



**Environmental  
Protection Agency**

John R. Kasich, Governor  
Mary Taylor, Lt. Governor  
Scott J. Nally, Director

Re: Ashland County  
City of Ashland  
NPDES Permit

May 15, 2012

Mr. Michael Hunter, Director  
City of Ashland  
206 Claremont Avenue  
Ashland, Ohio 44805

Dear Mr. Hunter:

On April 25, 2012, Walter Ariss conducted an inspection of the City of Ashland Wastewater Treatment Plant (WWTP). Mr. Ron Atkinson, Plant Superintendent, was present to provide information on facility operations. At the time of the inspection, all major treatment units were in service. The equalization basin was not in use and all flow was receiving complete treatment. A clear final effluent was being discharged. No major concerns with plant operations were noted. Our inspection report is included for your reference.

An inspection of the onsite laboratory was also performed. Please refer to the enclosed General Lab Criteria checklist for areas evaluated during the inspection. Out of five areas evaluated, all five were found to be adequate. Mr. Dennis Figley, the lab superintendent, mentioned that the lab SOPs had been reviewed and very little changes were needed. We recommend that a page be added to the SOP manual where you can track the review dates for all of the SOPs.

A review of the discharge monitoring reports that were submitted to our office for the period of June 2011 through March 2012 revealed several violations of the limits contained in your National Pollutant Discharge Elimination System (NPDES) permit. The violations are below for your review. The suspended solids violations were all associated with overflow events from the EQ basin.

Permit No	Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
2PD00010*MD	October 2011	001	50092	Mercury, Total (Low Le	30D Qty	0.0002	.0005	10/1/2011
2PD00010*MD	November 2011	003	00530	Total Suspended Solids	30D Conc	30.0	52.	11/1/2011
2PD00010*MD	January 2012	003	00530	Total Suspended Solids	30D Conc	30.0	56.	1/1/2012
2PD00010*MD	January 2012	003	00530	Total Suspended Solids	7D Conc	45.0	56.	1/22/2012

Mr. Michael Hunter  
May 15, 2012  
Page Two

The treatment plant experienced seven days with equalization basin overflow events during the period of June 2011 through March 2012. **Please be aware that these overflows are prohibited and considered violations of the NPDES permit and 2004 Modified Consent Decree.** The City needs to continue I/I reduction efforts in order to eliminate these overflows.

If you have any questions, please call Walter Ariss at 419-373-3070.

Yours truly,

A handwritten signature in cursive script that reads "Thomas B. Flanagan" followed by the word "For" in a smaller, less distinct script.

Elizabeth A. Wick, P.E.  
Environmental Engineer/Section Manager  
Division of Surface Water

WA/jlm

Enclosures

pc: Ron Atkinson, Superintendent, City of Ashland WWTP

ec: Inspection Tracking

Permit #: 2PD00010  
 NPDES #: OH0023906



State of Ohio Environmental Protection Agency  
 Northwest District Office

NPDES Compliance Inspection Report

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
2PD00010	OH0023906	04/25/2012	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Ashland WWTP 865 U.S. 42 Ashland Ohio	10:00 A.M.	4/15/2010
	Exit Time	Permit Expiration Date
	1:30 P.M.	1/31/2015
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Ron Atkinson - Superintendent	419-281-7081	
Name, Address and Title of Responsible Official	Phone Number	
Michael Hunter - Director	419-281-7041	

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

Section D: Summary of Findings (Attach additional sheets if necessary)			
Inspector		Reviewer	
Date		Date	
9/25/12		5/9/12	
Walter Ariss, P.E. Environmental Specialist II Division of Surface Water Northwest District Office		Tom Poffenbarger, P.E. Water Quality Engineer / Unit Supervisor Division of Surface Water Northwest District Office	

Permit # : 2PD00010  
NPDES # : OH0023906

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:

**Section F: Compliance Schedules/Violations**

- |   |   |
|---|---|
| (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 <span style="border: 1px solid black; padding: 2px;">NPDES permit</span> |   |
| (e) Permittee is meeting compliance schedule.....   | Y |

Comments/Status:

- a) monthly loadings and low level mercury
  - c) Pretreatment local limits submitted to Central Office for approval

**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.. Y
- (c) All treatment units in service other than backup units..... Y
- (d) Wastewater Treatment Works classification (OAC 3745-7)..... IV
- (e) Operator of Record holds unexpired license of class required by permit..... Y  
 Class: IV
- (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..... Y

**Record Keeping:**

- (a) Log book provided..... Y
- (b) Format of log book (i.e. computer log, hard bound book)  

computer log and maintenance request form
---
- (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..... Y
  - 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..... 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 Y
- (k) Are any portions of the sewer system at or near capacity..... N

**Comments/Status:**

Treatment Works

- a) EQ basin generator installed and available.
- b) staffed 24 hours, 7 days
- g) 2 class IV operators, 2 class III operators, 2 class II operators, 2 class I operators.
- i) the last influent pump is being rebuilt, still have two trickling filter pumps to rebuild.

