



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

January 10, 2013

Logan County Board of Commissioners  
117 East Columbus Street, Suite 100  
Bellefontaine, Ohio 43311

**RE: Indian Lake Water Pollution Control District Compliance Evaluation  
Inspection / Notice of Violation**

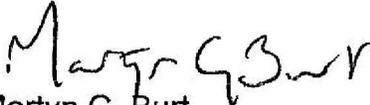
Dear Board of Commissioners:

On December 18, 2012, representatives of the Ohio EPA Southwest District Office conducted a Compliance Evaluation Inspection at the Indian Lake Water Pollution Control District waste water treatment plant. The inspection was conducted as part of a compliance review of the plant with respect to the terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit issued to the county.

The findings from this inspection are included in the attached report. There are no items that require a response at this time.

If you have any questions regarding the report, you may contact Joe Reynolds at (937) 285-6097.

Sincerely,

  
Martyn G. Burt  
Supervisor  
Division of Surface Water

MGB/tf

Enclosure

cc: Chris Clark, District Director  
Ron Jacob, Operations Manager  
Dan Mabry, Chief Plant Operator

Permit #: 1PK00002\*MD  
 NPDES #: OH0036641



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
1PK00002*MD	OH0036641	12/18/2012	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	Entry Time	Permit Effective Date
Indian Lake Water Pollution Control Dist. 1015 Orchard Island Road South Russells Point, Ohio 43348	9:30 AM	11/1/2012
	Exit Time	Permit Expiration Date
	12:30 PM	1/31/2016
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Chris Clark, District Director Ron Jacob, Operations Manager Dan Mabry, Chief Plant Operator	(937) 843 - 3328 (937) 843 - 3328	
Name, Address and Title of Responsible Official	Phone Number	
Logan County Board of Commissioners 117 East Columbus Street, Suite 100 Bellefontaine, Ohio 43311	(937) 599 - 7284	

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	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
S	Collection System				

Section D: Summary of Findings (Attach additional sheets if necessary)	
See attached report.	
Inspector	Reviewer
1/11/2013	1/11/2013
Joe Reynolds Division of Surface Water Southwest District Office	Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
Date	Date

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

**Section E: Permit Verification**

Inspection observations verify the permit

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

**Comments/Status:**

The water pollution control district has filed a "No Exposure" certification for storm water.

**Section F: Compliance**

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

**Comments/Status:**

Biomonitoring performed in September was not toxic.

**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 plant has a 775 KW generator. The generator can run everything.
  - ii. How often is the generator tested under load.....  

The generator is placed under load semi annually. It is run once per month.
- (b) Which components have an alarm system available for power or equipment failures.....  

The plants SCADA system covers all treatment units for alarm conditions.
- (c) All treatment units in service other than backup units..... Y
- (d) What method is used for scheduling routine & preventative maintenance (calendar, software, etc.).....  

An Intero maintenance package is used to schedule maintenance.
- (e) Any major equipment breakdown since last inspection..... N
- (f) Operation and maintenance manual provided and maintained..... Y
- (g) Any plant bypasses since last inspection..... Y
- (h) Any plant upsets since last inspection..... N

**Comments/Status:**

The plant still blends flows in excess of 4.6 MGD. This will occur after the 1.5 million gallon equalization system fills up.

**Section G: Operation & Maintenance con't**

**Record Keeping/Operator of Record:**

- (a) Wastewater Treatment Works classification (OAC 3745-7)..... III
- (b) Operator of Record holds unexpired license of class required by Permit..... Y
- (c) Copy of certificate of Operator of Record displayed on-site..... Y
- (d) Has the Operator of Record submitted an ORC Notification form.. Y
- (e) Minimum operator staffing requirements fulfilled (OAC 3745-7).... Y
- (f) If a Staffing Reduction plan has been approved, are the stipulations of the plan being met..... N/A
- (g) Operator of Record log book provided..... Y
- (h) Format of log book (e.g. computer log, hard bound book)  

Each operator maintains a 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 plant is staffed 5 days per week / 40 hours per week. Spot checks are performed on weekends.

**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.....29
  - ii. How many pump stations have telemetered alarms.....18
  - iii. How many pump stations have operable alarms..... 29
  
- (b) Any chronic collection system overflows since last inspection..... N
- (c) Regulatory agency notified of all overflows..... N/A
- (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) Portable pumps available for collection system maintenance..... Y
- (g) RDII Program established and active..... N
- (h) Any WIB complaint received since last inspection..... N
- (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:**

All of the main lift stations have permanent standby power. A portable pumping system is available for the rest. There are 300 individual stations in the system. The owners are notified not to use water during periods of repair. The district maintains a supply of new / rebuilt pumps to use in these stations.

**Section H: Sludge Management**

- (a) Method of Sludge Disposal...  Land Application  
 Haul to Another NPDES Permittee  
 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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - High pH and High Temperature (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Other Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 4 - Unknown Processes (84369)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Composting (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Drying (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Heat Treatment (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Thermophilic Aerobic Digestion (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Beta Ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Gamma ray Irradiation (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 5 - Pasteurization (84397)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 6 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**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)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Aerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Air Drying (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Anaerobic Digestion (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Composting (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 2 - Lime Treatment (46396)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Alternative 3 - Approved Equivalent Process	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- (b) Has amount of sludge generated changed significantly since the last inspection..... N
- (c) How much sludge storage is provided at the plant.....
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
- (e) Any complaints received in last year regarding sludge..... N
- (f) 5/8" 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..... Y  
 If so, what is the name of the contractor.....

