



**Environmental  
Protection Agency**

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

Re: **Notice of Violation**  
Richland County  
City of Mansfield WWTP  
NPDES Permit

April 17, 2012

Mr. Angelo Klousiadis  
Interim Public Works Director  
City of Mansfield  
30 North Diamond Street  
Mansfield, Ohio 44902

Dear Mr. Klousiadis:

On March 7, 2012, Walter Ariss completed a compliance evaluation inspection of the wastewater treatment facilities serving the City of Mansfield. Mr. Marc Morgan, Plant Manager, was present for a tour of the facilities and to provide information on plant operations and maintenance. The inspection included completion of a checklist designed to evaluate major areas of the treatment plant.

The majority of the treatment units were in operation at the time of the inspection. The bypass to the EQ basin was not active. The EQ basin was in need of cleaning from previous use. A clear effluent was being discharged from the final clarifiers and to the Rocky Fork of the Mohican River.

The floating cover anaerobic digester is no longer able to store gas. The digester cover has been leaking for a period of approximately four and a half years. The replacement of the cover should be a priority item for future upgrades at the treatment plant. The other digester covers are also beginning to show their age, with patches of the insulation bubbling up. Mr. Morgan mentioned that a replacement cover has been engineered but is waiting funding. A new sludge mixing system has been included with the design. Please be aware that this project would require a Permit to Install (PTI). The potential for a new belt filter press was also mentioned. The new press would be three passes instead of two. This project would also require a PTI.

During the inspection, we reviewed the plant's laboratory procedure and testing of CBOD. The completed laboratory checklist has been enclosed for your review. The laboratory procedures and testing for this parameter were acceptable. Several of the deficiencies identified in our previous inspection have been corrected.

On April 4 and May 25, 2011, the City bypassed raw sewage from the Park Avenue lift station. This bypass occurred when the storm water pumps in the station were activated. The pumps pump directly out of the wet well into the Rocky Fork of the Mohican. Please be aware that these discharges are unpermitted and represent a violation of ORC 6111.04. During the inspection, we visited the lift station. It was determined that due to the design of the storm pumps, an overflow can occur without the pumps being activated if the wet well becomes surcharged to a high enough elevation. It will be necessary to install a float switch at the elevation of the storm water pump discharge flap gates in the wet well. The float should be connected to an audible alarm and light that will indicate that an overflow is occurring. When the light and alarm are activated, it shall be assumed that an overflow has occurred, and the proper documentation and reporting shall be made. This alarm and light shall be installed **within 60 days of receipt of this letter**. You are required to notify our office in writing once this project has been completed.

In March 2010, the City submitted a Closure Plan for Biosolids Surface Disposal Area to address the need for closure of the former sludge monofill. Our office responded to this submittal with a letter dated July 19, 2010. The City's plan was found to be inadequate in addressing the closure activities in accordance with Section 2.5 and Appendix B of U.S. EPA's document *Surface Disposal of Sewage Sludge – A Guide for Owners/Operators of*

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*Surface Disposal Facilities on the Monitoring, Recordkeeping, and Reporting Requirements of the Federal Standards for the use or Disposal of Sewage Sludge, 40 CFR Part 503.* The letter from Ohio EPA required a resubmittal including a PTI application no later than August 30, 2010. A resubmittal was never received by Ohio EPA.

The permanent closure of the surface disposal area will be addressed with a compliance schedule included in your renewal National Pollutant Discharge Elimination System (NPDES) permit. This schedule will require the submittal of a complete closure plan developed in accordance with the above guidance. The complete plan will be due to Ohio EPA no later than three months from the effective date of the new permit. We urge the City to begin working on an updated plan. Our office is still open to the possibility of land applying the material in the surface disposal area over a several year time span as Class B biosolids, provided appropriate testing is completed.

A review of your discharge monitoring reports submitted for October 2010 through February 2012 revealed numerous **violations** of the limits contained in your NPDES permit. A printout of these **violations** is included in the enclosed spreadsheet. During the above time period, the EQ basin overflowed on 44 days with a total volume of 306 million gallons.

Our office has received your NPDES permit renewal application and has begun working on the renewal permit. Once the draft is finished, you will receive a copy for your review and comment. Please contact our office should you have any comments or concerns.