Collection system

- g) Four stations have SCADA that the WTP monitors. WIL, Ridgewood Ct, Amberwood Pkwy, and 42/250. 13 lift stations total.
- h) WIL and 42/250 lift stations both now have permanent backup natural gas driven pumps.
- k) the Davis Run trunk sewer is possibly nearing capacity

**Section H: Sludge Management**

- (a) Sludge management plan (SMP)  
Submitted date: 1992      Approval #: 03-309PW      Not submitted       N/A
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y  
(Method: Land application with subsurface injection)
- (d) If sludge is incinerated, where is ash disposed of
- (e) Is sludge disposal contracted..... Y  
(Name: Agrisludge)
- (f) Has amount of sludge generated changed significantly since  
last inspection..... N
- (g) Adequate sludge storage provided at plant..... N
- (h) Land application sites monitored and inspected per SMP..... Y
- (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:**

- a) using high pH - option 6  
c) have contract with Noble Road Landfill for cake sludge disposal  
g) can use press and storage bins for 120 days if necessary  
h) operators monitor application 2/year

**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: Magmeter on influent and effluent)
- (b) Calibration frequency adequate ..... Y  
(Date of last calibration: 5/1/2012)
- (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:**

- a) magmeters were rezeroed  
c) chart recorder for effluent meter repaired and in use.

**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
- (d) Sample collection procedures are adequate..... Y
  - (i) Samples refrigerated during compositing..... Y
  - (ii) Proper preservation techniques used..... Y
  - (iii) Containers and sample holding times prior to analysis conform with 40 CFR 136.3..... Y
- (e) 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
- (f) Adequate records maintained of sampling date, time, location, etc.. Y

**Laboratory:**

*General*

- (a) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
  - (b) If alternate analytical procedures are used, proper approval has been obtained..... N/A
  - (c) Analyses being performed more frequently than required by permit. Y
  - (d) If (c) is yes, are results in permittee's self-monitoring report..... Y
  - (e) Commercial laboratory used..... Y
- Parameters analyzed by commercial lab: Oil and Grease, Strontium, Antimony, Cyanide, Mercury, Dioxin, TKN, TDS  
Lab name: Alloway

*Quality Control/Quality Assurance*

- (f) Quality assurance manual provided and maintained..... Y
  - (g) Satisfactory calibration and maintenance of instruments/equipment. Y
  - (h) Adequate records maintained..... Y
  - (i) Results of latest USEPA quality assurance performance sampling program:  Satisfactory  Marginal  Unsatisfactory
- Date:

**Comments/Status:**

Sampling  
d) New refrigerated composite sampler for influent. Need to keep thermometer in samplers to verify digital temp setting. Record temp on operator's chain of custody form.

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

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	none	none	none	none	none	none	

**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?

**Comments/Status:**

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

RATING CODES: S = Satisfactory; U = Unsatisfactory; M = Marginal; IN = In Operation; OUT = Out of Operation

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	S	
	Safety Features	S	
	Bypasses		
	Stormwater Overflows		
	Alternate Power Source	OUT	Generator and dual feed
	Septage Receiving	OUT	Currently add septage to main trunk line before influent wet well
Preliminary	Maintenance of Collection Systems	S	Excessive I/I flows
	Pump Station	IN	4 Raw pumps – two fixed speed, two variable speed; one pump out for rebuild
	Ventilation	S	
	Bar Screen	IN	Mechanical course screen, one manual screen as backup
	Disposal of Screenings	S	Landfill- Stark county
	EQ Comminutor	OUT	
	Grit Chamber	IN	Aerated
	Disposal of Grit	S	Landfill-Stark county
	Rotary Microscreen	OUT	Operates when flow is >4 MGD
	Medium screen	IN	Recently rebuilt conveyor mechanism
Primary	Settling Tanks	IN	4 units
	Scum Removal	S	
	Sludge Removal	IN	
	Effluent	S	
	EQ tanks	OUT	
Sludge Disposal			
	Sludge Pumps	IN	2 WAS, 3 RAS
	Disposal of Sludge	S	Removed as liquid after lime stabilization
	Storage tanks	IN	4 at 84,000 gallons capacity
Other			
	Belt Filter Press	OUT	Used as needed
	Pressed Sludge Storage Bins	IN	One bin has a pile of sludge, pile covered in lime to reduce odors and vectors.
	Flow Meter and Recorder	IN	
Secondary-Tertiary <small>List items as</small>	Records	S	
	Lab Controls	S	
	Trickling Filters	IN	2 units, 5MGD capacity each
	Solids Contact tank	IN	3 tanks
	Secondary Clarifiers	IN	2 units
	Blowers	IN	3 units
Effluent Pumps	IN	4 units, 2 in service	
Trickling Filter Pumps	IN	3 pumps all with VFD, one VFD recently replaced, 2 in use, one backup.	
Disinfection			
	Effluent	S	
	UV Disinfection System	IN	new bulbs in channel #1, normally replace all bulbs in a channel 1/2 years

