



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

September 10, 2013

Hamilton County Board of Commissioners  
138 E. Court Street, Room 603  
Cincinnati, Ohio 45202

**RE: MSDGC Little Miami WWTW / Compliance Evaluation Inspection  
NPDES Permit No. OH0025453 / OEPA PERMIT NO. 1PL00000\*OD**

Gentlemen:

On August 19, 2013, I conducted an NPDES compliance evaluation inspection at the Metropolitan Sewer District of Greater Cincinnati's (MSDGCs) Little Miami wastewater treatment works (WWTW). Barb Browne (Operator of Record), David Bauer, Doug Handley and Kevin Cunningham represented Hamilton County and MSDGC during the inspection. The main purpose of the inspection was to evaluate the facility's compliance with the NPDES (discharge) permit.

Since Ohio EPA is renewing the NPDES permit for the facility in the upcoming months, an investigation of any substantial changes (infrastructure, influent waste stream, etc.) which occurred during the course of the existing permit was also conducted.

Please know that this inspection report will not discuss the nature of the mercury spill that occurred at the Little Miami WWTW on June 22, 2013. Since investigations are still on-going, this event will be addressed in future correspondence.

**EFFLUENT LIMIT VIOLATIONS**  
(Period of Review: June 2012 – June 2013)

7D = Weekly 30D = Monthly 1D = Daily  
Conc. = Concentration (mg/l) Qty.= Quantity (Kg/Day)

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value
June 2013	003	Chlorine, Total Residual	1D Conc	0.038	.061

\*MSDGC staff provided a self-notification report for the violation listed above and no further information is required at this time.

### Final Effluent Monitoring

Section 301 of the Clean Water Act requires all publicly owned treatment works to achieve compliance with effluent limitations that meet or are more stringent than secondary treatment standards, which are defined in 40 CFR 133.102:

#### *133.102 Secondary treatment.*

*The following paragraphs describe the minimum level of effluent quality attainable by secondary treatment in terms of the parameters—BOD<sub>5</sub>, SS and pH. All requirements for each parameter shall be achieved except as provided for in §§ 133.103 and 133.105.*

#### *(a) BOD<sub>5</sub>.*

*(1) The 30-day average shall not exceed 30 mg/l.*

*(2) The 7-day average shall not exceed 45 mg/l.*

*(3) The 30-day average percent removal shall not be less than 85 percent.*

*(4) At the option of the NPDES permitting authority, in lieu of the parameter BOD<sub>5</sub> and the levels of the effluent quality specified in paragraphs (a)(1), (a)(2) and (a)(3), the parameter CBOD<sub>5</sub> may be substituted with the following levels of the CBOD<sub>5</sub> effluent quality provided:*

*(i) The 30-day average shall not exceed 25 mg/l.*

*(ii) The 7-day average shall not exceed 40 mg/l.*

*(iii) The 30-day average percent removal shall not be less than 85 percent.*

#### *(b) SS.*

*(1) The 30-day average shall not exceed 30 mg/l.*

*(2) The 7-day average shall not exceed 45 mg/l.*

*(3) The 30-day average percent removal shall not be less than 85 percent.*

*(c) pH. The effluent values for pH shall be maintained within the limits of 6.0 to 9.0 unless the publicly owned treatment works demonstrates that: (1) Inorganic chemicals are not added to the waste stream as part of the treatment process; and (2) contributions from industrial sources do not cause the pH of the effluent to be less than 6.0 or greater than 9.0.*

Currently, monitoring station 003 in the NPDES permit reflects the final effluent monitoring requirements at the Little Miami WWTW (including final effluent pollutant limitations). However, this monitoring station does not fully represent all the flow that is received/treated at the WWTW and then discharged to the Ohio River. Wastewater that receives primary treatment only (bypassing secondary treatment) does not recombine with fully treated wastewater until after monitoring station 003. **Therefore, it would be more appropriate to relocate the effluent monitoring station to a location downstream of the secondary bypass recombination point. This is needed in order to determine compliance with secondary treatment standards (including percent removal of CBOD5 and suspended solids).**

**By no later than September 30, 2013, MSDGC shall provide Ohio EPA a proposed date for relocating the effluent monitoring station. MSDGC staff has expressed concerns for the relocation of the effluent monitoring station over the telephone. These reservations should be detailed in a response letter to Ohio EPA (no later than September 30, 2013) and the agency will take this information into account prior to renewing the NPDES permit for the Little Miami WWTW.**

Thanks to you and your staff for the time extended during the inspection process. If you have any questions, please feel free to contact me by phone at (937) 285-6342 or by email at [joshua.jackson@epa.ohio.gov](mailto:joshua.jackson@epa.ohio.gov).

