Ohio | Environmental Protection Agency

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

1PB0003720091201

CHAMPAIGN MECHANICSBURG WWTP REYNOLDS, JOSEP 2009/12/01

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Southwest District Office

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Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

December 1, 2009

Mayor and Village Administrator
Village of Mechanicsburg
18 North Main Street
Mechanicsburg, Ohio 43044

RE: Mechanicsburg Compliance Evaluation Inspection / Notice of Violation

Dear Mayor and Administrator:

On November 23, 2009 Joe Reynolds performed a Compliance Evaluation Inspection at the Mechanicsburg Waste water Treatment Plant.

The inspection was conducted as part of the compliance review for the plant. This inspection included a more in depth examination of the laboratory than has been done previously. The intent is to assist Mechanicsburg in being able to document that the data produced by the laboratory is "true and accurate" and is therefore defensible. Please note that the NPDES permit in part III states that the permittee shall "Periodically calibrate and perform maintenance on all monitoring and instrumentation at intervals to ensure accuracy of measurements". Furthermore the certification statement required with the submittal of discharge monitoring reports asks the signer to certify "I believe the submitted information true, accurate and complete."

The inspection findings are included in the attached report. The report contains several items which require a response. The response dates for each of the items are noted in the Items Requiring a Response section of the report.

If you have any question concerning the inspection please contact Mr. Reynolds at (937) 285 - 6097.

Sincerely,

Martyn Burt
Compliance Supervisor
Division of Surface Water

cc: John Grosse, Alpha Omega
Wendell Cornelison, Maintenance Supervisor

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**
1PB00037*CD	OH0022209	11/23/2009	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
Village of Mechanicsburg WWTP *90 Mill Street* Mechanicsburg, Ohio 43044	9:20 AM	8/1/2007
	Exit Time	**Permit Expiration Date**
	11:45 AM	7/31/2012
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
John Grosse, Operator of Record *Wendell Cornelison, Maintenance Supervisor* April Davis, Village Administrator	(614) 679 – 5647 (937) 834 – 3858 (937) 834 - 3187	
Name, Address and Title of Responsible Official	**Phone Number**	
Mayor and Council 18 North Main Street Mechanicsburg, Ohio 43044	(937) 834 - 3187	

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

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

See attached report.

Inspector	Reviewer
11/30/09	12/1/09
Joe Reynolds Division of Surface Water Southwest District Office	Date
Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office	Date

Permit # :
NPDES #:

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

Comments/Status:

The Village is planning on moving the final outfall location next Spring.

Section F: 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) Compliance schedule contained in	Findings and orders
(e) Permittee is meeting compliance schedule.....	N

Comments/Status:

A new compliance schedule will need to be developed for the village.

Permit # :
NPDES #:

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

(a)	Standby power available.....generator ☒ or dual feed ☐.....	Y
(b)	Adequate alarm system available for power or equipment failures..	N
(c)	All treatment units in service other than backup units.....	Y
(d)	Wastewater Treatment Works classification (OAC 3745-7).....	II
(e)	Operator of Record holds unexpired license of class required by permit..... Class: II	Y
(f)	Copy of certificate of Operator of Record displayed on-site.....	N
(g)	Minimum operator staffing requirements fulfilled (OAC 3745-7)...	Y
(h)	Routine and preventative maintenance scheduled/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.....	N
(l)	Regulatory agency notified of bypasses..... *On MORs* ☐ *and/or Spill Hotline (1-800-282-9378)* ☐	N/A
(m)	Any hydraulic and/or organic overloads since last inspection.....	N

Record Keeping:

(a)	Log book provided.....	Y
(b)	Format of log book (i.e. computer log, hard bound book) 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.....	N
	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
(d)	Has the operator of record submitted written notification 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

Section G: Operation & Maintenance (con't)

Collection System:

(a)	Percent combined system: 0%	
(b)	Any collection system overflows since last inspection..... (CSO ☐ and/or SSO ☒)	Y
(c)	Regulatory agency notified of overflows (SSOs).....	Y
(d)	CSO O&M plan provided and implemented.....	N/A
(e)	CSOs monitored and reported in accordance with permit.....	N/A
(f)	Portable pumps used to relieve system.....	N
(g)	Lift station alarms provided and maintained.....	N
(h)	Are lift stations equipped with permanent standby power or equivalent.....	Y
(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.....	N

Comments/Status:

A portable generator is available to provide back-up power to the lift station. An auto dialer system is being looked at as possible alarm system for the lift station. The village continues to work on infiltration and inflow in the collection system.

