Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

January 3, 2012

Re: Monroe County
Ormet Primary Aluminum
Compliance Evaluation Inspection
NDPES Permit 0IE00005*MD
Correspondence (IWW)

Mr. John Reggi, Director
Corporate Environmental Services
Ormet Primary Aluminum
P.O. Box 176, SR 7
Hannibal, Ohio 43931

Dear Mr. Reggi:

On November 22, 2011, I conducted a compliance evaluation inspection at Ormet Primary Aluminum located in Hannibal, Ohio. Brian Ashbrook represented Ormet and accompanied me during the inspection. The purpose of the inspection was to determine Ormet Primary Aluminum's compliance with NPDES Permit Number 0IE00005*MD and the Ohio Water Pollution Control Act, Revised Code Chapter 6111.

As a result of the inspection and review of our files, I have the following comment:

PART III. 2. D. of the Permit states, The effluent shall, at all times, be free of substances In amounts that either singly or in combination with other substances are toxic to human, animal, or aquatic life.

Since the last inspection, Ormet has violated its NPDES effluent permit limits. Provide in writing within thirty days of receipt of this letter the steps Ormet is taking to prevent future permit violations.

Attached is a copy of the inspection report which indicates the areas evaluated during the inspection and a copy of the lab audit. Due to the above comments, I rated the Compliance Schedules/Violations section of the inspection as ***marginal.*** Ormet should take the appropriate actions to maintain the facility in compliance with all terms and conditions of the NPDES permit.

Southeast District Office
2195 Front Street
Logan, OH 43138-8637

740 | 385 8501
740 | 385 6490 (fax)
www.epa.ohio.gov

The Ohio EPA strongly encourages pollution prevention as the preferred approach for waste management. The first priority of pollution prevention is to eliminate the generation of wastes and pollutants at the source (source reduction). For those wastes or pollutants that are generated, the second priority is to recycle or reuse them in an environmentally sound manner. You can benefit economically, help preserve the environment, and improve your public image by implementing pollution prevention programs. For more information about pollution prevention, including fact sheets and U.S. EPA's Facility Pollution Prevention Guide, (EPA/600/R-92/088), you may contact the Ohio EPA Pollution Prevention Section at (614) 644-3469 or me for additional information.

Sincerely,

Scott Foster
Environmental Specialist 2
Division of Surface Water

SF/dh

Enclosures

c: Brian Ashbrook, Environmental Supervisor
c: Joe Rykowski, Environmental Technician

NPDES
Compliance Inspection Report

A. NATIONAL DATA SYSTEM CODING

Permit No.	NPDES No.	Date	Inspection Type	Inspector	Facility Type
0IE00005*MD	OH0011550	November 22, 2011	C	S	2

B. FACILITY DATA

Name & Location of Facility Inspected	Entry Time	Permit Effective Date
Ormet Primary Aluminum Corp. Hannibal Reduction Division P.O. Box 176, S.R. 7 Hannibal, Ohio 43931	10:25 a.m.	July 1, 2010
	Exit Time	**Permit Expiration Date**
	12:10 p.m.	January 31, 2014

Name(s) & Title(s) of On-Site Representative(s)	Phone Number(s)
Brian Ashbrook, Environmental Supervisor Joe Rykowski, Environmental Technician	(740) 483-2732 (740) 483-2649
Name, Address, & Title of Responsible Official	**Phone Number**
John Reggi P.O. Box 176, S.R. 7 Hannibal, Ohio 43931	(740) 483-2659

C. AREAS EVALUATED DURING INSPECTION

S	Permit	S	Flow Measurement	N/A	Pretreatment
S	Records/Reports	S	Laboratory	M	Compliance Schedules
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	N/A	Sludge Storage/Disposal	N/A	Other
N/A	Collection System				

(S = Satisfactory; M = Marginal; U = Unsatisfactory; N = Not Evaluated; N/A = Not Applicable)

D. SUMMARY OF FINDINGS/COMMENTS (attach additional sheets if necessary)

See attached letter.

