



**Environmental
Protection Agency**

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



1PD0000420110826

WARREN

FRANKLIN REGIONAL WWTP

WARE, MAUREEN

2011/08/26



Environmental
Protection Agency

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

August 29, 2011

Tony Pace
Franklin Area WWTP
201 Baxter Dr.
Franklin, Ohio 45005

RE: Franklin WWTP NPDES Permit 1PD00004 Compliance Evaluation Inspection (CEI)

Dear Mr. Pace:

On August 18, 2011, I conducted a CEI at the Franklin Area WWTP. You represented this facility. A copy of my inspection report is enclosed. As indicated on the NPDES CEI form, one area (Effluent/Receiving Waters) that was evaluated during the inspection was rated as unsatisfactory due to the Franklin Area WWTP being in Significant Non-Compliance (SNC).

Ohio EPA has received your responses for the violations that have placed the Franklin Area WWTP in SNC. You have indicated that the loading violations were due to the high flows received from the co-permittees of the municipalities of Franklin, Carlisle and Germantown. Your responses indicate that the co-permittees have found, and intend to repair, some collection system problems. Please respond by October 14, 2011 with a description of what actions will be taken to address the collection system issues that have caused the high flow conditions that put the Franklin Area WWTP in SNC, and the dates by which those actions will be taken.

I appreciate the time and courtesy that was extended to me during the inspection. If you have any questions or comments concerning the contents of this letter, please feel free to contact me at this office.

Sincerely,

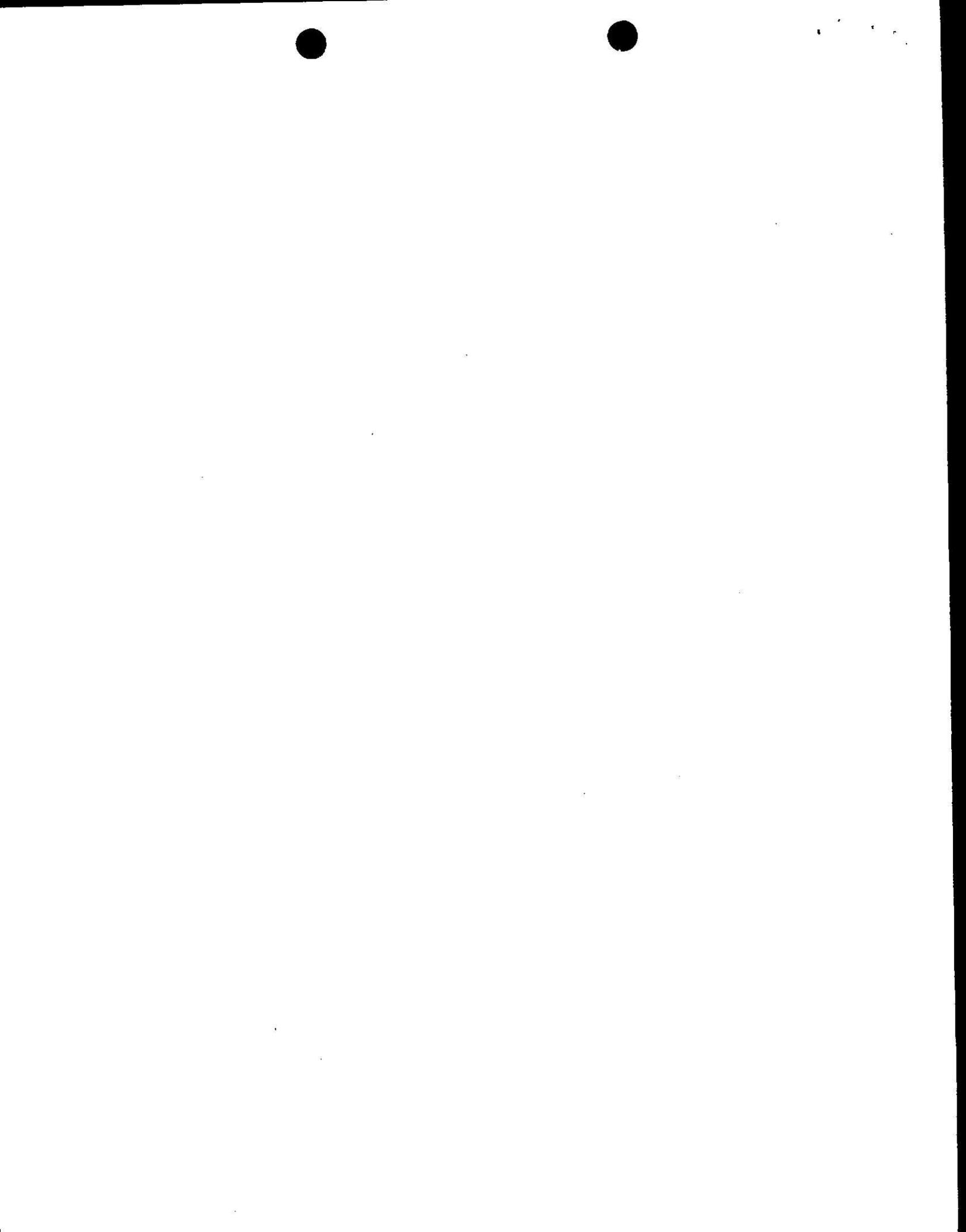
Maureen M. Ware
Division of Surface Water