In summary, the treatment plant appeared to be operating correctly at the time of the inspection. The completed inspection reports are enclosed for your review. If you have any questions, please contact Walter Ariss at 419-373-3070.

Yours truly,



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

WA/jlm

Enclosures

pc: Jim DeSanto, City Engineer, City of Mansfield  
Marc Morgan, City of Mansfield WWTP

ec: Inspection Tracking  
Jacob Howdysell, DSW-CO

Permit #: OH0026328  
 NPDES #: 2PE00001



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
OH0026328	2PE00001	3/7/2012	C	S	1

#### Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
City of Mansfield WWTP 385 South Illinois Avenue Mansfield, OH 44905	10:00	2/1/2010
	Exit Time	Permit Expiration Date
	1:30	6/30/2012
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Marc Morgan, Plant Manager	419-589-2830	
Name, Address and Title of Responsible Official	Phone Number	
Angelo Klousiadis, Interim Public Works Director	419-755-9736	

#### 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	M	Sludge Storage/Disposal	S	Other
M	Collection System				

#### Section D: Summary of Findings (Attach additional sheets if necessary)

*(This area is intentionally left blank for the summary of findings.)*

Inspector

Reviewer

 Date 3/7/12	 Date 4/18/12
Walter Ariss, P.E. Division of Surface Water Northwest District Office	Thomas Poffenbarger, P.E. Water Quality Engineer/ Unit Supervisor Division of Surface Water Northwest District Office

Permit # : OH0026328  
NPDES #: 2PE00001

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..... N
- (b) Permittee is taking actions to resolve violations..... N/A
- (c) Permittee has a compliance schedule..... Y
- (d) Compliance schedule contained in NPDES permit
- (e) Permittee is meeting compliance schedule..... Y

Comments/Status:

**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)  

paper work request sheets
- (c) Log book(s) kept onsite (in an area protected from weather)..... Y
- (d) Log book contains the following:
  - I. Identification of treatment works..... Y
  - II. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7..... N
  - III. Daily record of operation and maintenance activities (including preventative maintenance, repairs and request for repairs)..... Y
  - 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..... Y  
(CSO  and/or SSO )
- (c) Regulatory agency notified of overflows (SSOs)..... Y
- (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) generator runs storm screws, clarifiers and blowers, chlorine. Not WAS or RAS pumps

g) One class IV, two class III, two class II, one class I

Record Keeping

d) Marc needs to keep log of his time in and out of the treatment plant

Collection system

g) treatment plant staff in charge of all lift stations, all have either radio or dialer alarms

h) Park Ave and five smaller stations have backup

**Section H: Sludge Management**

- (a) Sludge management plan (SMP)  
Submitted date: 3/20/2004 Approval #: Not submitted  N/A
- (b) Sludge management plan current..... Y
- (c) Sludge adequately disposed..... Y  
(Method:Land application)
- (d) If sludge is incinerated, where is ash disposed of
- (e) Is sludge disposal contracted..... Y  
(Name: Burch Hydro hauling and application)
- (f) Has amount of sludge generated changed significantly since  
last inspection..... N
- (g) Adequate sludge storage provided at plant.....Y
- (h) Land application sites monitored and inspected per SMP..... 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:**

Gas holder does not hold gas but it is still in use. Methane gas mixing out of service, using recirculation pumps.

**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:magmeters)
- (b) Calibration frequency adequate ..... N  
(Date of last calibration: 2008)
- (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..... N
- (f) Flow measuring equipment inspection frequency  
Daily Weekly monthly other

**Comments/Status:**

b) Calibration had not been completed since 2008. This needs to be completed this year.

Flows measured by adding and subtracting recycle and waste stream flows from influent.

**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: Metals, Pretreatment, P, O&G, Nitrate and Nitrite, TKN, Bis-2

Lab name: Alloway and Pace

*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: 2011

**Comments/Status:**

Lab analyst doing much better.

i) Did not pass DMRQA due to Ginosko missing metals and WWTP missed three of five sample results.