**Comments/Status:**

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):  

Sonic meter and flume after the UV disinfection system.
- (b) Flow meter calibrated annually ..... N  
(Date of last calibration: 2010)
- (c) 24-hour recording instruments operated and maintained..... Y
- (d) Flow measurement equipment adequate to handle full range of flows..... Y
- (e) All discharged flow is measured..... Y

**Comments/Status:**

A mag. meter is used to record flows that are bypassed around the secondary treatment system.

**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:**

Effluent samples are collected after the UV system and at the river (daily grabs). Composite samples are flow proportioned.

**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 known precision and accuracy. Standard operating procedures are to be used in the laboratory in sufficient detail that a competent analyst unfamiliar with the method can conduct a reliable review and/or obtain acceptable results." SOPs should be developed for each analytical procedure.*

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. 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:**

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

Outfall # 001

Outfall Description: Final outfall was not visited during this inspection.

Receiving Stream: Great Miami River.

Receiving Stream Description: Warm Water Habitat

**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:**

## Inspection Findings

National Pollutant Discharge Elimination System (NPDES) permit number 1PK00002\*MD was issued to the Logan County Board of Commissioners on August 23, 2012. This permit expires on January 31, 2016:

The NPDES permit contains a compliance schedule for elimination of collection system overflows and a secondary bypass at the plant. A Phase II construction schedule is included in the permit. A flow study was performed in 2012 (the district purchased 16 flow meters and 4 rain gauges). This information will be used to identify and eliminate sources of infiltration and inflow. In addition to the flow study, the district has developed a Capacity, Management, Operation, and Maintenance (CMOM) plan.

Clarifier stress tests were performed in late 2012. Each of the two final clarifiers is designed to treat 2.3 MGD. During stress testing the clarifiers were able to handle 3.5 MGD. Additional tests will be performed to determine if the plant can handle peak flows of 5.6 MGD prior to blending (previously flows over 4.6 MGD were blended).

A new force main is being extended from Belle Center to the Huntsville lift station. This project will include a new back-up generator for the Huntsville lift station.

A System s Control and Data Acquisition (SCADA) system is being used to oversee plant operations and any alarm conditions. This system is being expanded to provide additional collection system coverage. Five collection system alarm sites were added over the past year.

As part of new design standards, all new lift stations must include magnetic flow meters. Annual recalibrations will be performed using milli amp testers.

An Antero electronic monitoring system is being used to register and monitor routine operations and maintenance activities. Hand held units allow operators to collect and record maintenance work orders. This information is fed to the main computer.

The plant has experienced unusual amounts of algae growth. The final clarifiers are taken off-line once a month to clean. In order to reduce the growth in the UV system, an old belt from the belt filter press was placed over the tank for shade.

## Inspection Findings (cont.)

Between February, 2011 and September, 2012 the sewer district reported the following final effluent violations: (11) chlorine residual violations, (1) pH violation, (4) suspended solids violations, and (41) code violations. Most of the code violations were AF "High Stream Water Inundates Sample Site".

### Facility Inspection

The septage receiving station is completely automated. Drivers have access cards to the system. The septage goes to holding tanks prior to introduction into a self-contained screening and press system. Solids are automatically bagged.

A 2.5 meter filter press is used to dry waste activated solids. The solids are directly deposited into two roll off boxes. The boxes are hauled to Cherokee Run landfill.

The district maintains over 300 Enviro One lift stations. As part of this oversight, the district plans to create a map which can be used to identify specific units at individual locations. A certified pump repair shop is maintained at the plant. Spare pumps and parts are maintained in this shop.

A new influent sluice gate was installed in 2011. This allows for the complete shut-off of influent flows to the wet well.

The raw influent pump station has 4 influent pumps (8.4 million gallons total capacity). New chopper pumps were installed in 2011. Along with the pumps, new check valves were added. Two magnetic meters are used to measure influent flows from the main influent line and slough force main.

The two old primary clarifiers have been converted to flow equalization (0.507 million gallons). In addition to the primaries, three new equalization basins (1.55 million gallons) have been installed. All of the equalization tanks were empty. Weirs are used to adjust flows between the new tanks and the old primaries (the new equalization tanks fill first, and then the old clarifiers are filled). SCADA controls are used to automatically return equalized flows when pre-set conditions are met.

## Facility Inspection (cont.)

The aeration system is being operated as an extended aeration system. All three aeration tanks were on-line. A newer aeration grid was added to the aeration system. This upgrade included the addition of fine bubble diffusers. The tanks were being mixed uniformly. Three blowers are being used to provide air to the system.

There are two final clarifiers that receive effluent from the aeration system. Both were on-line. A sluice gate was added to the effluent troughs to allow for easier flushing of algae from the system. The effluent was clear. Algae growth on the weir was contributing to an uneven overflow. Fine pin floc solids were leaving the tanks.

The UV channel is a flow through system at this time of year (disinfection season May through October). The effluent from the system was clear. A moderate amount of white foam was noted. The old chlorine contact tank is used to disinfect bypassed flows.