MMW/tf

ec: tlandis6@woh.rr.com
timhumphries@live.com
dcenters@franklinohio.org
Warren County Combined Health District

Southwest District Office
401 East Fifth Street
Dayton, OH 45402-2911

937 | 285 6357
937 | 285 6249 (fax)
www.epa.ohio.gov





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
1PD00004	OH0025275	08/18/11	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Franklin Area WWTP 201 Baxter Dr. Franklin, Ohio 45005	11:20AM	08/01/2009
	Exit Time	Permit Expiration Date
	2:20PM	1/31/2014
Name(s) and Title(s) of On-Site Representatives		Phone Number(s)
Tony Pace, ORC		937-746-1711
Name, Address and Title of Responsible Official		Phone Number
Veolia Water North America		

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	N	Compliance Schedule
S	Operations & Maintenance	U	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)	
Effluent/Receiving Waters were rated unsatisfactory due to Franklin being in Significant Non-Compliance.	
Inspector	Reviewer
 Maureen M. Ware Division of Surface Water Southwest District Office Date: 8/29/11	 Martyn G. Burt Environmental Supervisor Division of Surface Water Southwest District Office Date: 8/29/11

Sections E thru K: Complete on all inspections as appropriate
Y – Yes, N – No, N/A – Not Applicable, N/E – Not Evaluated

Section E: Permit Verification

Inspection observations verify the permit

- (a) Correct name and mailing address of permittee Y
- (b) Flows and loadings conform with NPDES permit..... Y
- (c) Treatment processes are as described in permit application... Y
- (d) All discharges are permitted..... Y
- (e) Number and location of discharge points are as described
in permit..... Y
- (f) Storm water discharges properly permitted..... Y

Comments/Status:

Section F: Compliance

- (a) Any significant violations since the last inspection..... Y
- (b) Appropriate Non-compliance notification of violations..... Y
- (c) Permittee is taking actions to resolve violations..... Y
- (d) Permittee has a compliance schedule..... Y
- (e) Compliance schedule contained in.....
NPDES Permit Compliance Schedule
- (f) Permittee is in compliance with schedule..... Y
- (g) Has biomonitoring shown toxicity in discharge since last inspection N

Comments/Status:

Compliance was checked from August 1, 2010 through June 30, 2011. The numerical violations for this period are noted on the last page of this report. The Franklin Area WWTP is in Significant Non-Compliance, and as such, Effluent/Receiving Waters has been rated as unsatisfactory.

For the period of March 2011 through May 2011 there were numerous instances of D.O., pH, fecal coliform, and total residual chlorine being coded off as "AF" in the eDMR. Franklin samples 20 feet from the river in the aeration channel (see longitude and latitude in Part II of the NPDES permit). Due to the wetter than usual spring, the river level was above the sampling point, and Franklin was unable to take the samples from the permitted sampling point.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained..... Y

(a) Standby power available.....generator or dual feed Y

i. What does the back-up power source operate.....