**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	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:**

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Balance</b>				
• Standard Weights	• Either NIST Class 1 or ASTM/ANSI Class 1 weights <sup>1,2</sup>	<input 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 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Service and recalibrate annually (manufacturer representative or comparable) <sup>1</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Must be able to measure to 0.1 grams <sup>4</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Drying Oven (Suspended Solids)</b>				
• Temperature Recordkeeping	• Temperature recorded with each use <sup>4</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Log book maintained <sup>6</sup>	<input 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 type="checkbox"/> Yes	<input type="checkbox"/> No	
• Other	• Thermometer temperature in 0.1° C increments <sup>5</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range is 103° -- 105° F <sup>4</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Instrument manual available	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: All of the thermometers used in the lab need to be calibrated annually with a NIST traceable thermometer. Instrument manual needs to be located.

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

Comments:

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Dissolved Oxygen Meter</b>				
• Calibration Method	• Air or known DO calibration method <sup>10</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
	• Calibration per manufacturer specification <sup>10</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
• Calibration Frequency / Documentation	• Logbook maintained <sup>9</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Calibration verification required at least once each day the meter is used. <sup>3</sup>	<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) <sup>11</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>Incubator (CBOD/E-Coli)</b>				
• Temperature Recordkeeping	• Temperature checked / recorded twice daily for each shelf in use <sup>1</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
	• Acceptable temperature range (CBOD) is 20° C ±1.0° <sup>12</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Acceptable temperature range (E-Coli) is 35° C ±0.5° <sup>22</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	• Logbook maintained <sup>9</sup>	<input checked="" 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 checked="" type="checkbox"/> No	
	• Temperature correction information posted on incubator <sup>1</sup>	<input checked="" 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 checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments: *Need to calibrate thermometer verses NIST traceable at least once/year*

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:

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

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:				

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Sample Collection/Handling</b>				
• Sample Labeling	• Samples container labeled (description, date, time, preservative added, initialed). <sup>19</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
• 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:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Desiccator</b>				
• 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 <sup>9</sup>	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Comments:

Criteria	Standard Methods Requirement	Acceptable?		Rating
<b>Bench sheets</b>				
• General criteria	• Date(s) <sup>4</sup>	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<b>A</b>
	• 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:

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

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
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# General Lab Criteria

City of Mansfield WWTP 3-7-2012

## 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

# General Lab Criteria

City of Mansfield WWTP 3-7-2012

<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

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	OUT	
	Stormwater Overflows	OUT	
	Alternate Power Source	IN	Peak shaving
	EQ Basin	OUT	Empty but needs cleaned out
Preliminary	Maintenance of Collection Systems	M	
	Pump Station	IN	Park avenue station, all pumps have now been rebuilt. Manual and mechanical screen in use.
	Ventilation	S	
	Influent Screen at WWTP	IN	2 Mechanical, one manual backup
	Disposal of Screenings	S	Landfill
	Comminutor		
	Grit Chamber	IN	Aerated
	Disposal of Grit	S	Landfill
	EQ grit	IN	
Primary	Grit Bucket Elevator	IN	
	Settling Tanks	IN	2 tanks
	Scum Removal	IN	
	Sludge Removal	IN	2 pumps – one in service, one backup
	Effluent	S	
Sludge Disposal	Digesters	IN	4 anaerobic units – gas holder still does not hold gas
	Temperature and pH	S	Insulation on covers starting to come off
	Gas Production	S	Used to run blowers, gas holder does not hold gas
	Heating Equipment	IN	
	Sludge Pumps	IN	2 WAS, 5 RAS, 2 dilution pump – one dilution pump out of service
	Disposal of Sludge	S	Land application
	Belt Filter Press	IN	2 presses, both in service
	Sludge Gravity Thickener	IN	2 tanks, only use one at a time
	Holding tank fill pumps	OUT	3 sludge holding feed pumps
	Holding tank blowers	OUT	2 blowers, they do not use these
Other	Flow Meter and Recorder	IN	
	Records	S	
	Lab Controls	S	
	Chemical Treatment	OUT	Polymer addition to sludge prior to filter press
	Sludge rotary screen	IN	
Secondary-Tertiary	Aeration Tanks	IN	8 Tanks
	Blowers	IN	4 units
	Secondary Clarifiers	IN	4 units
Disinfection	Effluent	S	
	Disinfection System	OUT	Gas chlorine feed to contact tank and EQ basin overflow
	Effective Dosage		
	Contact Time		
	Contact Tank	IN	
Dechlorination	OUT	Sulfur dioxide	