Scott Foster, Inspector, Ohio EPA, Southeast District Office — Date 1/3/12

Jennifer M. Witte, Reviewer, Ohio EPA, Southeast District Office — Date 1/4/12

Sections E through K: Complete on all inspections as appropriate (N/A = Not Applicable; N/E = Not Evaluated)

E. PERMIT VERIFICATION

Inspection Observations Verify the Permit	YES	NO	N/A	N/E
a. Correct name & mailing address of permittee	☒	☐	☐	☐
b. Correct name & location of receiving waters	☒	☐	☐	☐
c. Product(s) & production rates conform with permit application (industries)	☒	☐	☐	☐
d. Flows & loadings conform with NPDES permit	☒	☐	☐	☐
e. Treatment processes are as described in permit application/briefing memo	☒	☐	☐	☐
f. New treatment process(es) added since last inspection	☐	☒	☐	☐
g. Notification given to state of new, different, or increased discharges	☒	☐	☐	☐
h. All discharges are permitted	☒	☐	☐	☐
i. Number & location of discharge points are as described in permit	☒	☐	☐	☐

Comments:
6 out of 6 potlines in operation.
Casting lines not operating.

F. COMPLIANCE SCHEDULES/VIOLATIONS

	YES	NO	N/A	N/E
a. Any significant violations since the last inspection	☒	☐	☐	☐
b. Permittee is taking actions to resolve violations	☒	☐	☐	☐
c. Permittee has compliance schedule	☐	☒	☐	☐
d. Compliance schedule contained in: _____	☐	☐	☒	☐
e. Permittee is meeting compliance schedule	☐	☐	☒	☐

Comments:
a. pH, CL2, Toxicity

G. OPERATION AND MAINTENANCE

Treatment Facility Properly Operated & Maintained	YES	NO	N/A	N/E
a. Standby power available: Generator: ☐ Dual Feed: ☐	☐	☒	☐	☐
b. Adequate alarm system available for power or equipment failures	☒	☐	☐	☐
c. All treatment units in service other than backup units	☒	☐	☐	☐
d. Sufficient operating staff provided: # of shifts: 3 Days/Week: 7	☒	☐	☐	☐
e. Operator holds unexpired license of class required by permit. Class: 2	☒	☐	☐	☐
f. Copy of certificate of Operator of Record displayed on-site	☒	☐	☐	☐
g. Minimum operator staffing requirements fulfilled (OAC 3745-7)	☒	☐	☐	☐
h. Routine & preventive maintenance schedule/performed on time	☒	☐	☐	☐
i. Any major equipment breakdown since last inspection	☐	☒	☐	☐
j. Operation & maintenance manual provided & maintained	☒	☐	☐	☐
k. Any plant bypasses since last inspection	☐	☒	☐	☐
l. Regulatory agency notified of bypasses: On MORS: ☐ 800 No.: ☐	☐	☐	☒	☐
m. Any hydraulic and/or organic overloads experienced since last inspection	☐	☒	☐	☐

Comments:
Hay bales and sediment barriers placed around basins in yard. Yard cleaned and hay bales replaced on a regular basis.

Record Keeping	YES	NO	N/A	N/E
a. Log book provided	☐	☐	☐	☐
b. Log book kept on-site	☐	☐	☐	☐
c. Log book contains the following:	☐	☐	☐	☐
1. Identification of treatment works	☐	☐	☐	☐
2. Date/Time of arrival/departure of ORC	☐	☐	☐	☐
3. Daily record of operation and maintenance activities	☐	☐	☐	☐
4. Laboratory results (unless documented on bench sheets)	☐	☐	☐	☐
5. Identification of person making log entries	☐	☐	☐	☐
d. Is the ORC submitting written notification to Ohio EPA and permittee when a collection system overflow, treatment plant bypass or effluent limit violation has occurred.	☐	☐	☐	☐

Comments:

Collection System	YES	NO	N/A	N/E
a. Percent combined system. Percent: 0	☐	☐	☐	☐
b. Any collection system overflows since last inspection: CSO: ☐ SSO: ☐	☐	☒	☐	☐
c. Regulatory agency notified of overflow (SSOs)	☐	☐	☒	☐
d. CSO O&M plan provided and implemented	☐	☐	☒	☐
e. CSOs monitored and reported in accordance with permit	☐	☐	☒	☐
f. Portable pumps used to relieve system	☐	☐	☒	☐
g. Lift station alarm systems provided and maintained	☒	☐	☐	☐
h. Are lift stations equipped with permanent standby power or equivalent	☒	☐	☐	☐
i. Is there an inflow/infiltration problem (separate sewer system), or were there any major repairs to collection system since last inspection	☐	☒	☐	☐
j. Any complaints received since last inspection of basement flooding	☐	☐	☒	☐
k. Are any portions of the sewer system at or near capacity	☐	☐	☒	☐

Comments:

H. SLUDGE MANAGEMENT

	YES	NO	N/A	N/E
a. Sludge adequately disposed. Method: _____	☐	☐	☐	☐
b. If sludge is incinerated, where is ash disposed of? _____	☐	☐	☐	☐
c. Is sludge disposal contracted? Name: _____	☐	☐	☐	☐
d. Has amount of sludge generated changed significantly since last inspection	☐	☐	☐	☐
e. Adequate sludge storage provided at facility	☐	☐	☐	☐
f. Land application sites monitored and inspected per state rules	☐	☐	☐	☐
g. Records kept in accordance with state rules	☐	☐	☐	☐
h. Any complaints received in last year regarding sludge	☐	☐	☐	☐
i. Is sludge adequately processed (digestion, dewatering, pathogen control) in accordance with Ohio EPA rules	☐	☐	☐	☐

Comments:

I. SELF-MONITORING PROGRAM

Part 1 – Flow Measurement	YES	NO	N/A	N/E
a. Primary flow measuring device properly operated & maintained. Type of device: ☒ 004-Ultrasonic & parshall flume ☐ Calculated from influent ☐ Weir ☐ Other ☐ Ultrasonic & weir* specify: 003-cal 11/1/11, 004-cal 10/6/11	☒	☐	☐	☐
b. Calibration frequency adequate. Date of last calibration: 001-cal 10/12/11, 002-10/5/11	☒	☐	☐	☐
c. Secondary instruments (totalizers, recorders, etc.) properly operated and maintained	☒	☐	☐	☐
d. Flow measurement equipment adequate to handle expected ranges of flows	☒	☐	☐	☐
e. Actual flow discharged is measured	☒	☐	☐	☐
f. Flow measuring equipment inspection frequency: ☒ Daily ☐ Monthly ☐ Weekly ☐ Other				

Comments:
*001, 002, 003; 017 cal on 10/16/11 - Double V-Notch

Part 2 - Sampling	YES	NO	N/A	N/E
a. Sampling location(s) are as specified by permit	☒	☐	☐	☐
b. Parameters and sampling frequency agree with permit	☒	☐	☐	☐
c. Permittee uses required sampling method	☒	☐	☐	☐
d. Sample collection procedures are adequate	☒	☐	☐	☐
i. Samples refrigerated during compositing	☒	☐	☐	☐
ii. Proper preservation techniques used	☒	☐	☐	☐
Conform with 40 CFR 136.3	☒	☐	☐	☐
e. Monitoring records (e.g., flow, pH, D.O., etc.) maintained for a minimum of three years including all original strip chart recordings (e.g., continuous monitoring instrumentation, calibration, & maintenance records)	☒	☐	☐	☐
f. Adequate records maintained of sampling date, time, exact location, etc.	☒	☐	☐	☐

Comments:
Test America samples everything but pH and Dissolved Oxygen. See attached lab inspection sheet. Print out Test America Sample Results and put in file. Keep for 3 years.