Twin creek Pump Station, blowers, aeration, final clarifiers, Chlorine and autosampler.

ii. How often is the generator tested under load.....

once per year.

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

Blowers, vfd drives on main pump station, high water alarm on pump station, Twin Creek and Clear Creek Pump Stations, and RAS pump.

(c) All treatment units in service other than backup units..... Y

(d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....

Software

(e) Any major equipment breakdown since last inspection..... N

(f) Operation and maintenance manual provided and maintained..... Y

(g) Any plant bypasses since last inspection..... Y

(h) Any plant upsets since last inspection..... N

Comments/Status:

The large April rain event caused a bypass via station 002. Bypassing to the sludge lagoon was not possible at the time due to the sludge lagoon being too full of sludge. The bypassing of some treatment allowed Veolia to get flow data from the municipalities tributary to the Franklin Area WWTP. Without such bypassing, high flow events caused flow to back up in the collection systems rendering the municipalities flow meters useless. Veolia bills the municipalities by the volume of flow they receive and treat from each municipality. It is expected that the municipalities will now have financial incentive to remove I/I from their collection systems.

Section G: Operation & Maintenance con't

Record Keeping/Operator of Record:

- (a) Wastewater Treatment Works classification (OAC 3745-7)..... III
- (b) Operator of Record holds unexpired license of class required by Permit..... Y
- (c) Copy of certificate of Operator of Record displayed on-site..... Y
- (d) Has the Operator of Record submitted an ORC Notification form.. Y
- (e) Minimum operator staffing requirements fulfilled (OAC 3745-7).... Y
- (f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met..... N/A
- (g) Operator of Record log book provided..... Y
- (h) Format of log book (e.g. computer log, hard bound book)
hardbound book.
- (i) Log book kept onsite (in an area protected from weather)..... Y
- (j) Log book contains the following:
 - I. Identification of treatment works..... Y
 - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... Y
 - III. Daily record of operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)..... Y
 - IV. Laboratory results (unless documented on bench sheets)... Y
 - V. Identification of person making entries..... Y
- (k) Has the Operator of Record submitted written notifications to the permittee, Ohio EPA and, if applicable, any local environmental agencies when a collection system overflow, treatment plant bypass or effluent limit violation has occurred..... Y

Comments/Status:

Laboratory results are kept on the bench sheets.

Section G: Operation & Maintenance con't

Collection System:

- (a) Are there pump stations in the collection system..... Y
 - i. How many publicly-owned pump stations equipped with permanent standby power or equivalent.....
 - ii. How many pump stations have telemetered alarms.....
 - iii. How many pump stations have operable alarms.....

- (b) Any chronic collection system overflows since last inspection..... N/E
- (c) Regulatory agency notified of all overflows..... N/E
- (d) Are there CSOs in the collection system..... N/E
if so, what is the LTCP status.....
- (e) How are CSOs monitored (chalk, block, level sensor, etc.).....
- (f) Portable pumps available for collection system maintenance..... N/E
- (g) RDII Program established and active..... N/E
- (h) Any WIB complaint received since last inspection..... N/E
- (i) Is there a WIB response plan..... N/E
- (j) Is any portion of the collection system at or near dry weather capacity..... N/E

Comments/Status:

Veolia does not own or operate the collection systems from each municipality. Tony Pace developed an SOP regarding the reporting of SSO events from each municipality and had each municipality sign off on it.