Permit # :
NPDES #:

Section H: Sludge Management

(a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted ☐ N/A ☒

(b) Sludge management plan current..... N/A
(c) Sludge adequately disposed..... Y
(Method:Land application)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... Y
(Name:Burch Hydro, possibly Polecat)
(f) Has amount of sludge generated changed significantly since last inspection..... N
(g) Adequate sludge storage provided at plant..... Y
(h) Land application sites monitored and inspected per SMP..... N
(i) Records kept in accordance with State and Federal law..... Y
(j) Any complaints received in last year regarding sludge..... N
(k) Is sludge adequately processed (digestion, pathogen control)..... Y

Comments/Status:

The village produces a Class B sludge. They meet the 2 million bacteria count. The sludge is processed in an aerobic digester. The sludge is injected during application.

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary flow measuring device operated and maintained..... Y
Type of device: Ultrasonic & Parshall flume ☐ Ultrasonic & Weir ☒ Weir ☐
Calculated from influent ☐ Other ☐(Specify:)

(b) Calibration frequency adequate ..... Y
(Date of last calibration: 8/21/2009)
(c) Secondary instruments operated and maintained..... Y
(d) Flow measurement equipment adequate to handle full range of flows..... Y
(e) Actual flow discharged is measured..... Y
(f) Flow measuring equipment inspection frequency
☒Daily ☐Weekly ☐monthly ☐other

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..... Y
(see GLC page 4 and 8)
(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

Laboratory:

General

(a) Do you have written Standard Operating Procedures (SOP's) for all analysis performed onsite? N

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

- 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: SOP's are required per Standard Methods 1020A and states "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."

(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/A
(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

Quality Control/Quality Assurance

(g) Quality assurance manual provided and maintained..... Y
(h) Satisfactory calibration and maintenance of instruments/equipment. N
(see score from GLC page 6)
(i) Results of latest USEPA quality assurance performance sampling program: ☐ Satisfactory ☐ Marginal ☐ Unsatisfactory
Date:

(j) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: BOD, SS, Ammonia, Sludge.

Lab name: Alpha Omega.

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall Number	Outfall sign in place?	Oil sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	NA	None	None	None	None	In channel	None	NA

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?

Items Requiring a Response

1. The village needs to begin facilities planning to address on-going compliance issues (final effluent limit violations, and collection system infiltration and flow problems). All facilities upgrades should be designed to meet the limits contained in the village's National Pollutant Discharge Elimination System (NPDES) permit, 1PB00037*CD. A preliminary schedule for implementation of facilities planning work must be submitted to this office by no later than March 15, 2010.

2. A preliminary schedule for construction of the new chlorine feed building, and relocation of the final outfall structure must be submitted to this office by no later than January 18, 2010.

3. To the extent that it is practical (limited disturbance to the sludge in the effluent channel) the village must remove plastics that collect / have collected in the final outfall channel. Interim plans (until the fine screen can be installed) to control the loss of plastics from the treatment system (i.e. temporary baffle, screens on the decant arm, etc.) must be developed. A written response detailing how these items will be addressed must be submitted to this office by no later than March 15, 2010.

4. A preliminary schedule for the installation of a new screen and dialer alarm system at the main lift station must be submitted to this office by no later than March 15, 2010.

5. Written verification as to the date the effluent automatic sampler was repaired must be submitted to this office by no later than January 18, 2010.

6. A preliminary schedule for development of Standard Operating Procedures for all lab analysis performed by the village should be submitted to this office by no later than January 18, 2010. Along with this information a written discussion should be provided as to how any marginal or unacceptable rating on the "General Lab Criteria" have / will be addressed.

