



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

January 17, 2013

Darke County Board of Commissioners
County Administration Building
520 South Broadway
Greenville, Ohio 45331

RE: Darke County, Darke County Home, Compliance Evaluation Inspection

Ladies and Gentlemen:

On January 9, 2013, I conducted a Compliance Evaluation Inspection at the Darke County Home (NPDES Permit No. OH0133612; OEPA Permit No. 1PG00105*BD). The inspection was also conducted as part of renewing the NPDES Permit. Representing this Facility was Bill Marker and Jeff Marshall. A copy of my inspection report is enclosed.

All areas evaluated in the inspection report were found to be satisfactory. The items noted in the attached report are currently being addressed with one exception. A new Operator of Record Notification Form must be submitted for Bill Marker. Please submit this form to this office as soon as possible, but not later than February 15, 2013.

Finally, the County is investigating the possibility of connecting the county home and jail to the city of Greenville's sanitary sewer. Due to its age and poor condition, the current WWTP will need to be replaced sooner than later. Ohio EPA strongly encourages the County to connect to the City's sanitary sewers as soon as possible.

If you have any questions, please call me at (937) 285-6096.

Sincerely,

A handwritten signature in black ink, appearing to read "Ned Sarle".

Ned Sarle
Environmental Specialist
Division of Surface Water
Permits Section

NS/tb

Enclosures

ec: Jeff Marshall, Darke County



State of Ohio Environmental Protection Agency
Southwest District Office

NPDES Compliance Inspection Report
Semi-Public Sewage Disposal Inspection Form

Section A: National Data System Coding					
Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PG00105*BD	OH0133612	1/9/2013	C	S	2

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Darke County Home 5105 County Home Road Greenville, Ohio 45331	9:25 A.M.	3/1/2008
	Exit Time	Permit Expiration Date
	11:10 A.M.	2/28/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Bill Marker, WWTP Operator Jeff Marshall, Community Development Coordinator	(937) 459-2317 (937) 547-7362	
Name, Address and Title of Responsible Official	Phone Number	
Darke County Board of Commissioners County Administration Building 520 South Broadway Greenville, Ohio 45331	(937) 547-7370	

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	N	Other
S	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
See Attached Summary of Findings / Comments.	
Inspector	Reviewer
 1/18/13 Date	 1/18/13 Date
Ned Sarle Permit Section Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Permit #: 1PG00105*BD
 NPDES #: OH0133612

Average Daily Design Flow:	10,000 Gallons/Day
Plant Serves:	County Retirement Home
Average Daily Flow: (Period of Review):	7050 Gallons/Day (October 2011 through December 2012)
Method of flow monitoring:	Elapsed Time Meter of Dosing Pumps
Type of alarms for plant:	None - Home maintenance checks daily

Pretreatment

Type of Pretreatment: **Grease Trap**
 Does the Trash Trap need pumped: **No**
 Maintenance of pretreatment components is: **Good**

Comments/Status:

Grease trap cleaned once a year.

**Secondary Treatment
(Aeration)**

Color of sludge: **Medium Brown**
 Quality of Sludge: **Medium**
 Foam: **None present**
 Odor: **No objectionable odor present**

	Yes	No		Yes	No
Aeration is taking place	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plant is septic	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Blowers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Blowers are on a timer	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Skimmers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Plant is flooded	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Diffusers are operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Grating is present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sludge return is operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>			

Maintenance of aerating equipment is...**Good**

Comments/Status:

None.

**Secondary Treatment
(Settling)**

Clarity: **Clear**
 Condition of Weir: **Clean**
 Weir is level: **Yes**
 Effluent in weir: **Clear**

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NPDES #: OH0133612

Clarifier walls need scraped: **No**

Overall maintenance of settling components is: **Good**

Comments/Status:

Weirs are cleaned weekly. Clarifier walls scraped weekly.

Tertiary Treatment

	Yes	No		Yes	No
Surface sand filters: Slow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Subsurface	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Distribution box operating	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Beds alternated	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Are filters ponding/flooding	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Beds raked	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sand filters overgrown	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Chlorination present	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UV present	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Dechlorination present	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Overall maintenance of components is: **Good**

Comments/Status:

Some solids noted on surface sand filters after several months of use.