Get New Data

## City of Mansfield WWTP NPDES permit limit violations October 2010 through February 2012

Permit No.	Reporting Period	Station	Reporting Code	Parameter	Limit Type	Limit	Reported Value	Violation Date
2PE00001*KD	November 2010	602	00530	Total Suspended Solids	30D Conc	30	52.	11/1/2010
2PE00001*KD	December 2010	602	00530	Total Suspended Solids	30D Conc	30	33.	12/1/2010
2PE00001*KD	December 2010	002	00300	Dissolved Oxygen	1D Conc	5.0	4.3	12/31/2010
2PE00001*KD	January 2011	001	61942	pH, Minimum	1D Conc	6.5	5.91	1/12/2011
2PE00001*KD	January 2011	002	61942	pH, Minimum	1D Conc	6.5	5.59	1/12/2011
2PE00001*KD	February 2011	602	00530	Total Suspended Solids	30D Conc	30	61.	2/1/2011
2PE00001*KD	February 2011	602	80082	CBOD 5 day	30D Conc	25	49.5	2/1/2011
2PE00001*KD	February 2011	001	61942	pH, Minimum	1D Conc	6.5	6.03	2/10/2011
2PE00001*KD	February 2011	002	61942	pH, Minimum	1D Conc	6.5	6.07	2/10/2011
2PE00001*KD	February 2011	602	00530	Total Suspended Solids	7D Conc	45	49.	2/15/2011
2PE00001*KD	February 2011	602	80082	CBOD 5 day	7D Conc	40	50.	2/15/2011
2PE00001*KD	February 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	2.5	2/18/2011
2PE00001*KD	February 2011	602	00530	Total Suspended Solids	7D Conc	45	73.	2/22/2011
2PE00001*KD	February 2011	602	80082	CBOD 5 day	7D Conc	40	49.	2/22/2011
2PE00001*KD	March 2011	001	00530	Total Suspended Solids	7D Qty	1816	2166.79	3/1/2011
2PE00001*KD	March 2011	602	80082	CBOD 5 day	30D Conc	25	38.8181	3/1/2011
2PE00001*KD	March 2011	602	80082	CBOD 5 day	7D Conc	40	63.5	3/1/2011
2PE00001*KD	March 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	2.5	3/19/2011
2PE00001*KD	March 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	4.1	3/26/2011
2PE00001*KD	April 2011	602	00530	Total Suspended Solids	30D Conc	30	51.	4/1/2011
2PE00001*KD	April 2011	602	00530	Total Suspended Solids	7D Conc	45	56.6666	4/1/2011
2PE00001*KD	April 2011	602	80082	CBOD 5 day	30D Conc	25	42.1111	4/1/2011
2PE00001*KD	April 2011	002	61942	pH, Minimum	1D Conc	6.5	6.45	4/4/2011
2PE00001*KD	April 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	1.1	4/5/2011
2PE00001*KD	April 2011	602	00530	Total Suspended Solids	7D Conc	45	60.	4/15/2011
2PE00001*KD	April 2011	002	61942	pH, Minimum	1D Conc	6.5	6.48	4/19/2011
2PE00001*KD	April 2011	002	61942	pH, Minimum	1D Conc	6.5	6.46	4/20/2011
2PE00001*KD	April 2011	602	80082	CBOD 5 day	7D Conc	40	49.75	4/22/2011
2PE00001*KD	May 2011	001	00530	Total Suspended Solids	30D Qty	545	573.578	5/1/2011
2PE00001*KD	May 2011	001	80082	CBOD 5 day	30D Qty	454	480.061	5/1/2011
2PE00001*KD	May 2011	002	00530	Total Suspended Solids	30D Conc	12	13.2857	5/1/2011
2PE00001*KD	May 2011	002	00530	Total Suspended Solids	7D Conc	18	18.4	5/1/2011
2PE00001*KD	May 2011	002	80082	CBOD 5 day	30D Conc	10	12.7142	5/1/2011
2PE00001*KD	May 2011	602	00530	Total Suspended Solids	30D Conc	30	54.6	5/1/2011
2PE00001*KD	May 2011	602	00530	Total Suspended Solids	7D Conc	45	47.6666	5/1/2011
2PE00001*KD	May 2011	602	80082	CBOD 5 day	30D Conc	25	53.5	5/1/2011
2PE00001*KD	May 2011	602	80082	CBOD 5 day	7D Conc	40	41.	5/1/2011
2PE00001*KD	May 2011	001	50060	Chlorine, Total Residu	1D Conc	0.027	.435	5/5/2011
2PE00001*KD	May 2011	002	50060	Chlorine, Total Residu	1D Conc	0.027	.188	5/5/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.45	5/9/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.42	5/10/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.4	5/11/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.38	5/12/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.36	5/13/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.35	5/14/2011
2PE00001*KD	May 2011	001	00530	Total Suspended Solids	7D Qty	817	864.562	5/15/2011
2PE00001*KD	May 2011	001	80082	CBOD 5 day	7D Qty	681	729.331	5/15/2011
2PE00001*KD	May 2011	002	80082	CBOD 5 day	7D Conc	15	20.6	5/15/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.39	5/15/2011
2PE00001*KD	May 2011	602	00530	Total Suspended Solids	7D Conc	45	65.	5/15/2011
2PE00001*KD	May 2011	602	80082	CBOD 5 day	7D Conc	40	91.	5/15/2011
2PE00001*KD	May 2011	002	61942	pH, Minimum	1D Conc	6.5	6.08	5/16/2011
2PE00001*KD	May 2011	001	50060	Chlorine, Total Residu	1D Conc	0.027	.167	5/17/2011
2PE00001*KD	May 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	.1	5/28/2011
2PE00001*KD	May 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	.1	5/29/2011
2PE00001*KD	May 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	.1	5/30/2011
2PE00001*KD	May 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	3.9	5/31/2011
2PE00001*KD	June 2011	002	50060	Chlorine, Total Residu	1D Conc	0.027	.051	6/8/2011
2PE00001*KD	July 2011	001	00530	Total Suspended Solids	7D Conc	18	19.6	7/8/2011

