



**Environmental  
Protection Agency**

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



\*1PB0003520091201\*

PREBLE

WEST ALEXANDRIA WWTP

WARE, MAUREEN 2009/12/01

Proble  
w. Alex  
sewerage



State of Ohio Environmental Protection Agency

**Southwest District Office**

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Dayton, Ohio 45402

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

December 1, 2009

Mayor and Council, West Alexandria  
16 North Main St.  
West Alexandria, Ohio 45381

RE: Compliance Evaluation Inspection (CEI)  
West Alexandria WWTP  
Permit Number 1PB00035

Mayor and Council:

On November 19, 2009, Maureen Ware and Joe Reynolds conducted a Compliance Evaluation Inspection at the West Alexandria Wastewater Treatment Plant (WWTP). A copy of the inspection report is enclosed. The inspection report contains one marginal rating for the effluent/receiving waters, and one unsatisfactory rating for the laboratory.

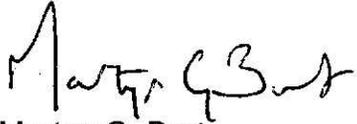
The compliance inspection included a more in depth examination of the laboratory than has been done previously. The intent is to assist West Alexandria in being able to document that the data produced by the laboratory is "true and accurate" and is therefore defensible. Please note that the NPDES permit 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."

Please respond by January 15, 2010 with a description of how West Alexandria intends to correct the deficiencies of the WWTP laboratory identified in the attached report. In addition, the report should include a description of how the effluent quality will be improved. Your response should include the dates actions will be initiated and completed for each noted laboratory deficiency and effluent improvement measure.

Page 2  
December 1, 2009

If you have any questions or comments concerning the contents of this letter, please feel free to contact Maureen M. Ware at (937) 285-6103.

Sincerely,

A handwritten signature in black ink that reads "Martyn G. Burt". The signature is written in a cursive style with a large initial "M".

Martyn G. Burt  
Environmental Supervisor  
Division of Surface Water

cc: Chris Day  
cc: Preble County Health Dept.



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
1PB00035	OH0021598	11/19/2009	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
West Alexandria WWTP 33 Desoto Drive West Alexandria, Ohio 45381	10:00 AM	5/1/7
	Exit Time	Permit Expiration Date
	12:30 PM	4/30/12
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Chris Day, Superintendent	937-839-4151	
Name, Address and Title of Responsible Official	Phone Number	
Mayor and Council PO Box 265 West Alexandria, Ohio 45381		

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	N	Compliance Schedule
S	Operations & Maintenance	M	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)	
<p>A marginal rating for Effluent/Receiving Waters was due to sludge clumps rising and going over the clarifier weirs as well as a sheen plastic floatables, and foam in the chlorine contact tank. The Laboratory was rated unsatisfactory due to rating no satisfactory, 2 marginal, and 6 unsatisfactory sections of the attached General Laboratory Criteria (GLC).</p>	
Inspector	Reviewer
 Maureen M. Ware Division of Surface Water Southwest District Office Date: 12/11/09	 Marty G. Burt Environmental Supervisor Division of Surface Water Southwest District Office Date: 12/11/09

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/A
- (g) Notification given to State of new, different or increased discharges..... Y
- (h) All discharges are permitted..... Y
- (i) Number and location of discharge points are as described in permit..... Y

Comments/Status:

**Section F: Compliance**

- (a) Any significant violations since the last inspection..... N
- (b) Permittee is taking actions to resolve violations..... Y
- (c) Permittee has a compliance schedule..... N/A
- (d) Compliance schedule contained in
- (e) Permittee is meeting compliance schedule..... N/A

Comments/Status:

Permit # :  
NPDES #:

**Section G: Operation & Maintenance**

**Treatment Works:**

Treatment facility properly operated and maintained

- (a) Standby power available.....generator [X] 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..... Y  
Class: II
- (f) Copy of certificate of Operator of Record displayed on-site.... Y
- (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..... N/A  
On MORs  and/or Spill Hotline (1-800-282-9378)
- (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)
- (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&N
  - 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

Permit # :  
NPDES #:

**Section G: Operation & Maintenance (con't)**

**Collection System:**

- (a) Percent combined system: 0%
- (b) Any collection system overflows since last inspection..... N  
(CSO  and/or SSO )
- (c) Regulatory agency notified of overflows (SSOs)..... N/A
- (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..... Y
- (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-N
- (k) Are any portions of the sewer system at or near capacity..... N

Comments/Status:

A light that is visible from the roadway serves as the alarm system.

