



**Environmental
Protection Agency**

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



1PB0002220100816

CLERMONT NEW RICHMOND STP

JACKSON, JOSHUA 2010/08/16

New Richmond
Corr.



**Environmental
Protection Agency**

Tim Erickland, Governor
Lee Fisher, Lt. Governor
Chris Koneski, Director

August 16, 2010

Village of New Richmond
Attn: Mr. David Kennedy
102 Willow Street
New Richmond, OH 45157

**RE: Village of New Richmond WWTW/Compliance Evaluation Inspection
NPDES Permit No. OH0021156/OEPA PERMIT NO. 1PB00022*GD**

Dear Mr. Kennedy:

On August 5, 2010, I conducted an NPDES Compliance Evaluation Inspection at the Village of New Richmond wastewater treatment works (WWTW). Mr. Ken Shearwood (Operator of Record) was present during the inspection. The purpose of the inspection was to evaluate compliance with the terms and conditions of the NPDES permit.

All evaluated areas, with the exception of one, received a "Satisfactory" rating; however, there are **"Items for Correction" within the report (in bold type)**.

Thank you and your staff for the 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: Ken Shearwood, Village of New Richmond (with report)



State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report

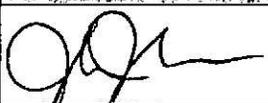
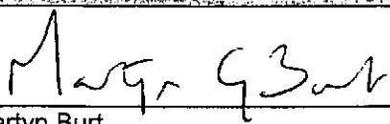
Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PB00022*GD	OH0021156	8/5/2010	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
New Richmond WWTW 900 Old US 52 New Richmond, Clermont County	9:30 a.m.	11/1/2008
	Exit Time	Permit Expiration Date
	12:30 p.m.	3/31/2011
Name(s) and Title(s) of On-Site Representatives		Phone Number(s)
Ken Shearwood, Operator of Record Jeff Knoechel, Operator		513-553-4160 (WWTW) 513-276-0739 (Cell Phone)
Name, Address and Title of Responsible Official		Phone Number
David Kennedy, Village Administrator Village of New Richmond 102 Willow Street New Richmond, OH 45157		513-553-4146

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	U	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	M	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	N	Other
S	Collection System				

*Laboratory was evaluated but not rated and SOPs will need to be developed (see within report).

Section D: Summary of Findings (Attach additional sheets if necessary)
See Attached Report.

Inspector	Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
8-13-10 Date	8/16/10 Date

Permit # : 1PB00022*GD

NPDES # : OH0021156

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..... N/A

Comments/Status:

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/A

Comments/Status:

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.....

Only one blower for the activated sludge system is powered by the generator. All other components of the WWTW (except for the remaining blowers) are also powered by the generator.
 - ii. How often is the generator tested under load.....

Twice/year. The generator is turned on weekly.

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

Operator is called (via autodialer) for the following reasons:
Plant power outage, high level in influent wet well, high level in effluent wet well, blowers off-line.

- (c) All treatment units in service other than backup units..... Y
- (d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

No schedule available during the inspection. Maintenance items are logged in the operator of record logbook.
- (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..... N
- (h) Any plant upsets since last inspection..... Y

Comments/Status:

Plant upset was caused by work being done on the aeration system and clarifier. 1/2 of the plant was taken down at a time to complete the work. During this time, a high flow event caused disruption in the treatment process.

Section G: Operation & Maintenance con't

Record Keeping/Operator of Record:

- (a) Wastewater Treatment Works classification (OAC 3745-7)..... II
- (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..... N/A
- (g) Operator of Record log book provided..... Y
- (h) Format of log book (e.g. computer log, hard bound book)
 spiral notebook
- (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:

Comments on the operator of record logbook in the attached report.

Section G: Operation & Maintenance cont.

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.....2
 - ii. How many pump stations have telemetered alarms.....0
 - 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.....
- (e) How are CSOs monitored (chalk, block, level sensor, etc.).....
- (f) Portable pumps available for collection system maintenance..... N
- (g) RDII Program established and active..... Y
- (h) Any WIB complaint received since last inspection..... N
- (i) Is there a WIB response plan..... N
- (j) Is any portion of the collection system at or near dry weather capacity..... N

Comments/Status:

The Village does not own a portable pump to bypass from one manhole to another, but Mr. Shearwood can readily rent a pump for a local source.

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..... N
- (c) How much sludge storage is provided at the plant.....
- (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..... Y
- (g) Are sludge application sites inspected to verify compliance with NPDES permit..... N/A
- (h) Is a contractor used for sludge disposal..... Y
If so, what is the name of the contractor.....