Respectfully,



Joshua Jackson  
Environmental Specialist II  
Division of Surface Water

JJ/tb

Ec: Barb Browne, MSDGC (w/report)  
Don Linn, MSDGC (w/report)  
Tom Kutcher, MSDGC (w/report)

Enclosures

Division of Surface Water-Southwest District Office

**NPDES Compliance Inspection Report**

Section A: National Data System Coding

Permit #	NPDES#	Month/Day/Year	Inspection Type	Inspector	Facility Type
1PL0000*OD	PJ0025453	8/19/2013	C	S	1

Section B: Facility Data

Name and Location of Facility Inspected	Entry Time	Permit Effective Date
MSDGC Little Miami WWTW 225 Wilmer Avenue Cincinnati, Hamilton County	9:25 a.m.	8/1/2009
	Exit Time	Permit Expiration Date
	1:20 p.m.	7/31/2013
Name(s) and Title(s) of On-Site Representatives	Phone Number(s)	
Barbara Browne, ORC David Bauer, Plant Supervisor Doug Handley, Plant Supervisor	513-352-4921	
Name, Address and Title of Responsible Official	Phone Number	
Hamilton County Board of Commissioners 138 E. Court Street, Room 603 Cincinnati, OH 45202	513-946-4400	

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	Permit	S	Flow Measurement	S	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	S	Other
S	Collection System				

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

See attached report.

Inspector	Reviewer
 Joshua Jackson Division of Surface Water Southwest District Office	 Martyn Burt Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office
Date 9-10-2013	Date 9/11/13

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

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**Section E: Permit Verification**

Inspection observations verify the permit

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

Comments/Status:

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**Section F: Compliance**

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

Comments/Status:

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 dual feed operates the entire WWTW mechanical units. When Duke Energy closed out a substation years ago, they combined both of the main lines for the WWTW into one substation. The WWIP (Attachment 1B) calls for improvements to fix the deficiency. The WWTW has generators for lights, SCADA, sump pumps and other ancillary items.

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

N/E

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

MSDGC provided a list of alarms for plant equipment, including process control and plant equipment failures. All major components were included in the spreadsheet.

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

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

Maximo proprietary software for predictive 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:

Due to low flow conditions, various treatment units (where multiple units are available such as grit, activated sludge and secondary clarification) were off-line.

**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)
 

Electronic - eOps proprietary software.
- (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)... N
  - 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:**

In 2008, MSDGC submitted an ORC staffing reduction plan to Ohio EPA. Ohio EPA approved the plan which reduced the required ORC time to 5 days/week for a total of 10 hours. This was based on plant automation and operator staffing (24/7).

The ORC logbook (eOps) was reviewed (staffing hours only) for the week of November 11, 2012 and the week of May 5, 2013. The review did not reveal any discrepancies or errors in the staffing hour reporting. During the two weeks evaluated, the ORC staffing hours at the Little Miami WWTW reflected the requirements of OAC 3745-7.

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

**Collection System:**

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

**Comments/Status:**

Plant personnel are not responsible for the MSDGC collection system. The collections system personnel are located at the Galbraith road office.

**Section H: Sludge Management**

- (a) Method of Sludge Disposal...  Land Application  
 Haul to Another NPDES Permittee  
 Haul to a Mixed Solid Waste Landfill  
 Incineration
  
- (b) Has amount of sludge generated changed significantly since the last inspection..... N
- (c) How much sludge storage is provided at the plant.....
- (d) Records kept in accordance with State and Federal law (5 years according to OAC 3745-40-06)..... Y
- (e) Any complaints received in last year regarding sludge..... N
- (f) 5/8" screen at headworks for facilities that land apply sludge..... N/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:**

The MSDGC Little Miami WWTW receives sludge from the Butler County Sewer District. During times of the year when the incinerator is taken down for PM, sludge cake is hauled to either the Mill Creek WWTW or a mixed solid waste landfill.

**Section I: Self-Monitoring Program**

**Flow Measurement:**

- (a) Primary/Secondary flow measuring devices (e.g. weir with ultrasonic level sensor):
- (b) Flow meter calibrated annually ..... Y  
(Date of last calibration: 5/1/2013)
- (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:**

Once flows exceed ~65 MGD, effluent pipe restrictions cause backflow conditions around the effluent meter. WWTW staff will then calculate effluent flows based on the influent flow meter and non-potable water meter.

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

**Sampling:**

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

**Comments/Status:**

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

**Laboratory:**

*General*

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

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

- (c) EPA approved analytical testing procedures used (40 CFR 136.3).. Y
- (d) If alternate analytical procedures are used, proper approval  
 has been obtained..... Y
- (e) Analyses being performed more frequently than required by permit. Y
- (f) If (e) is yes, are results in permittee's self-monitoring report.....Y
- (g) Satisfactory calibration and maintenance of instruments/equipment. Y  
 (see score from GLC page)
- (h) Commercial laboratory used..... N  
 Parameters analyzed by commercial lab:

Lab name:

**Comments/Status:**

Little Miami WWTW staff measure for chlorine residual (acceptable SOP provided). Continuous instrumentation is provided for dissolved oxygen, temperature and pH. All other parameters are sampled, and transported to the MSDGC laboratory at the Polk Run WWTW and DIW lab at the Mill Creek WWTW.

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

**Outfall # 003/098**

Outfall Description: 003 monitoring occurs after dechlorination but prior to recombining with secondary treatment bypassing. 098 monitoring occurs after treated effluent recombines with secondary treatment bypassing.

Receiving Stream: Ohio River

Receiving Stream Description: Discharge pipe is located along the bottom of the river with the outlet located approximately 150-200 feet from the shoreline. The discharge could not be observed from the shoreline.

**Comments/Status:**

The signs for outfalls 003/098 and 004 (Four Mile Pump Station bypass) were observed and are acceptable.

**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:**

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