Part 3 – Laboratory, General	YES	NO	N/A	N/E
a. Written Standard Operating Procedures (SOPs) for all analysis performed on-site	☐	☐	☐	☐
b. EPA approved analytical testing procedures used (40 CFR 136.3)	☒	☐	☐	☐
c. If alternate analytical procedures are used, proper approval has been obtained	☒	☐	☐	☐
d. Analysis being performed more frequently than required by permit	☐	☒	☐	☐
e. If (c) is yes, are results reported in permittee's self-monitoring report	☐	☐	☒	☐
f. Commercial laboratory used: 1. Parameters analyzed by commercial lab: All Permit Parameters except pH and D.O. at Outfall 017 2. Lab name: Test America, 301 Alpha Drive, Pittsburgh, PA 15238				

Comments:

Part 3 – Laboratory, Quality Control/Quality Assurance	YES	NO	N/A	N/E
a. Quality assurance manual provided and maintained	☐	☐	☐	☒
b. Satisfactory calibration and maintenance of instruments and equipment	☐	☐	☐	☒
c. Adequate records maintained	☐	☐	☐	☒
d. Results of latest U.S. EPA quality assurance performance sampling program: Date: August 19, 2011 ☒ Satisfactory ☐ Marginal ☐ Unsatisfactory				

Comments:

J. EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall #	Oil Sheen	Grease	Turbidity	Visible Foam	Visible Float Solids	Color	Other
001	None	None	None	None	None	None	
002	None	None	None	Yes	None	None	
003	None	None	None	None	None	None	
004	None	None	None	None	None	None	
017	None	None	None	None	None	None	

Comments:

K. MULTIMEDIA OBSERVATIONS

Collection System	YES	NO	N/A	N/E
a. Are there indications of sloppy housekeeping or poor maintenance in work and storage areas or laboratories	☐	☒	☐	☐
b. Do you notice staining or discoloration of soils, pavement, or floors	☐	☒	☐	☐
c. Do you notice distressed (unhealthy, discolored, dead) vegetation	☐	☒	☐	☐
d. Do you see unidentified dark smoke or dustclouds coming from sources	☐	☒	☐	☐
e. Do you notice any unusual odors or strong chemical smells	☐	☒	☐	☐
f. Do you see any open or unmarked drums, unsecured liquids, or damaged containment facilities	☐	☒	☐	☐

If any of the above are observed, ask the following questions:

1. What is the cause of the conditions?
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:

Ormet has made improvements in keeping the driveways and common areas of the plant clean.

General Lab Criteria

Facility: ORMET Primary Aluminum -11/22/11

Criteria	Standard Methods Requirement	Acceptable?		Rating
Balance				
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights[1,2]	☐ Yes	☐ No	NR
• Calibration Frequency/ Documentation	• Calibration verification required at least once each day the balance is used[3]	☐ Yes	☐ No	
• Cleanliness, air movement, vibration	• Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum[1]	☐ Yes	☐ No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable)[1]	☐ Yes	☐ No	
	• Must be able to measure to 0.1 grams[4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
	• Log book maintained[6]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
Drying Oven (Suspended Solids)				
• Temperature Recordkeeping	• Temperature recorded with each use[4]	☐ Yes	☐ No	NR
	• Log book maintained[6]	☐ Yes	☐ No	
• Calibration Frequency/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]. Correction factor posted on thermometer/equipment[1]	☐ Yes	☐ No	
• Other	• Thermometer temperature in 0.1°C increments[5]	☐ Yes	☐ No	
	• Acceptable temperature range is 103° – 105°F[4]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
Comments:				

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]	☐ Yes	☒ No	A
	• Log book maintained[9]	☒ Yes	☐ No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result[7]	☒ Yes	☐ No	
• Slope Documentation/ Acceptability	• Slope acceptable range indicated on benchsheet[2]	☒ Yes	☐ No	
• Buffer Expiration Date	• Buffers must not be expired	☒ Yes	☐ No	
• Other	• Instrument manual available	☒ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[8]	☒ Yes	☐ No	
Comments: Calibration increased to everyday from 2 times a week				

General Lab Criteria

Criteria	Standard Methods Requirement			Rating
Dissolved Oxygen Meter		**Acceptable?**		
• Calibration Method	• Air or known DO calibration method[10]	☒ Yes	☐ No	**A**
	• Calibration per manufacturer specification[10]	☒ Yes	☐ No	
• Calibration Frequency/ Documentation	• Logbook maintained[9]	☒ Yes	☐ No	
	• Calibration verification required at least once each day the meter is used.[3]	☒ Yes	☐ No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)[11]	☒ Yes	☐ No	
	• Instrument manual available	☒ Yes	☐ No	
Comments: Record calibration on log and bench sheets.				