Comments/Status:

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):
- (b) Flow meter calibrated annually Y
(Date of last calibration: 8/1/2009)
- (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:

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:

See attached report.

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..... 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 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..... 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. N
(see score from GLC page)
- (h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: Everything except pH, temperature and dissolved oxygen.
Lab name: Clermont County Laboratory

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: Effluent samples taken after uv disinfection channel. Outfall pipe was not accessible. Effluent leaving the WWTW was clear and free from observable solids and objectionable odors.

Receiving Stream: Ohio River

Receiving Stream Description: outfall was not accessible

Comments/Status:

Section K: Multimedia Observations

- (a) Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories..... N

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- (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
 (Items Requiring Correction in Bold Type)

The Village of New Richmond wastewater treatment works (WWTW) is permitted to treat and discharge an average daily flow of 0.55 million gallons/day (MGD). A review of the discharge monitoring reports (DMRs) from September 2009 through June 2010 shows an average daily flow of 0.308 MGD.

A review of the discharge monitoring report (DMR) data submitted by the Village from September 2009 through June 2010 shows the following effluent violations:

EFFLUENT LIMIT VIOLATIONS
 (Period of Review: September 2009 – June 2010)
 7D = Weekly 30D = Monthly 1D = Daily
 Conc. = Concentration (mg/l) Qty. = Quantity (Kg/Day)

Reporting Period	Parameter	Limit Type	Limit	Reported Value
October 2009	Fecal Coliform	30D Conc	200	265.387
October 2009	Fecal Coliform	7D Conc	400	523.927
March 2010	Total Suspended Solids	30D Qty	35.4	43.1334
March 2010	Fecal Coliform	30D Conc	1000	1444.61
March 2010	Total Suspended Solids	7D Qty	54.1	88.9034
March 2010	Fecal Coliform	7D Conc	2000	6000.
March 2010	CBOD 5 day	7D Qty	43.8	61.7655

Outfall Accessibility

During the inspection, Ohio EPA staff was unable to access the WWTW outfall to the Ohio River due to thick, vegetative overgrowth along the river bank. Similar comments were made after the inspection conducted in 2009. **In order to make the discharge accessible to WWTW staff and Ohio EPA, the Village needs to adjust the current lawn maintenance program to provide a cut pathway to the discharge point.**

Collection System and WWTW Improvements

As part of an ongoing effort to reduce inflow and infiltration, the Village acquired funding to re-line 3800 feet of sewers along with 12 manholes in 2009. They are applying for grants to make similar improvements to the sewers along SR 132 (as storm run-off from the hillside collects in this area).

In past years the Village would have to take the WWTW down for frequent maintenance/cleaning of the portion of the Aero-Mod system that conveys/distributes mixed liquor from the aeration system to the clarifier, as it would get clogged with debris and affect system performance. In March of 2010, the Village made improvements to the piping in order to eliminate these recurring

maintenance issues. During the installation process, ½ of the wastewater treatment works was taken down at a time; for this reason accompanied with high wet weather flows, the Village incurred effluent violations (shown above). Since the upgrade was completed, the Village has not reported any effluent violations and Mr. Shearwood believes that the system has never looked better. The Village has also replaced ½ of the ultraviolet disinfection bulbs (replaced ballasts as needed) and is in the process of replacing ½ of the clarifier skimmer units.

Effluent Pump Station

It was observed during the inspection that the top portion of the concrete effluent pump station wet well was rapidly deteriorating. The Village should begin the process of evaluating the wet well integrity so that appropriate repairs can be made to prevent further damage.

Outfall 002

The Village currently pumps influent wastewater up to the Aero-Mod treatment system, which then treats the wastewater and flows by gravity through the UV disinfection channel and cascade aeration to the effluent pump station wet well. Treated wastewater is then pumped to the Ohio River (outfall 001).

Within the effluent pump station wet well, there is an overflow channel (preceded by a v-notch weir) discharging to Twelve Mile Creek (outfall 002). Twelve Mile Creek was the discharge location of the original WWTW for the Village of New Richmond until improvements were made around 1970. Today, it is a permitted discharge location that is only used if the effluent pumps fail and the wet well overflows.

Ohio EPA does not object to the Village utilizing outfall 002 as the main discharge location for the WWTW. Twelve Mile Creek is essentially Ohio River backwaters at that location (less than one river mile from the confluence with the Ohio River) and is afforded the same effluent limitations and protections as the Ohio River.

Before this change could occur, the Village would need to install an effluent flow meter for outfall 002 so that flow can be continuously monitored. The meter would also need to be synchronized with the current effluent sampler so that 24-hour flow proportioned samples will be taken (as required by the NPDES permit). A permit to install application will need to be submitted to Ohio EPA for the new effluent flow meter prior to installation.

