



Mike DeWine, Governor
Jon Husted, Lt. Governor
Laurie A. Stevenson, Director

April 30, 2019

Mr. Michael Caprella, Director, Utilities Department
Lima WWTP
1200 Fort Amanda Road
Lima, Ohio 45804

Re: Lima WWTP
Inspection
NPDES
Allen County
2PE00000

Subject: Ohio Environmental Protection Agency NPDES Inspection

Dear Mr. Caprella:

On April 4, 2019, Mr. Andrew Gall, Mrs. Lori Komorowski and I conducted a compliance evaluation inspection of the City of Lima Wastewater Treatment Plant (WWTP). Mr. David Schnipke, Mr. Eric Markley, Mr. Jerry Coffey and Ms. Emily Kerber were present to provide technical information.

The purpose of the inspection was to evaluate compliance with the terms and conditions of your National Pollutant Discharge Elimination System (NPDES) permit and to evaluate the operation and maintenance of the plant.

Findings:

1. At the time of the inspection, all major units were in service.
2. The final effluent observed at the outfall to the Ottawa River was clear, colorless and had no noticeable odor.

Recommendations:

The recommendation(s) set out below are not Orders. The recommendations are offered by Ohio EPA in an effort to provide compliance assistance to your facility.

1. Please consider conducting a survey of the storm water outfalls, catch basins and downspouts located at the wastewater treatment plant to determine the sources of storm water to each outfall.

If you have any questions or comments concerning the enclosed inspection report, please contact me at 419-373-3006 or e-mail at Peggy.Christie@epa.ohio.gov.

Sincerely,


Peggy B. Christie
Division of Surface Water

/jlm

Enclosure

cc: Mr. David Schnipke, Environmental Compliance Manager, City of Lima
Mr. Eric Markley, WWTP Supervisor, City of Lima
Mr. Andrew Gall, DSW, NWDO
Mrs. Lori Komorowski, DSW, NWDO
Inspection Tracking

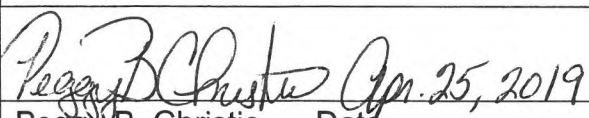
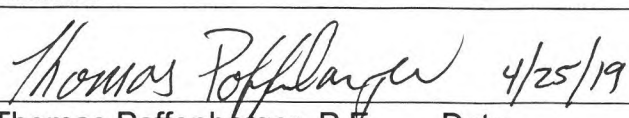
NPDES Compliance Inspection Report

SECTION A: NATIONAL DATA SYSTEM CODING						
Permit #	NPDES #	Inspection Type	Sig. Non-Compliance	Inspection Date	Entry Time	Exit Time
OH0026069	2PE00000	CEI	No	4/4/2019	10:00 AM	2:15 PM

SECTION B: FACILITY DATA	
Name and Location of Facility Inspected	Permit Effective Date
Lima WWTP 1200 Fort Amanda Rd. Lima, Ohio	8/1/2018
	Permit Expiration Date
	8/31/2022
Name(s) and Title(s) of On-Site Representatives	Phone Numbers
Mr. Eric Markley, Supervisor	419-221-5198
Mr. Jerry Coffey, ORC	
Mr. David Schnipke, Environmental Compliance Manager	419-221-5294
Ms. Emily Kerber, Ind. Monitoring Chief and Lab Supervisor	419-221-5196
Name and Title of Responsible Official	Phone Number
Mr. Michael Caprella, Utilities Director	419-221-5294

SECTION C: AREAS EVALUATED DURING INSPECTION		
Evaluated? Y-Yes; N-No	Area Evaluated	Recommendations noted in report? Y – Yes; N – No; N/A – Not Applicable
Y	E. NPDES Compliance	
Y	F. Operations & Maintenance	
Y	G. Operator Certification	
Y	H. Collection System	
Y	I. Sludge Management	
N	J. Storm Water	Y; See recommendation #1 regarding storm outfalls at the WWTP.
Y	K. Self-Monitoring Program	
Y	L. Laboratory	
Y	M. Effluent / Receiving Water Observations	

Comments:

Signatures	
 Peggy B. Christie Date Compliance and Enforcement Division of Surface Water Northwest District Office	 Thomas Poffenberger, P.E. Date Water Quality Engineer II/Unit Supervisor Division of Surface Water Northwest District Office

Compliance Data for Lima WWTP between 11/1/2017 and 3/1/2019

Summary

Permit Effluent Limit Violations: 7
Permit Effluent Code Events: 5
Permit Effluent Frequency Violations: 0
Compliance Schedule Milestones Not Entered: 6
Reported SSO Events: 359

