Ohio | Environmental Protection Agency

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Chris Korleski, Director

1PK0001920100104

HAMILTON POLK RUN WWTP ZIMMERMAN, MICH 2010/01/04

50 West Town Street, Suite 700
P.O. Box 1049
Columbus, OH 43216-1049

614 | 644 3020
614 | 644 3184 (fax)
www.epa.ohio.gov

OhioEPA
State of Ohio Environmental Protection Agency

Southwest District Office

401 E. Fifth St.
Dayton, Ohio 45402

TELE: (937) 285-6357 FAX: (937) 285-6249
www.epa.state.oh.us

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

January 4, 2010

Mr. Donald Linn, Superintendent
Division of Wastewater Treatment
Metropolitan Sewer District of Greater Cincinnati
1600 Gest Street
Cincinnati, Ohio 45204

Re: MSD Polk Run WWTP
NPDES Permit No. 1PK00019*FD; OH0020419
NPDES Compliance Inspection and Notice of Violation

Dear Mr. Linn:

On December 15, 2009, I conducted an NPDES (National Pollutant Discharge Elimination System) permit compliance inspection at the above referenced facility. MSD representatives present at the treatment plant during the inspection included Larry Scanlan, Barb Browne, Keith Heffner, Ed Ewbank, and Michelle Nelson. The purpose of the inspection was to evaluate the operation of the wastewater treatment system and to determine compliance with the NPDES permit.

A copy of the inspection report is enclosed. All review areas evaluated during the inspection received a satisfactory rating (Section D of the attached report). However, review of the monthly electronic Discharge Monitoring Reports submitted by MSD from January, 2009 through November, 2009, revealed a weekly concentration and loading violation for NH_3-N in June and a daily D.O. violation on August 17th. MSD previously provided written noncompliance notifications for these violations to the Ohio EPA. However, the causes of these violations were not included in the letters. Please provide this office, within 30 days of receipt of this letter, a written description of the causes of the violations and any actions, either taken or proposed, that will prevent a recurrence.

MSD previously indicated (April 20, 2009 letter) a SCADA alarm for the condition "not enough blowers on" would be in place by July 31, 2009. Please indicate whether this has been accomplished.

The next compliance inspection to be conducted at this facility will most likely include a more in depth examination of the laboratory than has been done previously. The intent is to assist MSD in being able to document that the data produced by the laboratory is "true and accurate" and is therefore defensible. The emphasis will be on the Standard Operating Procedures and Quality Assurance measures required by 40 CFR 136. A copy of the draft checklist we propose to use is included for your information.

If you have any questions, don't hesitate to contact me at (937) 285-6102.

Sincerely,

Michael W. Zimmerman
Permits Group
Division of Surface Water

Copy: Larry Scanlan and Keith Heffner, MSD of Greater Cincinnati

OhioEPA

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**
1PK00019*FD	OH0020419	12/15/2009	C	S	1

Section B: Facility Data		
Name and Location of Facility Inspected	**Entry Time**	**Permit Effective Date**
Hamilton Co. MSD Polk Run WWTP *9744 East Kemper Road* *Loveland, Ohio* *Mailing: 1600 Gest Street* *Cincinnati, Ohio 45204*	*12:45 pm*	*5/1/2005*
	Exit Time	**Permit Expiration Date**
	2:55 pm	*4/30/2010*
Name(s) and Title(s) of On-Site Representatives	**Phone Number(s)**	
Larry Scanlan, Treatment Supervisor IV	*(513) 352-4929*	
Barb Browne, Senior Plant Supervisor IV	*(513) 791-3508*	
Keith Heffner, Plant Supervisor III	*(513) 352-4929*	
Ed Ewbank, Senior Engineer	*(513) 244-5142*	
Michelle Nelson, Lab Technician III	*(513) 352-4929*	
Name, Address and Title of Responsible Official	**Phone Number**	
Donald Linn, Treatment Superintendent	*(513) 244-5142*	

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

S	Permit	S	Flow Measurement	N	Pretreatment
S	Records/Reports	S	Laboratory	S	Compliance Schedule
S	Operations & Maintenance	S	Effluent/Receiving Waters	S	Self-Monitoring Program
S	Facility Site Review	S	Sludge Storage/Disposal	-	Other
N	Collection System				

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

Review of electronic Discharge Monitoring Reports for the final effluent (Outfall 001) from January 1, 2009 through November, 2009 revealed a weekly NH_3-N concentration and loading violation in June, 2009, and a daily D.O. concentration violation, occurring on August 17, 2009. These are listed in the attached report.

The mixed liquor in the aeration basins had a dark gray color, apparently typical for this facility.

Inspector	Reviewer
Michael W. Zimmerman 12-30-09	Martyn Burt 1/4/10
Michael W. Zimmerman Date Division of Surface Water Southwest District Office	Martyn Burt Date Compliance & Enforcement Supervisor Division of Surface Water Southwest District Office

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).....	III
(e)	Operator of Record holds unexpired license of class required by permit.....	Y
	Class: III	
(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.....	N

Record Keeping:

(a)	Log book provided.....	Y
(b)	Format of log book (i.e. computer log, hard bound book)	
	Computer logs – E Ops and Excel spreadsheets *Hard bound books*	
(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.....	Y
	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 H: Sludge Management

(a) Sludge management plan (SMP)
Submitted date: Approval #: Not submitted ☐ N/A ☒
(b) Sludge management plan current..... N/A
(c) Sludge adequately disposed..... Y
(Method: *Hauled to the Little Miami or the Mill Creek WWTPs*)
(d) If sludge is incinerated, where is ash disposed of
(e) Is sludge disposal contracted..... Y
(Name: *Merrell Bros.*)
(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..... N/A
(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:

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:)

(b) Calibration frequency adequate ..... Y
(Date of last calibration: *approx. one year ago*)
(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..... Y
(f) Flow measuring equipment inspection frequency
☒Daily ☐Weekly ☐monthly ☐other

Comments/Status:

Effluent flow meter is calibrated weekly; the date of the last calibration was Dec. 15, 2009. The final effluent flow volume at 2:25 pm was 6.86 MGD. The pH was 7.19 and the D.O. was 8.68.