Criteria	Standard Methods Requirement			Rating
Incubator (CBOD/E-Coli)		**Acceptable?**		
• Temperature Recordkeeping	• Temperature checked/recorded twice daily for each shelf in use[1]	☐ Yes	☐ No	**NR**
	• Temperature checked/recorded daily[2] (CBOD)	☐ Yes	☐ No	
	• Acceptable temperature range (CBOD) is 20°C ±1.0°[12]	☐ Yes	☐ No	
	• Acceptable temperature range (E-Coli) is 35°C ±0.5°[22]	☐ Yes	☐ No	
	• Logbook maintained[9]	☐ Yes	☐ No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]	☐ Yes	☐ No	
	• Temperature correction information posted on incubator[1]	☐ Yes	☐ No	
• E-Coli can use multiple tubes (five 20 ml or ten 10 mg), or mfg's multi-well tray	• E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb)[23]	☐ Yes	☐ No	
• Other	• Instrument manual available	☐ Yes	☐ No	
	• Temperature Log (thermometer reads to 0.1 Celsius)[5]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Refrigerator		**Acceptable?**		
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius)[5]	☐ Yes	☐ No	**NR**
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]	☐ Yes	☐ No	
• Other	• Thermometer held in water bath[1]	☐ Yes	☐ No	
	• Refrigerator temperature ≤6° Celsius[13]	☐ Yes	☐ No	
	• Do not store volatile solvents, food, or beverages[14]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Chlorine Meter		**Acceptable?**		
• Calibration Frequency/ Documentation	• pH/millivolt meter read to 0.1 mV[15]	☐ Yes	☐ No	**NR**
	• 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]	☐ Yes	☐ No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters	☐ Yes	☐ No	

General Lab Criteria

	or calibration per manufacturer specification[16]			
	• Standards used for calibration not expired	☐ Yes	☐ No	
• Slope Documentation/ Acceptability	• Calibration curve (acceptable slope)	☐ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☐ Yes	☐ No	
	• Log book being maintained[9]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Ammonia 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]	☐ Yes	☐ No	**NR**
	• Log book being maintained[9]	☐ Yes	☐ No	
• Slope Acceptability	• Verify calibration slope is acceptable (per mfg. spec.)	☐ Yes	☐ No	
• Calibration Method	• Standards used for calibration (3 ammonia solutions of 10 mg/l, 1 mg/l, and 0.1 mg/l) or per mfg. spec.[17]	☐ Yes	☐ No	
	• Standards used for calibration not expired	☐ Yes	☐ No	
• Other	• Electrode free of deposits and foreign material	☐ Yes	☐ No	
	• Teflon covered magnetic stirrer or equivalent for mixing[18]	☐ Yes	☐ No	
	• Instrument manual available	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Sample Collection/Handling		**Acceptable?**		
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed)[19]	☒ Yes	☐ No	**A**
• Chain of Custody	• Chain of custody (description, date, time, signature)[19]	☒ Yes	☐ No	
• Other	• Composite samples refrigerated during sample collection[14]	☒ Yes	☐ No	
	• Equipment blanks utilized[14]	☒ Yes	☐ No	
	• SOP for cleaning of sampling equipment	☒ Yes	☐ No	
	• Log book being maintained[9]	☒ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Desiccator		**Acceptable?**		
• General Criteria	• Properly working seals	☐ Yes	☐ No	**NR**
	• Desiccant fresh (blue color)	☐ Yes	☐ No	
• Documentation	• Log book being maintained[9]	☐ Yes	☐ No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement			Rating
Bench Sheets		**Acceptable?**		
• General Criteria	• Date(s)[2]	☒ Yes	☐ No	**A**
	• Analyst initials[2]	☒ Yes	☐ No	
	• Blue or black ink pen[2]	☒ Yes	☐ No	
	• Calibration information[2]	☒ Yes	☐ No	
	• Equations, calculations, units for all measurements, notations, and results present[2]	☒ Yes	☐ No	
	• Corrections, single line through, initialed and dated[2]	☒ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Hot Water Bath (Fecal Coliform/E. Coli)		**Acceptable?**		
• Temperature Recordkeeping	• Temperature Log (thermometer reads 0.2° C)[21]	☐ Yes	☐ No	**NR**
	• Incubator temperature 44.5° C ±0.2°[21/24]	☐ Yes	☐ No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]	☐ Yes	☐ No	
	• Log book being maintained[9]	☐ Yes	☐ No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth)[1,5]	☐ Yes	☐ No	
Comments:				

