Ohio Environmental Protection Agency

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

June 27, 2012

Mr. Robert Leventry, Director
Butler County Environmental Services Department
130 High Street, 6th Floor
Hamilton, Ohio 45011

RE: Butler County, LeSourdsville WWTP, Compliance Evaluation Inspection

Dear Mr. Leventry:

On June 20, 2012, I conducted a Compliance Evaluation Inspection at the Butler County, LeSourdsville WWTP (NPDES Permit No. OH0049147; OEPA Permit No. 1PK00011*MD). Representing the facility was Jack Thornsberry, Brian Custer, Dave Click, Warren Barns and Rick Baker. A copy of my inspection report is enclosed.

The inspection report contains two marginal areas. The Permit section was rated marginal as a result of the WWTP bypasses. The Collection System section was rated marginal as a result of the sewage collection system bypasses. The events were due in large part to significant rain events and limitations at the WWTP. The county is addressing these issues by upgrading the WWTP. Therefore, a response is not required at this time.

If you have any questions or wish to discuss this further, please call me at (937) 285-6096.

Sincerely,

Ned Sarle
Division of Surface Water
Permits Section

NS/tf

Enclosure

ec: Brian Custer, Butler County Water and Sewer Department

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**
1PK00011*MD	OH0049147	6/20/2012	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
Butler County LeSourdsville WWTP 5260 Hamilton - Middletown Road Hamilton, Ohio 45011	9:20 A.M.	7/1/2010
	Exit Time	**Permit Expiration Date**
	12:10 P.M.	1/31/2014
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
Jack Thornsberry, Division Head Brian Custer, Field Superintendent Dave Click, Wastewater III Warren Barns, Collection Supervisor Rick Baker, Electric / Mechanical Supervisor	(513) 887-3929 (513) 887-5552 (513) 887-3686 (513) 887-3686 (513) 887-3686	
Name, Address and Title of Responsible Official	**Phone Number**	
Mr. Robert Leventry, Director Butler County Water and Sewer Department 130 High Street, 6th Floor Hamilton, Ohio 45011	(513) 887-5616	

Section C: Areas Evaluated During Inspection
(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

M	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	N	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
M	Collection System				

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

See Attached Summary of Findings / Comments.

Inspector	Reviewer
Ned Sarle 6/27/12	Martyn Burt 6/28/12
Ned Sarle Date Division of Surface Water Southwest District Office	Martyn Burt Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

Permit #: 1PK00011*MD
NPDES #: OH0049147

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.....	N
(e) Number and location of discharge points are as described in permit.....	Y
(f) Storm water discharges properly permitted.....	Y

Comments/Status:

Storm water discharge from facility is permitted under a General Industrial Storm Water Permit.

See Attached Summary of Findings / Comments.

Section F: Compliance

(a) Any 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.....	N
(e) Compliance schedule contained in...N/A	
(f) Permitt ee is in compliance with schedule.....	N/A
(g) Has biomonitoring shown toxicity in discharge since last inspection	N

Comments/Status:

See Attached Summary of Findings / Comments.

Section G: Operation & Maintenance

Treatment Works:

Treatment facility properly operated and maintained

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

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

The two backup generators are capable of running the whole WWTP.

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

Monthly.

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

The WWTP is staffed 24 hour a day, 7 days a week.

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

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

Computer program.

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

(f) Operatio n 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:

None.

Section G: Operation & Maintenance con't

Record Keeping/Operator of Record:

(a) Wastewater Treatment Works classification (OAC 3745-7)..... IV
(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..... Y
(g) Operator of Record log book provided..... Y
(h) Format of log book (e.g. computer log, hard bound book)

Hard bound 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:

The Staffing Reduction Plan was approved by the Ohio EPA on July 9, 2009. The certified operator is required to be at the facility a minimum of 10 hours a week.

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..... 10
  ii. How many pump stations have telemetered alarms.....14
  iii. How many pump stations have operable alarms.....14

(b) Any chronic collection system overflows since last inspection..... Y
(c) Regulatory agency notified of all overflows..... Y
(d) Are there CSOs in the collection system..... N/A
if so, what is the LTCP status.....

(e) How are CSOs monitored (chalk, block, level sensor, etc.).....

(f) Portabl e pumps available for collection system maintenance..... Y
(g) RDII Program established and active..... Y
(h) Any WIB complaint received since last inspection..... Y
(i) Is there a WIB response plan..... Y
(j) Is any portion of the collection system at or near dry weather capacity..... N

Comments/Status:

The LeSourdsville WWTP collection system has 14 pump stations. In addition to backup power, the county has two 4" portable pumps, one 8" portable pump, one portable generator, three vacuum trucks, and one sludge hauling truck.

See Attached Summary of Findings / Comments.

Section H: Sludge Management

(a) Method of Sludge Disposal... ☐ Land Application
☒ Haul to Another NPDES Permitee
☒ Haul to a Mixed Solid Waste Landfill

*if one of the selected methods is land application, complete applicable charts.