Sludge Handling/Storage Disposal

Hauler name: **Mike's Sanitation Inc.**
Disposal Site: **Mike's Sanitation Inc.**
Sludge wasted from: **Sludge Holding Tank**
How often is sludge wasted: **Sludge wasted from return sludge once a week**
Sludge drying beds: **No** Sludge holding tank: **Yes**

Overall maintenance of components is: **Good**

Comments/Status:

Sludge pumped from sludge holding tank once a year.

Plant Discharge

Discharge point is a: **Ditch**
Name of discharge point: **unnamed tributary of Bridge Creek**
Discharge is visible: **Yes** Quality of Effluent: **Clear**

Comments/Status:

None.

Permit #: 1PG00105*BD

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Attached Summary of Findings / Comments

The WWTP is required to be operated by a Class A wastewater operator. Bill Marker is currently a Class I. Steve Crawford, a Class I wastewater operator, is also available as a backup operator. An Operator of Record Notification Form was submitted on September 13, 2010. However, this form was not signed by Bill Marker. Since then, Bill has also become a Class I wastewater operator. Based on these facts, a new form adding Bill Marker as the Operator of Record must be submitted. A copy of this form may be found at the following web link: [http://epa.ohio.gov/portals/28/documents/opcert/Operator of Record Notification Form.pdf](http://epa.ohio.gov/portals/28/documents/opcert/Operator_of_Record_Notification_Form.pdf).

The WWTP serving this facility is constructed of metal tanks and is between 30-40 years old. The metal tank walls are corroded. The current WWTP will need to be replaced sooner than later. The county is in the process of investigating the possibility of connecting the county home and jail to the City of Greenville's sanitary sewer. To do this, the county must work out an agreement with the city. Once this agreement is finalized, the county will then design and construct the new sewage system to connect to the city's sanitary sewer. This would most likely consist of a pump station and force main. The Ohio EPA strongly encourages the county to proceed with this construction as soon as possible.

A sign was required to be posted at the WWTP discharge location. This is addressed in Part II, Section L of the NPDES Permit. The county indicated that they just became aware of this recently, and the required sign would be installed in the next several months.

An operator log is maintained at the WWTP. However, this log was not a bound notebook with number pages. The county indicated that this would be provided in the next month.

A review of the Discharge Monitoring Reports (DMRs) for this facility indicated several NPDES Permit violations. The Darke County Home has addressed these violations. Future violations must continue to be reported as required by the NPDES Permit as detailed in Part III.12 titled "Noncompliance Notification."

The WWTP was designed for an average daily flow rate of 10,000 gpd. The WWTP flow rate is monitored with an elapse time meters for the surface sand filter dosing pumps. A review of the DMRs for October 2011 through December 2012 indicated that the average daily flow rate was 7050 gpd and the peak daily design flow rate was 17,700 gpd.

The WWTP consists of a grease trap, an aeration tank, a secondary clarifier, a dosing tank, three surface sand filters, a chlorine contact tank, and a dechlorination system. An aerated sludge holding tank is also provided

Sludge is hauled by Mike's Sanitation and treated at their location. In 2011, 0.224 dry tons of sludge were hauled from the site.

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A review of the DMRs indicated that the detection limits are being reported as a number. This is incorrect. Reporting code "AA" with the detection limit noted should be reported on the DMRs. Finally, I have attached information that addresses the different "A" codes that may be used on the DMRs.

The wastewater sampling program was evaluated in the attached General Lab Criteria checklist. Several items were noted as needing to be addressed. The county indicated that they would be addressed soon.