Section H: Sludge Management

Pathogen Reduction Alternative	84370 Vector Attraction Reduction Options									
	Option 1 -38% Volatile Solids Reduction	Option 2 -Anaerobic Bench Scale Analysis	Option 3 - Aerobic Bench Scale Analysis	Option 4 - Specific Oxygen Uptake Rate	Option 5 - Aerobic Time and Temperature	Option 6 - Alkali Addition	Option 7 - >75% Percent Solids without Unstabilized	Option 8 - >75% Percent Solids with Unstabilized	Option 9 - Land Injection	Option 10 - Immediate Incorporation
Alternative 1 - Geometric Mean of Seven Fecal Samples (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (a) Method of Sludge Disposal... Land Application
 Haul to Another NPDES Permittee
 Haul to a Mixed Solid Waste Landfill
- (b) Has amount of sludge generated changed significantly since the last inspection..... N
- (c) How much sludge storage is provided at the plant.....
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
- (e) Any complaints received in last year regarding sludge..... N
- (f) 5/8" screen at headworks for facilities that land apply sludge..... N
- (g) Are sludge application sites inspected to verify compliance with NPDES permit..... Y
- (h) Is a contractor used for sludge disposal..... N
 If so, what is the name of the contractor.....

Comments/Status:

5/8" screen will be added with the next WWTP upgrade that is expected to take place approximately 3 years from now.

Section I: Self-Monitoring Program

Flow Measurement:

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):
magmeter and v notch.
- (b) Flow meter calibrated annually Y
(Date of last calibration: 8/10)
- (c) 24-hour recording instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range of flows..... Y
- (e) All discharged flow is measured..... Y

Comments/Status:

Section I: Self-Monitoring Program (con't)

Sampling:

- (a) Sampling location(s) are as specified by permit..... Y
- (b) Parameters and sampling frequency agree with permit..... Y
- (c) Permittee uses required sampling method..... Y
(see GLC page)
- (d) Monitoring records (i.e., flow, pH, DO) maintained for a minimum of three years including all original strip chart recordings (i.e, continuous monitoring instrumentation, calibration and maintenance records)..... Y

Comments/Status:

Section I: Self-Monitoring Program (con't)

Laboratory:

General

- (a) Does the Quality Assurance Manual contain written Standard Operating Procedures (SOP's) for all analysis performed onsite..... Y
- (b) Do SOP's include the following if applicable..... Y
- | | |
|------------------------------------|-----------------------------|
| • Title | • Procedure |
| • Scope and Application | • Calculations |
| • Summary | • Quality Control |
| • Sample Handling and Preservation | • Maintenance |
| • Interferences | • Corrective Action |
| • Apparatus and Materials | • Reference (Parent Method) |
| • Reagents | |

Note: Standard Methods 1020A establishes that "Quality assurance (QA) is the definitive program for laboratory operation that specifies the measure required to produce defensible data of known precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (d) If alternate analytical procedures are used, proper approval has been obtained..... 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
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y (see score from GLC page)
- (h) Commercial laboratory used..... Y
Parameters analyzed by commercial lab: everything except CBOD5, TSS, NH3, pH, Chlorine, bacteria, and hardness.

Lab name: Belmont - O&G, metals, and hexachrome; Test America (retest bacteria)

Discharge Monitoring Report Quality Assurance (DMRQA)

- (a) Participation in latest USEPA quality assurance performance sampling..... Y
Date:
- (b) Were any parameters "Unsatisfactory"..... N
- (c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

Section J: Effluent/Receiving Water Observations

Outfall # 001

Outfall Description: aeration channel to river.

Receiving Stream: Great Miami River

Receiving Stream Description: River was turbid.

Comments/Status:

Franklin's effluent had its characteristic slight tea color.

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:

Numerical violations for the period of August 1, 2010 through June 30, 2011

Station	Code	Parameter	Type	Limit	Reported	Date
001	80082	CBOD5	30DQty	425.8	469.206	3/1/2011
001	00530	TSS	30D Qty	511	540.905	4/1/2011
001	80082	CBOD5	30D Qty	425.8	522.035	4/1/2011
001	00530	TSS	7D Qty	766.5	976.653	4/22/2011
001	80082	CBOD5	7D Qty	681.3	1041.16	4/22/2011
001	00530	TSS	30D Qty	511	889.856	5/1/2011
001	00530	TSS	7D Qty	766.5	1797.73	5/1/2011
001	00610	NH3	30D Qty	102	153.217	5/1/2011
001	00610	NH3	7D Qty	153	175.554	5/1/2011
001	80082	CBOD5	30D Qty	425.8	802.170	5/1/2011
001	80082	CBOD5	7D Qty	681.3	1887.07	5/1/2011
001	00610	NH3	7D Qty	153	201.076	5/8/2011