Class A - Exception Quality Sewage Sludge (monitoring station 584)

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 Solids	Option 8 - >75% Percent Solids with Unstabilized Solids
Alternative 1 – Time and Temperature Regime (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 – High pH and High Temperature (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 3 – Other Processes (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 4 – Unknown Processes (84369)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Composting (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Heat Drying (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Heat Treatment (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Thermophilic Aerobic Digestion (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Beta Ray Irradiation (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Gamma ray Irradiation (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 5 – Pasteurization (84397)	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 6 - Approved Equivalent Process	☐	☐	☐	☐	☐	☐	☐	☐

Permit #: 1PK00011*MD
NPDES #: OH0049147

Class B Sewage Sludge (monitoring station 581)

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)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Aerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Air Drying (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Anaerobic Digestion (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 – Composting (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 2 - Lime Treatment (46396)	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Alternative 3 – Approved Equivalent Process	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

(b) Has amount of sludge generated changed significantly since the last inspection..... N

(c) How much sludge storage is provided at the plant.....

45 days.

(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" scree n at headworks for facilities that land apply sludge..... N/A

(g) Are sludge application sites inspected to verify compliance with NPDES permit..... N/A

(h) Is a contractor used for sludge disposal..... N

If so, what is the name of the contractor.....

Comments/Status:

See Attached Summary of Findings / Comments.

Section I: Self-Monitoring Program

Flow Measurement:

(a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):
Parshall flume and ultrasonic meter.

(b) Flow meter calibrated annually ..... Y
(Date of last calibration: 9/22/2011)

(c) 24-hour recording instruments operated and maintained..... Y

(d) Flow measurement equipment adequate to handle full range of flows..... N

(e) All discharged flow is measured..... Y

Comments/Status:

Flow measurement equipment may monitor flows between 0 - 32.0 MGD. In the past, both the influent and effluent parshal flumes have been flooded during storm events. The current WWTP upgrade will address these limitations.

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:

None.

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..... N/E

(b) Do SOP's include the following if applicable..... N/E

- Title
- Scope and Application
- Summary
- Sample Handling and Preservation
- Interferences
- Apparatus and Materials
- Reagents
- Procedure
- Calculations
- Quality Control
- Maintenance
- Corrective Action
- Reference (Parent Method)

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 know 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).. N/E

(d) If alternate analytical procedures are used, proper approval has been obtained..... N/E

(e) Analyses being performed more frequently than required by permit. N/E

(f) If (e) is yes, are results in permittee's self-monitoring report..... N/E

(g) Satisfactory calibration and maintenance of instruments/equipment. N/E (see score from GLC page)

(h) Commercial laboratory used..... N/E
Parameters analyzed by commercial lab:

Lab name:

Discharge Monitoring Report Quality Assurance (DMRQA)

(a) Participation in latest USEPA quality assurance performance sampling..... N/E
Date:

(b) Were any parameters "Unsatisfactory"..... N/E

(c) Reasons for "Unsatisfactory" parameters.....

Comments/Status:

None.

Section J: Effluent/Receiving Water Observations

Outfall # 001
Outfall Description: WWTP effluent pipe discharge.

Receiving Stream: Great Miami River
Receiving Stream Description: No adverse conditions were noted with the WWTP discharge.

Comments/Status:

The WWTP discharge sign was not posted as required by the NPDES Permit. This sign should be provided as soon as possible.

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:

None.

Summary of Findings / Comments

A review of the Discharge Monitoring Reports (DMRs) from April 2011 through April 2012 indicated several NPDES permit violations. These violations are listed on Attachment I. These violations have been adequately addressed. All of the DO violations were caused by high flow events. Future violations must continue to be reported as required by the NPDES permit as detailed in Part III, Section 12 titled "Noncompliance Notification".

The WWTP is designed for an average daily flow of 12.0 MGD and a peak daily flow of 28.0 MGD. The average daily flow reported for this period was 9.64 MGD. The peak daily flow reported was 24.99 MGD.

The LeSourdsville WWTP is being upgraded as part of a two phase construction project. The Phase I project has been completed.

The Phase II project includes increasing the WWTP design flow rate from 12.0 to 15.0 MGD, increasing the WWTP influent pump station capacity to a peak flow rate of 70.0 MGD, converting an existing oxidation ditch to a flow equalization basin, constructing a new pretreatment system, constructing a new biological treatment system, modifying the existing secondary clarifier sludge collection and pumping systems, constructing a new secondary clarifier, and providing a new backup generator. A new WWTP outfall pipe is also being constructed with these upgrades. Construction on these improvements was started on April 1, 2011. The construction should be completed by October 2013.

April 2011 through April 2012, numerous overflows were reported from the sewage collection system. These overflows are noted on Attachment II. These overflows were reported on the DMRs and in the annual SSO report. Most of these overflows were reported along Hamilton Middletown Road and were due to rain events. The WWTP upgrade that is under construction will address these overflows. In addition, a new backup generator was installed for the Sand Pump Station. These overflows have been reported in accordance to the NPDES permit as detailed in Part II, Section D. The county was requested to submit written reports for all sewage collection system overflows. The county has submitted the written reports for all of these overflows. The county should also continue to provide the overflow volume estimates and if applicable the return frequency of the storm event that caused the overflow.