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NPDES #: OH0133612

Attachment I					
Darke County Home					
Effluent Limit Violations for October 2011 through December 2012					
Reporting Period	Parameter	Limit Type	Units	Permit Limit	Reported Value
August 2012	Chlorine	Daily	mg/l	0.019	0.43
October 2012	Chlorine	Daily	mg/l	0.019	0.74

General Lab Criteria – Darke County Home, 1/9/13

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 – Darke County Home, 1/9/13

Criteria	Standard Methods Requirement	Acceptable?		Rating
pH Meter				
<ul style="list-style-type: none"> • Calibration Frequency / Documentation 	<ul style="list-style-type: none"> • 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	<ul style="list-style-type: none"> • Logbook maintained² 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
<ul style="list-style-type: none"> • Minimum of 2 point calibration 	<ul style="list-style-type: none"> • Calibration per manufacturer specification and calibration buffers must bracket anticipated result⁷ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Slope Documentation / Acceptability 	<ul style="list-style-type: none"> • Slope acceptable range indicated on benchsheet² 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Buffer Expiration Date 	<ul style="list-style-type: none"> • Buffers must not be expired 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Instrument manual available 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Teflon covered magnetic stirrer or equivalent for mixing⁸ 	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: : A logbook must be maintained, and a copy of the instrument manual must be obtained.

Criteria	Standard Methods Requirement	Acceptable?		Rating
Dissolved Oxygen Meter				
<ul style="list-style-type: none"> • Calibration Method 	<ul style="list-style-type: none"> • Air or known DO calibration method¹⁰ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	A
	<ul style="list-style-type: none"> • Calibration per manufacturer specification¹⁰ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Calibration Frequency / Documentation 	<ul style="list-style-type: none"> • Logbook maintained² 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Calibration verification required at least once each day the meter is used.³ 	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
<ul style="list-style-type: none"> • Other 	<ul style="list-style-type: none"> • Small to no bubble present under membrane (must be smaller than the lead in number 2 pencil)¹¹ 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
	<ul style="list-style-type: none"> • Instrument manual available 	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	

Comments: A logbook must be maintained, and a copy of the instrument manual must be obtained.

General Lab Criteria – Darke County Home, 1/9/13

Criteria	Standard Methods Requirement		Rating
Incubator (CBOD/ E-Coli)	Acceptable?		
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use ¹ (E-Coli)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Temperature checked / recorded daily ² (CBOD)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Acceptable temperature range (CBOD) is 20° C ±1.0 ^o ¹²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Acceptable temperature range (E-Coli) is 35° C ±0.5 ^o ²²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Logbook maintained ²	<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
	• Temperature correction information posted on incubator ¹	<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) ²³	<input type="checkbox"/> Yes	<input type="checkbox"/> No
• Other	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Temperature Log (thermometer accurate to 0.5 Celsius). ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Comments: :

Criteria	Standard Methods Requirement		Rating
Refrigerator	Acceptable?		
• Temperature Recordkeeping	• Temperature Log (thermometer accurate to 0.5 Celsius). ⁵	<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
• Other	• Thermometer held in water bath. ¹	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Refrigerator temperature ≤6° Celsius. ¹³	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Do not store volatile solvents, food, or beverages. ¹⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No

Comments:

General Lab Criteria – Darke County Home, 1/9/13

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 – Darke County Home, 1/9/13

Criteria	Standard Methods Requirement		Rating
Sample Collection/Handling		Acceptable?	
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). ¹⁹	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
• 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 type="checkbox"/> Yes	<input type="checkbox"/> No
	• Equipment blanks utilized ¹⁴	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• SOP for cleaning of sampling equipment	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Logbook being maintained ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Comments:			
Criteria	Standard Methods Requirement		Rating
Desiccator		Acceptable?	
• 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		Rating
Bench sheets		Acceptable?	
• General criteria	• Date(s) ²	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	• 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
	• Equations, calculations, units for all measurements, notations, and results present ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	• Corrections, single line through, initialed and dated ²	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Comments:			

General Lab Criteria – Darke County Home, 1/9/13

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General Lab Criteria – Darke County Home, 1/9/13

Criteria	Standard Methods Requirement	Acceptable?		Rating
Hot Water Bath (Fecal Coliform/E. Coli)				
• 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	Acceptable?		Rating
Autoclaves/Steam Sterilizers				
• 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 – Darke County Home, 1/9/13