Inspection Findings

The Village of Mechanicsburg currently holds National Pollutant Discharge Elimination System (NPDES) permit number 1PB00037*CD. The permit was issued on June 27, 2007 and it expires on July 31, 2012.

The treatment system consist of the following units, main lift station with muffin monster and bar rack, treatment plant bar screen, flow equalization lagoon, Sequential Batch Reactor, chlorination / dechlorination tank and post aeration tank.

On August 4, 2005 the village agreed to Findings and Orders issued by the Director Ohio EPA in order to resolve non-compliance issues with their NPDES permit. The village is currently in non-compliance with the planning and permit approval sections of the Orders. Please be advised all compliance schedule violations are significant violations. These violations need to be addressed immediately. The village will be contacted in the near future to begin negotiation of a revised compliance schedule.

The village is currently looking for funding sources to begin the facilities planning process. Debt on three loans will be retired at the end of 2010. This will free up money to support the findings of this planning.

Projects already under review include a bar screen and automatic dialer on the main lift station. Note, fine screens are required at all waste water treatment plant that land apply solids. This work is scheduled for completion some time in 2011.

Projects being considered for 2010 include construction of a new chlorine feed building, located next to the chlorine contact tank, and relocation of the final outfall structure directly on the main channel of the Little Darby.

In January, 2005 the Ohio EPA conducted a Performance Evaluation of the waste water treatment plant. The village has enacted several of the recommendations from this evaluation. The influent flow control gates have been replaced. Temporary return plumbing to allow for a higher return rate from the EQ lagoon to the reactor has been added. Additionally, the village is looking at adding fine screens to the influent lift station in 2011.

Waste water treatment oversight is currently contracted with Alpha Omega. John Grosse (Class III waste water operator) is the Operator of Record in responsible charge of plant operations. Wendell Cornelison is the Maintenance Superintendent. Wendell is currently working on his Class I waste water certification.

Inspection Findings (continued)

When the village's National Pollutant Discharge Elimination System (NPDES) permit comes up for renewal (expiration date July 31, 2012) the village will be required to meet the minimum staffing requirements contained in Ohio Administrative Code Rule 3745 – 7 – 04 (C), "Staffing", (Class II plant, 5 days per week, 20 hours per week).

Infiltration and inflow (I/I) into the collection system is contributing to peak flows at the plant. The village has conducted smoke testing and inspections of part of the collection system. This work has identified areas that are in need of repair. The village is looking at slip lining those sections identified as needing repair.

Influent flows above 0.3 million gallons are equalized in the old treatment lagoons. The lagoons can provide up to 3.0 million gallons of storage. If flows become too high the air is shut off to the aeration system and the system is operated in flow through mode. Lagoon levels are recorded on a daily basis.

Alum is being added to the head of the aeration system to help with nutrient limits.

The village land applies approximately 100,000 to 120,000 gallons of sludge annually. Historically Burch Hydro has removed solids from the plant.

Wendell Cornelison schedules monthly maintenance activities for the plant. Maintenance forms are used by plant staff when non-scheduled maintenance is required. An Operation and Maintenance log as required by Ohio Administrative Code 3745 – 7 – 09 is being maintained. Operator departure times need to be recorded.

A new chlorine feed building is scheduled for installation in 2010. The building will be located next to the chlorine contact tank. A question was raised concerning the need for a Permit to Install. If new (different size or type of equipment) chlorine feed equipment is included as part of the installation a Permit to Install application must be submitted to the agency. If the installation does not include new equipment, then a copy of plans showing the basic location / layout (including equipment to be housed) of the structure can be submitted to this office as documentation of the installation.

Between September 1, 2008 and September 31, 2009 Mechanicsburg reported 52 final effluent violations. These violations include: 1 Fecal Coliform, 24 Suspended Solids, 2 CBOD, 9 Chlorine, 3 Ammonia, 11 phosphorus, and 2 Dissolved Oxygen. During this same time period there were 39 frequency violations.

Facility Inspection

Automatic slide gates are being used to divide flows between the two Sequential Batch Reactors. There have been some icing issues with the gates during winter months.