2PE00001*KD	July 2011	001	80082	CBOD 5 day	7D Conc	15	16.6	7/8/2011
2PE00001*KD	July 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	4.1	7/19/2011
2PE00001*KD	November 2011	602	00530	Total Suspended Solids	30D Conc	30	38.6666	11/1/2011
2PE00001*KD	November 2011	602	80082	CBOD 5 day	30D Conc	25	36.	11/1/2011
2PE00001*KD	November 2011	602	00530	Total Suspended Solids	7D Conc	45	86.	11/8/2011
2PE00001*KD	November 2011	602	80082	CBOD 5 day	7D Conc	40	48.	11/8/2011
2PE00001*KD	November 2011	001	61941	pH, Maximum	1D Conc	9.0	9.23	11/14/2011
2PE00001*KD	November 2011	001	61941	pH, Maximum	1D Conc	9.0	10.5	11/15/2011
2PE00001*KD	November 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	1.6	11/24/2011
2PE00001*KD	November 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	1.7	11/25/2011
2PE00001*KD	November 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	2.1	11/26/2011
2PE00001*KD	November 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	1.4	11/27/2011
2PE00001*KD	November 2011	002	00300	Dissolved Oxygen	1D Conc	5.0	4.6	11/28/2011
2PE00001*KD	December 2011	602	00530	Total Suspended Solids	30D Conc	30	34.5	12/1/2011
2PE00001*KD	December 2011	602	00530	Total Suspended Solids	7D Conc	45	48.5	12/1/2011
2PE00001*KD	December 2011	602	80082	CBOD 5 day	7D Conc	40	44.	12/1/2011
2PE00001*KD	January 2012	602	00530	Total Suspended Solids	30D Conc	30	40.6666	1/1/2012
2PE00001*KD	January 2012	602	80082	CBOD 5 day	30D Conc	25	32.3333	1/1/2012
2PE00001*KD	February 2012	001	61942	pH, Minimum	1D Conc	6.5	6.38	2/1/2012
2PE00001*KD	February 2012	602	00530	Total Suspended Solids	30D Conc	30	74.	2/1/2012
2PE00001*KD	February 2012	602	80082	CBOD 5 day	30D Conc	25	118.	2/1/2012
2PE00001*KD	February 2012	001	00552	Oil and Grease, Hexane	1D Conc	10	24.1	2/9/2012