are to be reported to the Ohio EPA along with a report addressing the reasons for the violations. According to our records, Glendale only reported on the June 2009 violations. ***Please inform this office, in writing, within ten days of receipt of this notification as to the reason(s) for the above referenced violation(s), as well as a description of the action(s) taken or proposed to prevent any further violation(s). Your response should include the dates, either actual or proposed, for completion of the action(s). Future violations must be reported as required by the NPDES Permit as detailed in Part III.12 titled "Noncompliance Notification."***

2. General Lab Criteria

A. While performing the lab inspection for *Final Effluent Temperature Monitoring* it was noted Glendale uses the Dissolved Oxygen meter for the permit required effluent temperature monitoring. The NPDES permit for Glendale requires continuous monitoring for temperature. Using the handheld DO meter would constitute grab sampling for this parameter. **Within 30 days Glendale needs to install a continuous maximum indicating thermometer for outfall 001 and record the maximum temperature for the NPDES parameter daily. Notify this office in writing when the thermometer is installed and operational.**

B. Standard Operating Procedures (SOPs) should be prepared for all procedures performed in the lab. Glendale had some SOPs for lab procedures, but not all information required was present in the SOPs. **Prepare SOPs for all lab procedures, making sure to include everything referenced in the NPDES Compliance Evaluation Inspection Report, Section I, Laboratory.**

3. Compliance Schedule Violations:

Part I, C. (e.) of the Village's MPDES permit requires the following:

Complete construction as soon as possible, but not later than June 1, 2008.

It is now two years past this compliance deadline and the "Supervisory Control and Data Acquisition" (SCADA) system required for WWTW automation is not on-line. Without the SCADA system, there are no alarms for the wastewater treatment system and all process adjustments must be done manually. The operator stated that he feels some of the violations (specifically the phosphorus and nitrogen violations) reported by Glendale would not have occurred if the treatment system was being run by SCADA as opposed to manually.

The Village is in Significant Non-Compliance with the NPDES permit due to the SCADA system not being operational two years after being required by the permit. Ohio EPA is currently weighing enforcement options against the Village of Glendale for this violation.

Within ten days of receipt of this notification the Village of Glendale must inform the Ohio EPA, in writing, of the following:

- 1. A detailed explanation as to why the SCADA system is not operational.***
- 2. All steps that have been taken to make the SCADA system operational.***
- 3. All steps that are planned to achieve an operating SCADA system.***
- 4. Short and long term alternatives for plant operations until SCADA becomes fully functional.***
- 5. How alarms will be set up for critical systems, such as the lift station and blowers. The current alarms are not functional as the dialer is connected to the nonfunctioning SCADA system.***

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
pH 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	X Yes	No
	• Logbook maintained ²	X Yes	No
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	X Yes	No
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	X Yes	No
• Buffer Expiration Date	• Buffers must not be expired	X Yes	No
• Other	• Instrument manual available	Yes	X No
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	X Yes	No
M			

Comments: Locate manual for pH meter.

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

Comments:

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Refrigerator		Acceptable?	
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.5 Celsius). ⁵	X Yes	No
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer. ^{1,2}	Yes	X No
• Other	• Thermometer held in water bath. ¹	X Yes	No
	• Refrigerator temperature $\leq 6^{\circ}$ Celsius. ¹³	Yes	X No
	• Do not store volatile solvents, food, or beverages. ¹⁴	X Yes	No
Comments: Thermometer read 7.5° Celsius. Calibrate thermometer and set the temperature of the refrigerator so it is $\leq 6^{\circ}$ Celsius.			

Criteria	Standard Methods Requirement		Rating
Sample Collection/Handling		Acceptable?	
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	X Yes	No
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	X Yes	No
• Other	• Composite samples refrigerated during sample collection ¹⁴	X Yes	No
	• Equipment blanks utilized ¹⁴	X Yes	No
	• SOP for cleaning of sampling equipment	Yes	X No
	• Logbook being maintained ²	X Yes	No
Comments: Prepare SOP for cleaning sampling equipment.			

Criteria	Standard Methods Requirement		Rating
Bench sheets		Acceptable?	
• General criteria	• Date(s) ²	X Yes	No
	• Analyst initials ²	X Yes	No
	• Blue or black ink pen ²	X Yes	No
	• Calibration information ²	X Yes	No
	• Equations, calculations, units for all measurements, notations, and results present ²	Yes	X No
	• Corrections, single line through, initialed and dated ²	Yes	No
Comments: No corrections were noted in logbook. Slope was recorded in logbook. The numeric temperature was recorded, but was missing the scale. Add "$^{\circ}$ Celsius" on bench sheets. A flow number was recorded but missing the units. Add "MGD" to flow records.			

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?	Rating
Final Effluent Temperature Monitoring		Acceptable?	
• General Criteria	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	Yes X No	U
	• Thermometer reads in increments of at least 0.1° C ⁵	X Yes No	
	• Log book being maintained ²	X Yes No	
<p>Comments: Glendale uses the DO meter to record temperature. The DO meter is calibrated daily and recorded in the log book. For more information regarding the "Unacceptable" rating for the Final Effluent Temperature Monitoring, please see the Inspection Report Findings.</p>			
Number of Criteria Rated:		Acceptable	1
		Marginal	4
		Unacceptable	1
		Total Number of Areas Rated	6
<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>			
<p>Consider recommending PAI Audit from DES when:</p>		<p>>60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable</p>	

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