Operator of Record Logbook

As required by Ohio Administrative Code 3745-7-09, Mr. Shearwood has an operator of record logbook on the WWTW grounds. Records are kept on whenever he or Mr. Knoechel enters and leaves the WWTW property.

Currently the logbook is kept as a spiral notebook. OAC 3745-7-09 requires a "...hard bound book with consecutive page numbering" (or well organized computer logs). Please make the appropriate changes without delay but no later than August 31, 2010.

Automatic Composite Sampler

At the time of the inspection, Mr. Shearwood was documenting composite sampler readings for both samplers on the days in which samples are taken. In order to show that the sampler temperature was within the acceptable range (<6°C) for the entire sampling period, temperature readings should be documented for the beginning and the end of the 24-hour sampling period.

During the inspection Mr. Shearwood also stated that he has been having problems with the refrigeration unit for the raw influent composite sampler. On at least 4 different sampling events, the documented temperature reading for this sampler was above 6°C. Since this is outside the acceptable holding temperature for a sample (CBOD5, TSS, NH3, etc.), all the corresponding data generated is considered invalid and should reported with an "AE" code on the e-DMR. This sampler shall be repaired or replaced without delay, but no later than August 31, 2010.

Quality Assurance & Standard Operating Procedures

The foundation of the NPDES permitting program is the reliability of data "self-reported" by wastewater dischargers under permit. Part III, 3., of the Village's NPDES permit requires "All wastewater treatment works shall be operated in a manner consistent with the following: At all times, the permittee shall maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee necessary to achieve compliance with the terms and conditions of this permit. *Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures...*" Part III, 5., goes on to say, "Test procedures for the analysis of pollutants shall conform to regulation 40 CFR 136... The permittee shall periodically calibrate and perform maintenance procedures on all monitoring and analytical instrumentation at intervals to insure accuracy of measurements."

The federal regulatory benchmark for all water and wastewater sampling/laboratory procedures is 40 CFR 136. This rule lists acceptable sampling and laboratory procedures published in "Standard Methods for the Examination of Water and Wastewater" (Standard Methods) among other resources such as the American Society for Testing and Materials (ASTM). Standard Methods is a comprehensive reference widely used throughout the industry and is cooperatively published by the American Water Works

Association, Water Environment Federation and the American Public Health Association.

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". *Without a QA program, the City is without defensible data showing compliance with the NPDES permit.* Standard Methods goes on to require the inclusion of Standard Operating Procedures (SOP) for each analytical method within the QA manual. The SOP should include the following applicable categories:

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

During the inspection, Mr. Shearwood was given example SOPs and/or sections of Standard Methods for every analytical method performed at the WWTW. **It is expected that the Village of New Richmond develop SOPs for the following analytical procedures (at a minimum) by no later than December 3, 2010: pH, temperature, dissolved oxygen and sample collection. Each of the SOPs should comply with the analytical methods outlined in Standard Methods. If any additional parameters become part of the laboratory testing program, an SOP should be written for that as well.**

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	Calibration performed with every use.	
	• Logbook maintained ²	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Buffer Expiration Date	• Buffers must not be expired	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• Other	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	• Teflon covered magnetic stirrer or equivalent for mixing ⁸	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

NR

Comments: : Teflon covered magnetic stirrer must be used for mixing. An ongoing lab equipment maintenance logbook must be maintained.

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
	• 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	N/A. LDO meter used.	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

NR

Comments: An ongoing lab equipment maintenance logbook must be maintained.

General Lab Criteria

Criteria	Standard Methods Requirement		Acceptable?	Rating
Sample Collection/Handling				NR
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized ¹⁴	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• SOP for cleaning of sampling equipment	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	• Logbook being maintained ²	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Comments: An ongoing lab equipment maintenance logbook must be maintained.				
Criteria	Standard Methods Requirement		Acceptable?	Rating
Bench sheets				NR
• General criteria	• Date(s) ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Analyst initials ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Blue or black ink pen ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration information ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> 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}	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	NR
	• Thermometer reads in increments of at least 0.1° C ⁵	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Comments: An ongoing lab equipment maintenance logbook must be maintained. An NIST traceable thermometer must be used for a minimum of annual calibration of all thermometers used at the WWTW. This is an instrument that could be borrowed from another laboratory.			
Number of Criteria Rated:			<input type="checkbox"/> Acceptable <input type="checkbox"/> Marginal <input type="checkbox"/> 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-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
NH3-N	P, G	500	G, C	Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO_3 to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate $\leq 6^{\circ}\text{C}$	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}\text{C}$ If chlorine present, add sodium thiosulfate tablet	6 hrs transport Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

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