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Balance		Acceptable?	
• Standard Weights	• Either NIST Class s or ASTM/ANSI Class 1 weights ^{1,2}	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Calibration Frequency / Documentation	• Calibration verification required at least once each day the balance is used. ³	<input 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 ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Other	• Service and recalibrate annually (manufacturer representative or comparable) ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Must be able to measure to 0.1 grams ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Log book maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Comments :			
Criteria	Standard Methods Requirement		Rating
Drying Oven (Suspended Solids)		Acceptable?	
• Temperature Recordkeeping	• Temperature recorded with each use ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Log book maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2} . Correction factor posted on thermometer / equipment ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Other	• Thermometer temperature accurate to 0.5° Celsius ⁵	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Acceptable temperature range is 103° – 105° C ⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Comments :			

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
• Calibration Frequency / Documentation	• Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples) ³	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Minimum of 2 point calibration	• Calibration per manufacturer specification and calibration buffers must bracket anticipated result ⁷	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Slope Documentation / Acceptability	• Slope acceptable range indicated on benchsheet ²	<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 ⁸	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: :

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
• Calibration Method	• Air or known DO calibration method ¹⁰	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	• Calibration per manufacturer specification ¹⁰	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. ³	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil) ¹¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: Veolia uses a Hach meter that uses sensor caps instead of membrane.

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Incubator (CBOD/E-Coli)				
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature checked / recorded twice daily for each shelf in use¹(E-Coli) 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	M
	<ul style="list-style-type: none"> • Temperature checked / recorded daily² (CBOD) 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Acceptable temperature range (CBOD) is 20° C ±1.0°¹² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Acceptable temperature range (E-Coli) is 35° C ±0.5°²² 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Logbook maintained² 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration / Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Temperature correction information posted on incubator¹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • E-Coli can use multiple tubes (five 20 ml or ten 10 ml), or mfg's multi-well tray 	<ul style="list-style-type: none"> • E-coli Ultraviolet lamp (365 nm wave length, 6 W bulb)²³ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Instrument manual available 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Temperature Log (thermometer accurate to 0.5 Celsius).¹ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: : Veolia noted that they will either purchase an NIST thermometer or have the thermometer calibrated annually with an NIST traceable thermometer.				
Criteria	Standard Methods Requirement	Acceptable?		Rating
Refrigerator				
<ul style="list-style-type: none"> • Temperature Recordkeeping 	<ul style="list-style-type: none"> • Temperature Log (thermometer accurate to 0.5 Celsius).⁵ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Temperature Calibration / Documentation 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer^{1,2} 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Thermometer held in water bath.¹ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Refrigerator temperature ≤6° Celsius.¹³ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	<ul style="list-style-type: none"> • Do not store volatile solvents, food, or beverages.¹⁴ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments:				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Chlorine Meter				
• Calibration Frequency / Documentation	• pH / millivolt meter read to 0.1 mV ¹⁵	<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) ³	<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 ¹⁶	<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. ²	<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
Ammonia 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	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book being maintained ²	<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. ¹⁷	<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 ¹⁸	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Comments: :				

General Lab Criteria

Criteria	Standard Methods Requirement	Acceptable?		Rating
Sample Collection/Handling				
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
• Chain of Custody	• Chain of custody (description, date, time, signature). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Composite samples refrigerated during sample collection ¹⁴	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Equipment blanks utilized ¹⁴	<input 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 ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
Desiccator				
• General criteria	• Properly working seals.	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Desiccant fresh (blue color)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
• Documentation	• Log book being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

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

Comments: Calibration information is contained in the D.O. meter bench sheets. No corrections were noted for the bench sheet viewed.