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 checked="" type="checkbox"/> No						
	<ul style="list-style-type: none"> • Thermometer accurate to 0.1° Celsius⁵ 	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No						
	<ul style="list-style-type: none"> • Log book being maintained ² 	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No						
Comments: A logbook must be maintained.								
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;">5</td> </tr> <tr> <td style="text-align: center;">Marginal</td> <td style="text-align: center;"></td> </tr> <tr> <td style="text-align: center;">Unacceptable</td> <td style="text-align: center;"></td> </tr> </table>	Acceptable	5	Marginal		Unacceptable	
Acceptable	5							
Marginal								
Unacceptable								
		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="text-align: center;">Total Number of Areas Rated</td> <td style="text-align: center;">5</td> </tr> </table>	Total Number of Areas Rated	5				
Total Number of Areas Rated	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:	<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

1	Method 9020-B, Item 3	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-A, 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	40 CFR 136.3, Table II	26	Method 9020 B, Table IV

General Lab Criteria – Darke County Home, 1/9/13

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
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-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 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

"A" REPORTING CODES

Here is the explanation concerning the use of data substitution codes ("A" codes) on monthly operating reports. This information is subject to change. Please watch for the annual mailing of monthly operating reports from Ohio EPA for revisions to the "A" code list and guidance concerning the use of the codes. Depending on the facts of the matter, there may be a violation of the permit for "failure to monitor" even when the data substitution codes are used properly.

AA Below Detectable Limit: Use this code when the quantitative analysis for a substance is done according to an approved analytical method and does not detect the substance or detects it at a level below the minimum detection level. When this code is used, the detection limit should be reported in the additional remarks section of the monthly operating report.

AB Analytical Data Lost: Use this code when the analytical data for a sample has been lost. This applies only to recorded data (e.g., paper records, data disks, etc.). This code is not to be used when a sample is lost. In such a case, the sample would be considered not to have been taken. The circumstances causing the use of this code should be explained in the additional remarks section of the monthly report.

AC Plant Not Operating: Use this code when the wastewater treatment plant is not in operation and there is no discharge to waters of the State, thereby precluding the collection of samples. The circumstances causing the use of this code should be explained in the additional remarks section of the monthly operating report.

AD Automatic Analyzer Out of Service: Use this code when an automatic analyzer, which is normally used to analyze samples at the treatment works, is inoperative. The circumstances causing the use of this code should be explained in the additional remarks section of the monthly operating report.

AE Analytical Data Not Valid: Use this code if the analytical data for a given sample is for some reason not valid. The reason that the data is not valid should be stated in the additional remarks section of the monthly operating report.

AF High Stream Water Inundates Sample Site: Use this code when the designated sampling site is inaccessible because of the high level of water in a stream. This code should be used for all parameters required to be sampled at the site on the day that it was submerged.

AG Trace: This code should not be used. It will be removed from the list of substitution codes available for use on the monthly operating reports.

AH Sample Not Taken, Explanation in Remark Section: Use this code when a required sample is not taken for a reason other than one covered by another "A" Code. An explanation as to why the sample was not taken must be given in the additional remarks section of the monthly operating report.

AJ Above Range of Automatic Analyzer: Use this code when the concentration of a substance is above the level that an automatic analyzer is capable of measuring. This code should only be used for parameters that are normally analyzed by an automatic analyzer. The upper limit of the automatic analyzer should be reported in the additional remarks section of the monthly operating report.

AK Biological Sample - Too Numerous to Count: Use this code when the number of bacterial colonies for each dilution tested exceeds the acceptable number of colonies given by the analytical method used. (Appropriate dilutions should be used to obtain an acceptable count of bacterial colonies.)

AN Sample Not Taken, Plant Not Normally Staffed (Saturdays, Sundays, and Holidays): Use this code to indicate when samples are not collected on days that the treatment plant is not normally staffed. The use of this code is limited to Saturdays, Sundays, and officially recognized municipal holidays if the treatment plant is not normally staffed on those days.