Limit Violations						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
July 2018	604	Mercury, Total (Low Le	30D Conc	7.6	31.5	7/1/2018
July 2018	604	Nitrogen, Ammonia (NH3	30D Conc	2.0	3.29084	7/1/2018
July 2018	604	Nitrogen, Ammonia (NH3	7D Conc	4.0	5.70657	7/8/2018
July 2018	604	Nitrogen, Ammonia (NH3	7D Conc	4.0	8.76314	7/15/2018
August 2018	001	E. coli	7D Conc	284	359.356	8/8/2018
November 2018	001	Mercury, Total (Low Le	30D Conc	3.7	3.92	11/1/2018
December 2018	604	Total Suspended Solids	7D Conc	20	24.3666	12/15/2018

Code Events				
Reporting Period	Station	Parameter	Reported Value	Event Date
June 2018	901	E. coli	AK	6/6/2018
June 2018	801	E. coli	AK	6/6/2018
August 2018	901	E. coli	AK	8/1/2018
August 2018	801	E. coli	AK	8/1/2018
February 2019	001	pH, Maximum	AD	2/22/2019

Compliance Schedule Milestones					
Schedule Due Date	Completion Date	Event Code	Schedule Type	Schedule Milestone	Permit Part 1, C/page
August 2019		34099	Other	Submit Study Plan	Item A. 1/p. 29
August 2019		5699	Construction	Final Compliance w/ Eff Limits	Item B. 3/p. 31
February 2020		2199	Toxics	Toxics Reduction Evaluation Plan	Item A. 2/p. 29
August 2020		91299	Other	Submit Corrective Action Plan	Item A. 3/p. 29
February 2021		3099	Construction	Begin Construction	Item A. 4/p. 29
August 2022		5699	Construction	Final Compliance w/ Eff Limits	Item A. 5/p. 29

Lima WWTP SSO Events			
Parameter	Units	Date	Reported Value
Overflow Occurrence	No./Month	11/1/2017	38
Overflow Occurrence	No./Month	1/1/2018	7
Overflow Occurrence	No./Month	2/1/2018	13
Overflow Occurrence	No./Month	3/1/2018	41
Overflow Occurrence	No./Month	4/1/2018	23
Overflow Occurrence	No./Month	6/1/2018	43
Overflow Occurrence	No./Month	7/1/2018	12
Overflow Occurrence	No./Month	8/1/2018	17
Overflow Occurrence	No./Month	9/1/2018	22
Overflow Occurrence	No./Month	10/1/2018	17
Overflow Occurrence	No./Month	11/1/2018	13
Overflow Occurrence	No./Month	12/1/2018	33
Overflow Occurrence	No./Month	1/1/2019	30
Overflow Occurrence	No./Month	2/1/2019	50

High Flow Data for Lima WWTP between 11/1/2017 and 3/1/2019

Top 10 Flows	
Date	Flows (MGD)
2/16/2018	38.800
2/8/2019	38.692
2/20/2018	38.660
1/24/2019	38.650
1/12/2018	38.510
2/13/2019	38.378
1/1/2019	38.205
11/2/2018	38.077
11/18/2017	37.720
11/19/2017	37.720
Average	17.392

SECTION D: PERMIT VERIFICATION

	Yes	No	N/A
a. Correct name and mailing address of permittee	☒	☐	
b. Correct name and location of receiving waters	☒	☐	
c. Flows and loadings conform with NPDES permit	☒	☐	
d. Treatment processes are as described in permit application	☒	☐	
e. New treatment process added since last inspection	☐	☒	
f. Notification given to State of new, different or increased discharges	☐	☐	☒
g. All discharges are permitted	☒	☐	
h. Number and location of discharge points are as described in permit	☒	☐	☐
i. Are all storm water discharges properly permitted?	☒	☐	
For Industrial Facilities Only			
j. Products and production rates conform with permit application?	☐	☐	☐
k. Do categorical standards apply? If yes, which ones?			

Comments:

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SECTION E: COMPLIANCE

See previous page for more compliance information.