Section J: Effluent/Receiving Water Observations

Outfall Number	Oil sheen	Grease	Turbidity	Visible Foam	Visible Floating Solids	Color	Other
001	*None*	*None*	*Clear*	*None*	*Slight*	*None*	---

Comments/Status:

The final outfall consists of a concrete headwall on the right bank of the tributary. There was a slight amount of flow upstream from the outfall. Flow travels approx. 50 feet under the road to the mouth and confluence with the Little Miami River.

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:

Draft General Lab Criteria

Criteria	Std Methods Required	Status	Rating
Balance • Standard Weights • Calibration Frequency / Documentation • Cleanliness, air movement, vibration	• Either NIST Class s or ASTM/ANSI Class 1 weights [1,2] • Calibration verification required for testing over long period of time (e.g. 12 hrs.), or after a large number of samples (every 10 samples)[3] • Cleanliness of balance is a must and air movement and vibration needs to be kept to a minimum[1] • Service and recalibrate annually (manufacturer representative or comparable)[1] • Must be able to measure to 0.1 grams[4] • Instrument manual available • Log book maintained[6]		
Comments:			
Drying Oven • Temperature Recordkeeping • Calibration Frequency / Documentation	• Thermometer calibrated annually with NIST traceable thermometer[1,2] • Correction factor posted on thermometer / equipment[1] • Temperature recorded with each use[4] • Thermometer temperature in 0.1° C increments[5] • Acceptable temperature range is 103° – 105° F [4] • Instrument manual available • Log book maintained[6]		

Draft General Lab Criteria

Comments:			
Incubator • Temperature Recordkeeping • Temperature Calibration / Documentation	• Check / record temperature twice daily for each shelf in use[1] • Thermometer calibrated annually with NIST traceable thermometer[1, 2] • Temperature correction information posted on incubator[1] • Acceptable temperature range is 20° C +/1.0° [12] • Instrument manual available • Logbook maintained [9] • Temperature Log (thermometer reads to 0.1 Celsius).[5]		
Comments:			
Refrigerator • Temperature Recordkeeping • Temperature Calibration / Documentation	• Temperature Log (thermometer reads to 0.1 Celsius).[5] • Thermometer calibrated annually with NIST traceable thermometer [1, 2] • Thermometer held in water bath. [1] • Refrigerator temperature 4° Celsius (+/-2°).[13] • Do not store volatile solvents, food, or beverages.[14]		
Comments:			

Draft General Lab Criteria

Comments:			
Sample Handling / Collection • Sample Labeling • Chain of Custody	• Samples container labeled (description, date, time, preservative added, initialed). [19] • Chain of custody (description, date, time, signature).[19] • Composite samples refrigerated during sample collection[14] • Equipment blanks utilized[14] • SOP for cleaning of sampling equipment • Logbook being maintained[9]		
Comments:			
Desiccator	• Properly working seals. • Desiccant fresh (blue color) • Log book being maintained[9]		
Comments:			

	efficacy using a biological such as commercially available *Geobacillus stearothermophilus* in spore strips, suspensions, or capsules [1] • Verify the autoclave temperature weekly by using a maximum registering thermometer (MRT) to confirm that 121°C has been reached. [1] • Thermometer calibrated annually with NIST traceable thermometer [1,2] • Log book being maintained [9]		
Comments:			
		Acceptable	
		Marginal	
		Unacceptable	

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).

PAI Audit Recommendation Criteria:
>60% Marginal Rating = Recommend PAI Audit from DES
>45% Combination of Marginal and Unacceptable Rating = Recommend PAI Audit from DES
>30% Unacceptable = Recommend PAI Audit from DES

and acids	rinsed or baked)					extraction 40 day after extraction
Pesticides	G (PTFE lined lid)	1000	C	Refrigerate 4° C +/-2°	7 d	7 d until extraction 40 day after extraction
Fecal Coliform	G, P (Sterilized)	100	G	Refrigerate 4° C +/-2°, If chlorine present add sodium thiosulfate tablet,	start analysis within 2 hrs of sample collection.	
Oil and Grease	G	1000	G	HCl or H_2SO_4 to pH <2, Refrigerate 4° C +/-2°	28 d	28 d

Notation of Referenced Method

1. Method 9020-B, Item 4	2. Method 1020-A, Item 1
3. Method 1020-B, Item 10	4. Method 2540-B, Item 2
5. Method 2550-B, Item 1	6. Method 1020-B, Item 1
7. Method 4500-H B, Item 4	8. Method 4500-H B, Item 2
9. Method 1020-B, Item 2	10. Method 4500-O B, Item 3
11. Method 4500-O G, Item 3	12. Method 5210-B, Item 5
13. Method 1060B, Table 1060I	14. Method 1060A, Item 2
15. Method 4500-Cl I, Item 2	16. Method 4500-Cl I, Item 24
17. Method 4500-NH3 D, Item 4	18. Method 4500-NH3 D, Item 2
19. Method 1060-B, Item 2	20. Method 1060-B, Item 1
21. Method 9222D, Item 1	22.

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.