# Ashland WWTP 4/25/2012 General Lab Criteria

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

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Drying Oven (Suspended Solids)</b>				<b>A</b>
• Temperature Recordkeeping	• Temperature recorded with each use <sup>4</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup> . Correction factor posted on thermometer / equipment <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1° C increments <sup>5</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° – 105° F <sup>4</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>pH Meter</b>				
• 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) <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result <sup>7</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet <sup>2</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Buffer Expiration Date	• Buffers must not be expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing <sup>8</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

# Ashland WWTP 4/25/2012 General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Dissolved Oxygen Meter</b>				
• Calibration Method	• Air or known DO calibration method <sup>10</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration per manufacturer specification <sup>10</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. <sup>3</sup>	<input 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) <sup>11</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

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

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Refrigerator</b>				
• Temperature Recordkeeping	• Temperature Log (thermometer reads to 0.1 Celsius). <sup>5</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer <sup>1, 2</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer held in water bath. <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Refrigerator temperature ≤6° Celsius. <sup>13</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Do not store volatile solvents, food, or beverages. <sup>14</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

# Ashland WWTP 4/25/2012 General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Chlorine Meter</b>				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV <sup>15</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Method	• Calibration using three iodate solutions 0.2, 1.0, 5.0 milliliters or calibration per manufacturer specification <sup>16</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Calibration curve (acceptable slope)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained. <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Ammonia Meter</b>				
• 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) <sup>3</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope acceptability	• Verify calibration slope is acceptable (per mfg. spec.).	<input type="checkbox"/> Yes	<input type="checkbox"/> 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. <sup>17</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Standards used for calibration not expired	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Electrode free of deposits and foreign material	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Teflon covered magnetic stirrer or equivalent for mixing <sup>18</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

# Ashland WWTP 4/25/2012 General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Sample Collection/Handling</b>				<b>A</b>
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). <sup>19</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Chain of Custody	• Chain of custody (description, date, time, signature). <sup>19</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection <sup>14</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized <sup>14</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• SOP for cleaning of sampling equipment	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook being maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Need to add thermometer inside the composite samplers. Operator's should be checking the temperature when picking up samples.				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Desiccator</b>				<b>A</b>
• General criteria	• Properly working seals.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Log book being maintained <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: Should keep a log on desiccator of dates that media was regenerated.				

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Bench sheets</b>				<b>A</b>
• General criteria	• Date(s) <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Analyst initials <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Blue or black ink pen <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration information <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equations, calculations, units for all measurements, notations, and results present <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Corrections, single line through, initialed and dated <sup>2</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

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

# Ashland WWTP 4/25/2012 General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Autoclaves/Steam Sterilizers</b>				
<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 <sup>25</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>10 to 30 minutes time based on material being sterilized<sup>26</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>Documentation</li> </ul>	<ul style="list-style-type: none"> <li>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. <sup>1</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>Date, contents, sterilization time and temperature, total time in autoclave, and analyst's initials should be recorded each time the autoclave is used <sup>1</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>Temperature Calibration / Documentation</li> </ul>	<ul style="list-style-type: none"> <li>Thermometer calibrated annually with NIST traceable thermometer <sup>1,2</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> <li>Log book being maintained <sup>9</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> <li>Performance Checks</li> </ul>	<ul style="list-style-type: none"> <li>Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules <sup>1</sup></li> </ul>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

<b>Number of Criteria Rated:</b>	Acceptable	5
	Marginal	
	Unacceptable	
	<b>Total Number of Areas Rated</b>	5

**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
--	---

# Ashland WWTP 4/25/2012 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-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-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 $\leq 6^{\circ}\text{C}$	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 $\text{H}_2\text{SO}_4$ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	7 d	28 d
TRC	P, G	500	G	Analyze immediately	0.25h	0.25 h
DO (electrode)	G, BOD Bottle	300	G	Analyze immediately	0.25h	0.25 h
Temperature	P, G	--	G	Analyze immediately	0.25h	0.25 h
Metals, general	P, G	1000	G, C	For dissolved filter immediately and add $\text{HNO}_3$ 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 $\text{H}_2\text{SO}_4$ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

# Ashland WWTP 4/25/2012 General Lab Criteria

<b>Approved Standard Methods</b>	
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