	Yes	No	N/A
a. NPDES renewal app submitted 180 days prior to expiration	☒	☐	☐
b. Permittee has a compliance schedule	☒	☐	☐
c. Document containing compliance schedule	NPDES		
d. Permittee is meeting compliance schedule	☒	☐	☐
e. Any bypasses since last inspection	☐	☒	
f. Regulatory agency notified of all bypasses	☐	☐	☒
g. Permittee or representative reporting all noncompliance per Part III of NPDES	☒	☐	☐

Comments:

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SECTION F: OPERATION AND MAINTENANCE

a. Standby power available	Generator	
b. Standby power provides power to which treatment components?	Two diesel generators. With both running, the generators can run entire plant. With one, the generator can run everything but the filter building.	
c. Which treatment components have alarm system available for power or equipment failures?	Everything is monitored by SCADA.	
	Yes	No
d. All treatment units in service other than backup units	☒	☐
e. Routine and preventative maintenance scheduled and performed	☒	☐
f. Any major equipment breakdown since last inspection	☐	☒
g. Operation and maintenance manual provided and maintained	☒	☐
h. Any operational problems due to influent quality or quantity since last inspection	☒	☐
i. Are WWTP operations changed during high-flow events?	☒	☐
j. Does your facility accept trucked in wastewater, and if so, from what sources?	Yes – septage. The city has recently enacted a policy that no industrial wastes can be trucked in.	

Comments:

- e. CMMS program generates work orders for preventative maintenance. City works logs all maintenance.
- g. Jones and Henry Engineering is in the process of updating the plant O&M manual to incorporate all the upgrades (headworks and disinfection). All equipment O& M manuals are at the plant.
- h. Kambach Feeds trucked wastewater to the plant following the fire at their plant. This wastewater caused an upset at the plant, resulting in ammonia and mercury violations in July 2018.
- i. During low flow, the new primary clarifiers, 1-4, are out of service and the plant operates using 5, 6 and 7. They have determined the plant operates more efficiently this way. The new tanks will be brought on line during storm events and are able to capture the “first flush”.
- Seeding of the towers continues. Have some problems with solids settling in the pipe to seed the towers and are not sure that the towers are getting the biological growth that was expected. The line will go septic, and during the first high flow event, the septic material was flushed to the towers, causing operation problems. The City is working on developing a SOP to automate periodic flushing of this line to clean out the debris.

SECTION G: OPERATOR CERTIFICATION

a. Wastewater Treatment Works Classification	IV		
	Yes	No	N/A
b. Operator of Record holds unexpired license of class required by Permit?	☒	☐	
c. Current Operator of Record form submitted?	☒	☐	
d. Copy of certificate of Operator of Record displayed on-site?	☒	☐	
e. Minimum operator staffing requirements fulfilled (OAC 3745-7)	☒	☐	
f. If a Staffing Reduction plan has been approved, are the stipulations of the plan being met?	☒	☐	☐
g. 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?	☒	☐	☐
h. Operator of Record log book provided?	☒	☐	
i. Log book location	WWTP		
j. Logbook Format	Hardbound and Electronic		
Log book contains the following:			
k. Identification of treatment works	☒	☐	
l. Date/times of arrival/departure for Operator of Record and any other operator required by OAC 3745-7	☒	☐	
m. Daily record of operator and maintenance activities (including preventative maintenance, repairs and request for repairs, process control test results, etc.)	☒	☐	
n. Laboratory results (unless documented on bench sheets)	Bench Sheets		
o. Identification of person making entries	☒	☐	

SECTION H: COLLECTION SYSTEM

Collection System Overview

a. Which department oversees collection system operation and maintenance	Utilities Field Services oversees collection; WWTP maintains the pump station.
b. Who is the certified Collection System Operator?	Mr. Larry Huber
c. Is there a plan for collection system maintenance? If yes, to what extent is this plan being implemented?	Yes – through the consent decree and the CMOM. The City reports miles of cleaned pipe.
d. Were there any major repairs or improvements to collection system since last inspection?	Yes – Grand Ave 78" need emergency repairs, and ongoing construction of equalization basin.
e. Name the satellite communities that discharge into your collection system	Findlay Road area sewers are Allen County's, this area discharges to the City of Lima.

Pumps and Force Mains

a. How many lift stations are within the collection system?	32
b. How many lift stations have alarms?	All – all but two are connected to SCADA.
c. How many lift stations are equipped with permanent standby power or equivalent?	All

Capacity / SSOs / I&I / WIB

	Yes	No
a. Are portable pumps used to relieve the system?	☐	☒
b. Any complaints received since last inspection of basement flooding? 2	☒	☐
c. Have there been any SSOs since the last inspection?	☒	☐
d. What progress has been made in SSO elimination if applicable?	Working through CMOM and Consent Decree.	
e. Are any portions of the sewer system at or near dry weather capacity? If yes, describe plans.	No	
f. Is there an inflow and infiltration reduction plan being followed? If yes, describe plans.	Yes, CMOM and consent decree. Have done some separation.	