The logbook lacks information about requests for repairs.

Permit # :  
NPDES #:

**Section H: Sludge Management**

- (a) Sludge management plan (SMP)  
Submitted date:                      Approval #:                      Not submitted     N/A
  
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y  
(Method: landfill)
- (d) If sludge is incinerated, where is ash disposed of ..... N/A
- (e) Is sludge disposal contracted..... N  
(Name:                      )
- (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/A
- (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:**

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary flow measuring device operated and maintained..... Y  
Type of device: Ultrasonic & Parshall flume [ ] Ultrasonic & Weir [X]  
Weir [ ] Calculated from influent [ ]                      Other [ ] (Specify:                      )
  
- (b) Calibration frequency adequate ..... Y  
(Date of last calibration: Spring 09)
- (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 [X] Weekly [ ] Monthly [ ] Other [ ]

**Comments/Status:**

Permit # :  
NPDES #:

**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 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:

Permit # :  
NPDES #:

- (j) Commercial laboratory used..... Y  
Parameters analyzed by commercial lab: CBOD, TSS, NH3, Fecal,  
Sludge.

Lab name: MASI

**Comments/Status:**

Oil and grease samples are being transferred from sampling jar prior to analysis.

**Section J: Effluent/Receiving Water Observations**

Outfall Number	Outfall sign in place?	Oil sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	N	Y	N	N	Y	Y	N	

**Comments/Status:**

A sheen was present in the chlorine contact tank. It was not clear if it was from oil or another unknown substance. Foam and plastic solids were evident in the chlorine contact tank.

**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?

Permit # :  
NPDES #:

**Comments/Status:**

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## General Lab Criteria

Criteria	Std Methods Required	Status	Rating
<p><b>Balance</b></p> <ul style="list-style-type: none"> <li>• Calibration by 3<sup>rd</sup> Party</li> <li>• Standard Weights</li> <li>• Calibration Frequency / Documentation</li> <li>• Cleanliness, air movement, vibration</li> </ul>	<ul style="list-style-type: none"> <li>• Either NIST Class s or ASTM/ANSI Class 1 weights</li> <li>• Calibration verification required for each sample set analyzed or every 10 samples analyzed</li> <li>• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum</li> <li>• Service and recalibrate annually (manufacturer representative or comparable)</li> <li>• Must be able to measure to 0.1 grams</li> <li>• Instrument manual available</li> </ul>	<p>Unacceptable Unacceptable</p> <p>Acceptable</p> <p>Unacceptable</p> <p>Acceptable Unacceptable</p>	U
<p>Comments: NIST weights are not being used to calibrate the balance. Calibration verification was not being performed. Annual calibration and service (third party) was not being performed. A log book is not maintained with meter. The instrument manual was not available in the lab.</p>			
<p><b>Drying Oven</b></p> <ul style="list-style-type: none"> <li>• Temperature Recordkeeping</li> <li>• Calibration Frequency / Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Thermometer calibrated annually with a NIST traceable thermometer</li> <li>• Correction factor posted on thermometer / equipment</li> <li>• Temperature recorded with each use</li> <li>• Thermometer temperature in 0.1° C increments</li> <li>• Acceptable temperature range is 103° – 105° F</li> <li>• Instrument manual available</li> </ul>	<p>Unacceptable</p> <p>Not Established</p> <p>Acceptable Unacceptable Unacceptable (120 degrees) Unacceptable</p>	U
<p>Comments: Annual calibration with an NIST traceable thermometer was not being performed. Two thermometers were being used. The scale was not high enough on one of the thermometers. Neither reads to 0.1 degrees C. A log book is not maintained with meter. The equipment manual was not available in the lab.</p>			