General Lab Criteria

Criteria	Standard Methods Requirement		Rating
Hot Water Bath (Fecal Coliform/E. Coli)			Acceptable?
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.2° C) ²¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Incubator temperature 44.5° C ± 0.2 ^{21/24}		
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Water Level	• Thermometer total immersion or partial (line on thermometer to ID immersion depth) ^{1,5}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			
Criteria	Standard Methods Requirement		Rating
Autoclaves/Steam Sterilizers			Acceptable?
• All apparatus utilized is adequately sterilized before use	• Sterilizing temperature 121° C ²⁵	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• 10 to 30 minutes time based on material being sterilized ²⁶	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> 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	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Temperature Calibration / Documentation	• Thermometer calibrated annually with NIST traceable thermometer ^{1,2}	<input type="checkbox"/> Yes <input type="checkbox"/> No	
	• Log book being maintained ²	<input type="checkbox"/> Yes <input type="checkbox"/> No	
• Performance Checks	• Test monthly for efficacy using a biological such as commercially available <i>Geobacillus stearothermophilus</i> in spore strips, suspensions, or capsules ¹	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Comments:			

General Lab Criteria

Criteria	Standard Methods Requirement		Rating								
Final Effluent Temperature Monitoring		Acceptable?									
<ul style="list-style-type: none"> • General Criteria 	<ul style="list-style-type: none"> • Thermometer calibrated annually with NIST traceable thermometer ^{1,2} 	<input type="checkbox"/> Yes	<input type="checkbox"/> No								
	<ul style="list-style-type: none"> • Thermometer accurate to 0.1° Celsius⁵ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No								
	<ul style="list-style-type: none"> • Log book being maintained ² 	<input type="checkbox"/> Yes	<input type="checkbox"/> No								
Comments:											
Number of Criteria Rated:			<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="text-align: center;">Acceptable</td><td style="text-align: center;">3</td></tr> <tr><td style="text-align: center;">Marginal</td><td style="text-align: center;">1</td></tr> <tr><td style="text-align: center;">Unacceptable</td><td style="text-align: center;">0</td></tr> <tr><td style="text-align: center;">Total Number of Areas Rated</td><td style="text-align: center;">4</td></tr> </table>	Acceptable	3	Marginal	1	Unacceptable	0	Total Number of Areas Rated	4
Acceptable	3										
Marginal	1										
Unacceptable	0										
Total Number of Areas Rated	4										
<p>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).</p> <p>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).</p> <p>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).</p>											
Consider recommending PAI Audit from DES when:		<ul style="list-style-type: none"> >60% of ratings are Marginal >45% of ratings are a combination of Marginal or Unacceptable >30% of ratings are Unacceptable 									

Notation of Referenced Method

- | | |
|--|--|
| <ul style="list-style-type: none"> 1 Method 9020-B, Item 3 2 Method 1020-A, Item 1 3 Method 1020-B, Item 10 4 Method 2540-B, Item 2 5 Method 2550-B, Item 1 6 Method 1020-A, Item 1 7 Method 4500-H B, Item 4 8 Method 4500-H B, Item 2 9 Method 1020-B, Item 2 10 Method 4500-O B, Item 3 11 Method 4500-O G, Item 3 12 Method 5210-B, Item 5 13 CFR 136.3, Table II | <ul style="list-style-type: none"> 14 Method 1060A, Item 1 15 Method 4500-CI I, Item 2 16 Method 4500-CI I, Item 4 17 Method 4500-NH3 D, Item 4 18 Method 4500-NH3 D, Item 2 19 Method 1060-B, Item 2 20 Method 1060-B, Item 1 21 Method 9222D, Item 1 22 Method 9223 B, Item 2 23 Method 9223 B, Item 3 24 Method 1603, Item 2 25 Method 9030-B, Item 3 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.

General Lab Criteria

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
NH ₃ -N	P, G	500	G, C	Analyze as soon as possible or add H ₂ 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 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-Coll	G, P (Sterilized)	100	G	Refrigerate $\leq 10^{\circ}\text{C}$ If chlorine present, add sodium thiosulfate tablet	6 hrs transport Start analysis within 2 hrs of receipt in lab.	
Oil and Grease	G	1000	G	HCl or H ₂ SO ₄ to pH <2, Refrigerate $\leq 6^{\circ}\text{C}$	28 d	28 d

Approved Standard Methods	
CBOD / BOD 5 Day	Std Methods 5210-B
Ammonia, Selective Electrode Method	Std Methods 4500-NH ₃ 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