Both reactors are receiving influent flow on a continuous basis (Influent Continuous Extended Aeration System (ICEAS) mode).

Flows above 300,000 gallons are diverted to the equalization lagoon through a diversion pipe located in the splitter box. A bucket covers the inlet to the equalization lagoon. This inlet is adjusted (move bucket to various degrees of open) in anticipation of pending storms.

One of the reactors was being mixed uniformly. The mixed liquor was dark brown. The MLSS was being maintained around 4500 mg/l. There was Nicardia foam on the surface of the reactor in settle mode. Solids will be removed from the plant when a new contract is established with the selected waste hauler.

Three aeration blowers are used to provide air to the system. One serves the aeration tank, one serves the digester, and one is a back-up. All three were working at the time of the inspection.

The aerobic sludge digester was ¾ full. One of the air lines was plugged. This line will be unclogged when solids are removed later this year.

The chlorine contact tank serves as a flow through tank at this time of year (November through April). Solids are removed from the chlorine contact tank twice per year. Some denitrification bubbles were noted.

The post aeration tank had a dark tint. A light foam was forming. A fine black solid (ash) was noted leaving the tank. The post aeration mixer was repaired since the last inspection.

Effluent samples are collect at the post aeration tank. The sampler and sample lines were clean. The sampler was reading 13 degrees Celsius at the time of the inspection. The temperature in the sampler has been slowly increasing.

The final effluent was clear. The effluent channel was covered in algae. Plastics and old solids were noted in the effluent channel. The sediments were black as a result.

General Lab Criteria

Criteria	Std Methods Required	Status	Rating
Balance • Calibration by 3rd Party • Standard Weights • Calibration Frequency / Documentation • Cleanliness, air movement, vibration	• Either NIST Class s or ASTM/ANSI Class 1 weights • Calibration verification required for each sample set analyzed or every 10 samples analyzed • Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum • Service and recalibrate annually (manufacturer representative or comparable) • Must be able to measure to 0.1 grams • Instrument manual available	Not in use.	NE
Comments:			
Drying Oven • Temperature Recordkeeping • Calibration Frequency / Documentation	• Thermometer calibrated annually with a NIST traceable thermometer • Correction factor posted on thermometer / equipment • Temperature recorded with each use • Thermometer temperature in 0.1° C increments • Acceptable temperature range is 103° – 105° F • Instrument manual available	Not in use.	NE
Comments:			

General Lab Criteria

pH Meter • Buffers Used for Calibration • Minimum of 2 point calibration • Buffer Expiration Date • Calibration Frequency / Documentation • Slope Documentation / Acceptability	• Calibration required with each use • Should compare to another pH meter monthly – if available • Buffers must not be expired • Buffers used for calibration must bracket anticipated result • Slope acceptable range shown on benchsheet • Instrument manual available	Acceptable Not currently Acceptable – 4/7/2010 Acceptable Unacceptable Acceptable	M
Comments:			
DO Meter • Calibration Frequency / Documentation • Calibration Method	• Follow mfg's recommendation for calibration • Calibration method / frequency (each use) • Small to no bubble present under membrane (must be smaller than the lead in # 2 pencil) • Logbook maintained • Instrument manual available • Air or known DO calibration method	Acceptable Acceptable Acceptable Unacceptable Acceptable Acceptable	M
Comments: Log books should be established for both meters. The pH bench sheets should include the acceptable slope range.			

General Lab Criteria

Incubator • Temperature Recordkeeping • Temperature Calibration / Documentation	• Check / record temperature twice daily for each shelf in use • Thermometer calibrated semi-annually with NIST traceable thermometer • Temperature correction information posted on incubator • Acceptable temperature range is 20° F +/1.0° • Instrument manual available	Not in use	NE
Comments:			
Refrigerator • Temperature Recordkeeping • Temperature Calibration / Documentation	• Temperature Log (thermometer reads to 0.1 °C) • Temperature calibration (annual check NIST traceable thermometer) • Thermometer held in water bath. Total immersion or partial (line on thermometer to ID immersion depth). • Refrigerator temperature 4° Celsius (+/-2°). • No storage of volatile solvents, food, or beverages.	Unacceptable Unacceptable Unacceptable Marginal Acceptable	U
Comments:			