Continued... SECTION H: COLLECTION SYSTEM

Combined Sewer System		Yes	No
a. Does the collection system include combined sewers?		☒	☐
Skip following questions if there are no combined sewers			
b. Are all CSOs included in your NPDES permit? If not, explain.	Yes		
c. What is the status of the LTCP implementation?	Approved – on-going and ahead of schedule.		
d. If there is no LTCP, what is the status of preparation of the LTCP?	N/A		

SECTION I: SLUDGE MANAGEMENT

a. Date of last sludge inspection	April 4, 2019
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Comments: Separate inspection letter to follow.

SECTION J: STORM WATER PROGRAM – Not Evaluated

SECTION K: SELF-MONITORING PROGRAM

Flow Measurement	Yes	No
a. Actual flow discharged is measured?	☒	☐
b. Flow measurement equipment adequate to handle full range of flows	☒	☐
c. Is the primary flow measuring device calibrated at least annually or in accordance with manufacturers specifications	☒	☐
d. Date of last calibration	3/27/2019	
e. Who calibrates the flow measuring device?	Data Systems – In house	
f. Frequency of calibration	Annually	
g. How often is the flow measuring device checked for functionality?	Continuously SCADA	

Comment:

Continued...	SECTION K: SELF-MONITORING PROGRAM
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Sampling, Monitoring, and Records	Yes	No	N/A
a. Secondary instruments operated and maintained	☒	☐	
b. Sampling location(s) are as specified by permit	☒	☐	
c. Sampling frequency agree with permit (look at compliance table for frequency violations or missing DMRs)	☒	☐	
d. Are proper sampling methods used (i.e. Oil & Grease collected in a glass container)	☒	☐	
e. Are the proper sampling types used (i.e., Grab, Composite, Flow proportionate, etc.)	☒	☐	
f. Are the field parameters (pH, DO, total residual chlorine, temperature) measured within 15 minutes of collection?	☒	☐	☐
g. 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)	☒	☐	

Comments:

SECTION L: LABORATORY

In-House Sampling:

Parameter	Analytical testing methods used
TSS	SM 2540 D
CBOD	SM 5210 B
Ammonium	ASTM D6919-09
Phosphorus	SM 4500 P
COD	HACH 8000
Nitrate + Nitrite	ASTM D4327-03
Total Filterable Residue	SM 2540 C
Total Solids	EPA 160.3 160.4
E. coli	SM 9223 B
Biosolids fecal	SM 9221 E, C
pH	SM 4500-H+ B
Hardness	SM 2340 C
Chlorine residual	SM 4500-Cl-E
Orthophosphate	SM 4500 P

Continued...

SECTION L: LABORATORY

	Yes	No	N/A
a. Quality assurance manual provided and maintained?	☒	☐	
b. Does quality assurance manual contain SOPs for all sampling and analyses conducted on site?	☒	☐	
c. If alternate procedures are used, are they U.S. EPA approved?	☐	☐	☒
d. Are permit required parameters analyzed more frequently than required by the permit?	☒	☐	
i. If yes, are results recorded in permittee's e-DMR report?	☒	☐	☐

Commercial Laboratory Sampling:

Laboratory Name: Alloway

Parameter	Analytical testing methods used
Hexavalent Chromium	3500 CRV
O & G	EPA 1664 A
TKN	EPA 351.2
Metals	EPA 200.8
Cyanide	SM 4500 CN E
Bis-2	EPA 625
Low level Mercury	EPA 1631 E
Bioassay	EPA-2000, 1000, 2002, 1002
Potassium	SW-6010B
Nitrate + Nitrite	EPA 353.2 / SM 4500 NO3
Total Solids	SM 2540 G
Phosphorus	EPA 365.3
Ammonia - N	EPA 350.1

Quality Assurance and Quality Control

	Yes	No	N/A
a. Does the lab participate in DMRQA or other QC programs?	☒	☐	
b. Has corrective action been taken for any parameters found unsatisfactory in the last DMRQA or water Pollution Studies?	☒	☐	☐
i. Date of last study	Aug 31, 2018		
ii. Parameters found unsatisfactory TDS, Orthophosphate passed on retest, Oct.5, 2018	☒	☐	☐
c. Has a Performance Audit Inspection (PAI) been conducted by Ohio EPA, Division of Environmental Services since the last inspection?	☐	☒	
i. If yes; have the recommendations from that PAI been implemented?	☐	☐	☒

SECTION M: EFFLUENT/RECEIVING WATER OBSERVATIONS

Outfall Number	Outfall sign in place	Oil Sheen	Grease	Turbidity	Foam	Solids	Color	Other
001	Yes	No	No	No	slight	No	None	

Comments:

F. GUIDE - VISUAL OBSERVATION - UNIT PROCESS

RATING CODES: S = Satisfactory; U = Unsatisfactory; M = Marginal; IN = In Operation; OUT = Out of Operation; NE=Not evaluated

CONDITION OR APPEARANCE		RATING	COMMENTS
General	Grounds	S	
	Buildings	S	
	Potable Water Supply Protection	S	Backflow preventers installed - will be inspected by health dept.
	Safety Features	S	Fence around property.
	Bypasses	OUT	Bypass at head of WWTP not used in years. Station 057 in NPDES permit.
	Storm Water Overflows	NE	
	Alternate Power Source	S	Two Diesel Generators. Put under load every five weeks. Participates in EnerNOC. Auto switch after 7 seconds of lost power.
Preliminary	Maintenance of Collection Systems	S	Handled by collections department.
	Pump Station	NE	
	Ventilation	NE	12 air exchanges when lights on; 6 when lights are off.
	Mechanical Bar Screen	IN	Four 1/4 inch chain and rake screens. 1 in use. Each can treat 18 MGD
	Bar Screen	IN	On standby. Used when mechanical screens are out of service.
	Disposal of Screenings	S	Landfill
	Grit Removal	IN	Four tanks, aerated; 4 grit cyclones; one grit classifier. 2 units in service.
	Disposal of Grit	S	Landfill
	Grease Removal	S	Grease compactor. Hauled grease trap waste is unloaded to scum pit.
Primary	Septage Receiving	IN	Septage receives full treatment. All trucks are weighed, manifested.
	Settling Tanks	IN	4 large tanks, three small tanks (5, 6 & 7). Tanks 5, 6 & 7 used in low flows. Tanks 1-4 brought on line during wet weather. Tanks 1-4 currently off-line.
	Scum Removal	IN	Skimmer units. Goes to scum pit, then to scum concentrator.
	Sludge Removal	IN	Bottom collector units; 4 centrifugal pumps. Goes to thickeners
	Chemical Addition	IN	Ferrous Chloride and polymer added to primary influent channel.
Secondary-Tertiary	Primary Clarifier Effluent	S	Gray
	Aeration Tanks	IN	Five tanks. Three passes each tank. Diffused air. Fine bubble.
	Blowers	IN	Four units. Two small and two large. One in use. Others on standby.
	Pre-aeration Chamber (Settled)	IN	Adds air to primary effluent before entering aeration tanks.
	RAS Channel	IN	RAS from final tanks is returned to the aeration tanks - aerated.
	Final Clarifiers	IN	Four tanks. All in service.
	Final Clarifier Pump Station	IN	Three vertical turbine pumps; used during during wet weather
	Final Clarifier Effluent	S	Clear
Other	Nitrification Towers	IN	Two units/plastic media. Will treat final clarifier effluent during dry weather, primary effluent during wet weather.
	Flow Meter and Recorder	IN	Magmeter
	Records	S	See inspection forms.
	Lab Controls	S	See lab inspection form.
Sludge Disposal	Automatic Samplers	IN	Three units. Raw, Final and station 604.
	Anaerobic Digesters	IN	Two primary, one secondary. Three used for gas storage.
	Temperature and pH	S	Use N-viro method to treat to exceptional quality sludge
	Gas Production	IN	Used to power two micro-turbines. Plans to have third.
	Heating Equipment	IN	3 boilers and a heat exchanger. Micro turbines have their own heat exchangers.
	Sludge Pumps	IN	Two WAS pumps, 325,000 gpd. Three RAS pumps, 17-20 MGD.
	Gravity Thickeners	IN	Two tanks. South used as a thickener, North used for County's Sludge.
	Gravity Thickner pumps	IN	Two digester feed, one piston (scum), two cyclone degritter.
	Sludge Storage Tanks	IN	Two tanks. Feeds belt press.
	Belt Presses	IN	Three units. One on standby. About 52 % solids off.
	Chemical Addition	IN	N-Viro process. Lime (2 silos), fly ash (2 silos) and polymer (3 tanks) added.
	Windrow Building	IN	Four bunkers for sludge storage.
	Disposal of Sludge	S	Class A land application; contract with Wright.
Disinfection	Disinfection System	OUT*	Sodium hypochlorite disinfection. Two addition locations (603 and 604).
	Chlorine contact tanks	S	4 tanks
	Effective Dose	S	Parasaltic pumps, 4 units on chlorine feed and 4 units on dechlorination
	Dechlorination	OUT*	Sodium Bisulfate. Two feed points to ensure full dechlorination.
	Final Effluent Pumps	IN	Four pumps; pump to towers.
	Final Effluent	S	Clear and colorless with no noticeable odor.