## General Lab Criteria

<p><b><u>pH Meter</u></b></p> <ul style="list-style-type: none"> <li>• Buffers Used for Calibration</li> <li>• Minimum of 2 point calibration</li> <li>• Buffer Expiration Date</li> <li>• Calibration Frequency / Documentation</li> <li>• Slope Documentation / Acceptability</li> </ul>	<ul style="list-style-type: none"> <li>• Calibration required with each use</li> <li>• Should compare to another pH meter monthly – if available</li> <li>• Buffers must not be expired</li> <li>• Buffers used for calibration must bracket anticipated result</li> <li>• Slope acceptable range shown on benchsheet</li> <li>• Instrument manual available</li> </ul>	<p>Acceptable Currently No</p> <p>Unacceptable (Exp. 08) Acceptable</p> <p>Unacceptable Unacceptable</p>	<p>U</p>
<p>Comments: Both pH buffer solutions were expired. The slope ranges were not being recorded on the bench sheets. A log book is not maintained with meter. The instrument manual was not available in the lab.</p>			
<p><b><u>DO Meter</u></b></p> <ul style="list-style-type: none"> <li>• Calibration Frequency / Documentation</li> <li>• Calibration Method</li> </ul>	<ul style="list-style-type: none"> <li>• Follow mfg's recommendation for calibration</li> <li>• Calibration method / frequency (each use)</li> <li>• Small to no bubble present under membrane (must be smaller than the lead in # 2 pencil)</li> <li>• Logbook maintained</li> <li>• Instrument manual available</li> <li>• Air or known DO calibration method</li> </ul>	<p>Acceptable Acceptable (air cal.) Acceptable</p> <p>Unacceptable Unacceptable Acceptable</p>	<p>M</p>
<p>Comments: A log book is not maintained with meter. The instrument manual was not available in the lab.</p>			

## General Lab Criteria

<p><b><u>Incubator</u></b></p> <ul style="list-style-type: none"> <li>• Temperature Recordkeeping</li> <li>• Temperature Calibration / Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Check / record temperature twice daily for each shelf in use</li> <li>• Thermometer calibrated semi-annually with NIST traceable thermometer</li> <li>• Temperature correction information posted on incubator</li> <li>• Acceptable temperature range is 20° C +/-1.0°</li> <li>• Instrument manual available</li> </ul>	<p>NE / Not in use</p>	
<p>Comments:</p>			
<p><b><u>Refrigerator</u></b></p> <ul style="list-style-type: none"> <li>• Temperature Recordkeeping</li> <li>• Temperature Calibration / Documentation</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature Log (thermometer reads to 0.1 °C)</li> <li>• Temperature calibration (annual check NIST traceable thermometer)</li> <li>• Thermometer held in water bath. Total immersion or partial (line on thermometer to ID immersion depth).</li> <li>• Refrigerator temperature 4° Celsius (+/-2°).</li> <li>• No storage of volatile solvents, food, or beverages.</li> </ul>	<p>Unacceptable Unacceptable</p> <p>Unacceptable (No Therm.)</p> <p>Unacceptable (unknown) Acceptable</p>	<p>U</p>
<p>Comments:</p> <p>A thermometer was not being maintained in the refrigerator. Accordingly, the temperature of the refrigerator could not be verified. The refrigerator needed to be defrosted and cleaned. A log book is not maintained with the refrigerator.</p>			

## General Lab Criteria

<p><b>Chlorine Meter</b></p> <ul style="list-style-type: none"> <li>• Calibration Frequency / Documentation</li> <li>• Calibration Method</li> <li>• Standard expiration date</li> <li>• Standards used for calibration</li> <li>• Slope Documentation / Acceptability</li> </ul>	<ul style="list-style-type: none"> <li>• pH / millivolt meter read to 0.1 mV</li> <li>• Electrode free of deposits and foreign material</li> <li>• Calibration method / frequency (each use)</li> <li>• Standards used for calibration (three iodate solutions 0.2, 1.0, 5.0)</li> <li>• Calibration curve (acceptable slope)</li> <li>• Log book being maintained.</li> <li>• Instrument manual available</li> <li>• Standards Expiration Date</li> </ul>	<p>NE / Not in use</p>	
<p>Comments:</p>			
<p><b>Ammonia Meter</b></p> <ul style="list-style-type: none"> <li>• Calibration Frequency / Documentation</li> <li>• Calibration Method</li> <li>• Standard expiration date</li> <li>• Standards used for calibration</li> <li>• Slope acceptability</li> </ul>	<ul style="list-style-type: none"> <li>• Electrode free of deposits and foreign material</li> <li>• Calibration method / frequency (each use)</li> <li>• Teflon covered magnetic stirrer for sample mixing</li> <li>• Standards used for calibration (3 ammonia solution 10 mg/l, 1 mg/l, and 0.1 mg/l)</li> <li>• Calibration curve (acceptable slope)</li> <li>• Log book being maintained</li> <li>• Instrument manual available</li> </ul>	<p>NE</p>	
<p>Comments:</p>			