General Lab Criteria

Chlorine Meter • Calibration Frequency / Documentation • Calibration Method • Standard expiration date • Standards used for calibration • Slope Documentation / Acceptability	• pH / millivolt meter read to 0.1 mV • Electrode free of deposits and foreign material • Calibration method / frequency (each use) • Standards used for calibration (three iodate solutions 0.2, 1.0, 5.0) • Calibration curve (acceptable slope) • Log book being maintained. • Instrument manual available • Standards Expiration Date	Acceptable Acceptable Acceptable Acceptable Acceptable Unacceptable Acceptable Acceptable	M
Comments:			
Ammonia Meter • Calibration Frequency / Documentation • Calibration Method • Standard expiration date • Standards used for calibration • Slope acceptability	• Electrode free of deposits and foreign material • Calibration method / frequency (each use) • Teflon covered magnetic stirrer for sample mixing • Standards used for calibration (3 ammonia solution 10 mg/l, 1 mg/l, and 0.1 mg/l) • Calibration curve (acceptable slope) • Log book being maintained • Instrument manual available		NE
Comments:			

General Lab Criteria

Sample Handling / Collection • Sample Labeling • Chain of Custody	• Samples labeled (description, date, time, preservative added, initialed). • Chain of custody (description, date, time, signature). • Check for correct sample container, preservatives, temperature, hold times • Composite samples refrigerated during sample collection • Equipment and fields blanks utilized • SOP for cleaning of sampling equipment • Logbook being maintained	Acceptable Acceptable Acceptable Acceptable Unacceptable Unacceptable Unacceptable	M
Comments:			
Desiccator	• Properly working seals. • Desiccant fresh (blue color) • Log book being maintained • Instrument manual available	Not in use.	NE
Comments:			
Benchsheets	• One parameter / benchsheet (recommended) • Date(s) • Analyst initials • Equations, calculations, units for all measurements, notations, and results present • Calibration information • Blue or black ink pen • Corrections, single line through, initialed and dated	Using one bench sheet Acceptable Unacceptable Unacceptable Unacceptable Acceptable Not applicable	U
Comments:			

General Lab Criteria

Hot Water Bath • Temperature Recordkeeping • Temperature Calibration / Documentation • Water Level	• Temperature Log (thermometer reads to 0.2° C) • Temperature calibration (semiannual check NIST traceable thermometer) • Thermometer total immersion or partial (line on thermometer to ID immersion depth) • Incubator temperature 44.5° C +/- 0.2° • Use only stainless steel, plastic coated or other corrosion proof racks	Not in Use	NE
Comments:			
Autoclaves / Steam Sterilizers • All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C for 12-15 minutes • 45 minutes total elapsed time in autoclaves without cool down and vapor removal systems • Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used • Test monthly for sterilization efficacy using a biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, or capsules • Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached.		NE
Comments:			

Number Acceptable	
Number Marginal	4
Number Unacceptable	2

General Lab Criteria

Ratings

Acceptable – 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 – 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 – 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).

Criteria for Recommending PAI Audit from DES:
>60% Marginal Rating
>45% Combination of Marginal and Unacceptable Rating
>30% Unacceptable

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 Degrees 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
- 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

Preservation and Holding Times

Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate 4° C +/-2 °	6h	48h
TSS	P, G	200	G, C	Refrigerate 4° C +/-2 °	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 4° C +/-2 °	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 4° C +/-2 °	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	C, G	Refrigerate 4° C +/-2 °	7 d	7 d until extraction 40 day after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate 4° C +/-2 °	7 d	7 d until extraction 40 day after extraction
Fecal Coliform	G, P (Sterilized)	100	G	Refrigerate 4° C +/-2 °, If chlorine present add sodium thiosulfate tablet,	start analysis within 2 hrs of sample collection	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate 4° C +/-2 °	28 d	28 d

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.