Criteria	Standard Methods Requirement			Rating
Autoclaves/Steam Sterilizers		**Acceptable?**		
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C[25]	☐ Yes	☐ No	**NR**
	• 10 to 30 minutes time based on material being sterilized[26]	☐ Yes	☐ No	
• Documentation	• Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached as measured in the exhaust[1]	☐ Yes	☐ No	
	• Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used[1]	☐ Yes	☐ No	
• Temperature Calibration/ Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2]	☐ Yes	☐ No	
	• Log book being maintained[9]	☐ Yes	☐ No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, or capsules[1]	☐ Yes	☐ 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]	☐ Yes	☐ No	**NR**
	• Thermometer reads in increments of at least 0.1°C[5]	☐ Yes	☐ No	
	• Log book being maintained[2]	☐ Yes	☐ No	
Comments:				

Number of Criteria Rated:	**Acceptable**	4
	Marginal	0
	Unacceptable	0
	Total Number of Areas Rated	4

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

General Lab Criteria

Notation of Referenced Method

1	Method 9020-B, Item 4	14	Method 1060A, Item 1
2	Method 1020-A, Item 1	15	Method 4500-Cl I, Item 2
3	Method 1020-B, Item 10	16	Method 4500-Cl I, Item 4
4	Method 2540-B, Item 2	17	Method 4500-NH3 D, Item 4
5	Method 2550-B, Item 1	18	Method 4500-NH3 D, Item 2
6	Method 1020-B, Item 1	19	Method 1060-B, Item 2
7	Method 4500-H B, Item 4	20	Method 1060-B, Item 1
8	Method 4500-H B, Item 2	21	Method 9222D, Item 1
9	Method 1020-B, Item 2	22	Method 9223 B, Item 2
10	Method 4500-O B, Item 3	23	Method 9223 B, Item 3
11	Method 4500-O G, Item 3	24	Method 1603, Item 2
12	Method 5210-B, Item 5	25	Method 9030-B, Item 3
13	CFR 136.3, Table II	26	Method 9020 B, Table IV

Equipment Logbook Content – All maintenance performed on a piece of equipment should be documented in the logbook. This should include parts replacement and routine maintenance activities. Entries should include date, maintenance performed and initials of person making entry.

Preservation and Holding Times

Parameter	Container	Min. Sample Size (mL)	Sample Type	Preservation	Maximum Storage Time	
					Recommended	Regulatory
BOD / CBOD	P, G	1000	G, C	Refrigerate ≤6°C	6h	48h
TSS	P, G	200	G, C	Refrigerate ≤6°C	7 d	7 d
pH	P, G	50	G	Analyze immediately	0.25h	0.25 h
NH3-N	P, G	500	G, C	Analyze as soon as possible or add H_2SO_4 to pH <2, Refrigerate ≤6°C	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add HNO_3 to pH <2	6 months	6 months
Purgeables by purge and trap	G (PTFE lined lid)	40 (X2)	G	HCl to pH <2, Refrigerate ≤6°C	7 d	14 d
Base/Neutrals and acids	G (solvent rinsed or baked)	1000	G, C	Refrigerate ≤6°C	7 d	7 days until extraction 40 days after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate ≤6°C	7 d	7 days until extraction 40 days after extraction
Fecal Coliform / E-Coli	G, P (Sterilized)	100	G	Refrigerate ≤10°C If chlorine present, add sodium thiosulfate tablet	6 hrs transport. Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate ≤6°C	28 d	28 d

General Lab Criteria

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 Methods 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