## General Lab Criteria

<p><b><u>Sample Handling / Collection</u></b></p> <ul style="list-style-type: none"> <li>• Sample Labeling</li> <li>• Chain of Custody</li> </ul>	<ul style="list-style-type: none"> <li>• Samples labeled (description, date, time, preservative added, initialed).</li> <li>• Chain of custody (description, date, time, signature).</li> <li>• Check for correct sample container, preservatives, temperature, hold times</li> <li>• Composite samples refrigerated during sample collection</li> <li>• Equipment and fields blanks utilized</li> <li>• SOP for cleaning of sampling equipment</li> <li>• Logbook being maintained</li> </ul>	<p>Unacceptable</p> <p>Unacceptable</p> <p>Unacceptable</p> <p>Acceptable</p> <p>Unacceptable</p> <p>Unacceptable</p> <p>Unacceptable</p>	<p>U</p>
<p>Comments:</p> <p>The sample label did not include the date, time, collectors initials, or description of preservation technique used. A Chain of custody form is not being used. Equipment and field blanks were not being used. A SOP for cleaning of the sampling equipment needs to be developed. A log book is not maintained.</p>			
<p><b><u>Desiccator</u></b></p>	<ul style="list-style-type: none"> <li>• Properly working seals.</li> <li>• Desiccant fresh (blue color)</li> <li>• Log book being maintained</li> <li>• Instrument manual available</li> </ul>	<p>Marginal</p> <p>Unacceptable (Unknown)</p> <p>Unacceptable</p> <p>Unacceptable</p>	<p>U</p>
<p>Comments:</p> <p>Vaseline is reportedly used to seal the desiccator. The Desiccator did not have samples in it at the time of the inspection. Color changing desiccant is not used. The freshness of the desiccant is not determined. A log book is not maintained with the desiccator.</p>			

## General Lab Criteria

<p><b><u>Benchsheets</u></b></p>	<ul style="list-style-type: none"> <li>• One parameter / benchsheet (recommended)</li> <li>• Date(s)</li> <li>• Analyst initials</li> <li>• Equations, calculations, units for all measurements, notations, and results present</li> <li>• Calibration information</li> <li>• Blue or black ink pen</li> <li>• Corrections, <i>single line through, initialed and dated</i></li> </ul>	<p>Currently not Acceptable Acceptable Unacceptable (show units)</p> <p>Acceptable Acceptable No corrections noted</p>	<p>M</p>
<p>Comments: The units of all recorded measurements should be included on the bench sheets. Any calibration information for the parameters being recorded should be included on the bench sheet.</p>			
<p><b><u>Hot Water Bath</u></b></p> <ul style="list-style-type: none"> <li>• Temperature Recordkeeping</li> <li>• Temperature Calibration / Documentation</li> <li>• Water Level</li> </ul>	<ul style="list-style-type: none"> <li>• Temperature Log (thermometer reads to 0.2° C)</li> <li>• Temperature calibration (semiannual check NIST traceable thermometer)</li> <li>• Thermometer total immersion or partial (line on thermometer to ID immersion depth)</li> <li>• Incubator temperature 44.5° C +/- 0.2°</li> <li>• Use only stainless steel, plastic coated or other corrosion proof racks</li> </ul>	<p>NE (Not being used)</p>	
<p>Comments:</p>			

## General Lab Criteria

<p><b>Autoclaves / Steam Sterilizers</b></p> <ul style="list-style-type: none"> <li>• All apparatus utilized is adequately sterilized before use</li> </ul>	<ul style="list-style-type: none"> <li>• Sterilizing temperature 121° C for 12-15 minutes</li> <li>• 45 minutes total elapsed time in autoclaves without cool down and vapor removal systems</li> <li>• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used</li> <li>• Test monthly for sterilization efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules</li> <li>• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached.</li> </ul>	<p>NE (Not being used)</p>	
<p>Comments:</p>			
		Number Acceptable	
		Number Marginal	<b>2</b>
		Number Unacceptable	<b>6</b>

### 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:

## General Lab Criteria

- >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 <sub>2</sub> SO <sub>4</sub> 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	300	G	Analyze immediately	0.25h	0.25 h

### General Lab Criteria

Temperature	Bottle P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO <sub>3</sub> 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 <sub>2</sub> SO <sub>4</sub> 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.