The required annual SSO report was received on February 23, 2012. During 2011, seven WIBs were reported.

Butler County owns and operates approximately 717 miles of sanitary sewers. The sanitary sewers are cleaned approximately once every five years. Visual inspections of the sanitary sewers are also occurring approximately once every ten years. In 2011, 712,000 feet (19%) of sanitary sewers were cleaned. Butler County also visually inspected 570,000 feet (15%) of sanitary sewers. Significant sources of infiltration and

inflow (I / I) continued to be eliminated as they are found. Sanitary sewers are being replaced in problematic areas to further control I / I. Thirteen flow monitors are used in the collection systems to determine areas that have high I / I. Butler County has an effective sanitary sewer operation and maintenance program.

April 2011 through April 2012, numerous WWTP bypasses were reported. These bypasses are noted on Attachment III. All but one of these bypasses were due to rain events. The WWTP upgrade currently under construction are designed to address these bypasses. Future WWTP bypasses must continue to be reported as required by the NPDES Permit as detailed in Part III, Section 11 titled "Unauthorized Discharges." The county should also continue to provide the overflow volume estimates and if applicable the return frequency of the storm event that caused the overflow.

The annual sludge disposal report was submitted on January 18, 2012. For the 2011 sludge disposal, 51.43 dry tons were hauled to the Rumpke Landfill and 1912.77 dry tons were incinerated at the MSD Mill Creek WWTP and Little Miami WWTP.

Part II, Section AA of the NPDES Permit requires that a flow projection report be submitted by the 10th of January and July of each year. These reports are used to determine when the WWTP flows will exceed 12.0 MGD. These reports were received on May 3, 2011; July 5, 2011 and January 3, 2012.

Attachment I

LeSourdsville WWTP

Effluent Limit Violations for April 2011 through April 2012

Reporting Period	Parameter	Limit Type	Units	Permit Limit	Reported Value
April 2011	DO	Daily	mg/l	5.5	1.5
April 2011	DO	Daily	mg/l	5.5	4.6
April 2011	DO	Daily	mg/l	5.5	4.0
April 2011	DO	Daily	mg/l	5.5	4.2
April 2011	DO	Daily	mg/l	5.5	2.5
May 2011	DO	Daily	mg/l	5.5	3.3
May 2011	DO	Daily	mg/l	5.5	0.0
May 2011	DO	Daily	mg/l	5.5	5.2
May 2011	E. coli	Weekly	#/100ml	284	"AK"
August 2011	Oil & Grease	Daily	mg/l	10	11
September 2011	DO	Daily	mg/l	5.5	5.4
November 2011	DO	Daily	mg/l	5.5	3.9
December 2011	DO	Daily	mg/l	5.5	3.0
January 2012	DO	Daily	mg/l	5.5	5.2

Attachment II

Sanitary Sewer Overflows

April 2011 through April 2012

Date	Location	Quantity	Cause
4/19-20/2011	5335 Hamilton Middletown Road	39,000	Rain
4/19-20/2011	5300 Hamilton Middletown Road	61,000	Rain
4/19/2011	Sands Pump Station	2000	Power Failure
4/30/2011	Greencrest Pump Station	34,000	Equipment Failure
5/3/2011	5300 Hamilton Middletown Road	unknown	Rain
5/3/2011	5676 Hamilton Middletown Road	unknown	Rain
5/23/2011	Sands Pump Station	1040	Rain / Power Failure
9/26/2011	5300 Hamilton Middletown Road	23,000	25 Year Rain
9/26/2011	5676 Hamilton Middletown Road	23,000	25 Year Rain
10/26/2011	6880 Maple Creek Drive	8000	Vandalism
12/5-6/2011	731 South Sands Drive	unknown	2 Year Rain
12/5-6/2011	5300 Hamilton Middletown Road	50,671	2 Year Rain
12/5-6/2011	5676 Hamilton Middletown Road	50,671	2 Year Rain
1/27/2012	5300 Hamilton Middletown Road	10,767	6 Month Rain
1/27/2012	5676 Hamilton Middletown Road	10,767	6 Month Rain

Attachment III

Wastewater Treatment Plant Overflows

April 2011 through April 2012

Date	Location	Quantity	Cause
4/19/2011	Various WWTP Locations	unknown	Rain
4/20/2011	Various WWTP Locations	unknown	Rain
4/27/2011	Various WWTP Locations	unknown	Rain
5/3/2011	Various WWTP Locations	970,000 (+/-)	Rain
9/14/2011	Secondary Clarifier	200,000	Operator Error
9/26/2011	Various WWTP Locations	594,000	25 Year Rain
12/5-6/2011	Various WWTP Locations	2,400,000(+/-)	2 Year Rain
1/27/2012	WWTP Manhole	20,000	6 Month Rain