Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

March 8, 2012

RE: CITY OF LAKEWOOD WWTP
CUYAHOGA COUNTY
COMPLIANCE EVALUATION INSPECTION
NPDES PERMIT NO. OH0026018
OHIO EPA PERMIT NO. 3PE00004

Mayor Michael Summers and Council
Lakewood City Hall
12650 Detroit Avenue
Lakewood, Ohio 44107

Dear Mayor Summers and Council:

On February 7-8, 2012, a Compliance Evaluation Inspection (CEI) was conducted at the City of Lakewood Wastewater Treatment Plant (WWTP) by the undersigned. Messrs. Bill Crute, Richard Krumreig, and Jim Armbruster represented the facility. The purpose of the CEI was to evaluate the facility's compliance with terms and conditions of the National Pollutant Discharge Elimination System (NPDES) permit. During the course of the inspection, evaluations were conducted of the treatment processes, effluent discharge quality, laboratory, collection system, and biosolids management.

NPDES Permit Status

The current NPDES permit for this facility was issued on August 1, 2007 and expires on July 31, 2012. The permit authorizes an average daily discharge of 18.0 MGD from the facility to Lake Erie. A renewal application was submitted by the City on February 6, 2012. A Mercury Variance Application was submitted on July 17, 2009 and is currently pending.

Facility Description

The City of Lakewood WWTP provides service to Lakewood, as well as small portions of the cities of Cleveland and Rocky River. The treatment process consists of preliminary screening, grit removal, primary settling, activated sludge process, secondary clarification, phosphorus removal, and UV disinfection. The treated effluent is discharged to Lake Erie via NPDES outfall 3PE00004001.

The NPDES permit identifies nine active combined sewer overflows (CSOs) in the collection system (CSO 051 has been eliminated):

CSO #	Location	Receiving Stream
002	WWTP Headworks	Lake Erie
052	Riverside @ Madison	Rocky River
053	WWTP @ West Drive	Rocky River
054	Scenic Drive	Rocky River
055	16504 Edgewater	Rocky River
056	15120 Edgewater	Lake Erie
057	Lakewood Park	Lake Erie
058	13919 Edgewater	Lake Erie
059	12900 Lake Ave.	Lake Erie

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The headworks bypass and the respective collection system overflows have been subjects of ongoing Consent Order negotiations between the City, United States Environmental Protection Agency (US EPA), and Ohio Environmental Protection Agency (Ohio EPA.)

Waste sludge generated from the wet-stream process operations is thickened in two gravity thickeners, stabilized by two-stage anaerobic digestion, and dewatered utilizing a belt filter press. The dewatered Class B sludge is land applied for agronomic beneficial use.

Inspection Findings
At the time of the inspection, the following observations and comments were noted:

- The general operation and maintenance of the treatment plant appeared to be satisfactory. A visual observation of the plant effluent revealed no signs of floating debris, oil & grease, or foam in the discharge during the plant tour.

- Mr. Crute noted that the plant has been routinely handling peak flowrates of 40 MGD.

- We understand that the facility plans to relocate and house the aeration system blowers next to the aeration tanks during 2012.

- The City is currently contracted with CT Consultants to continue monitoring and modeling of the collection system. Upon completion, Lakewood will submit a revised Long Term Control Plan (LTCP) to USEPA and Ohio EPA for review and approval.

- Each of the communities is responsible for maintenance of their respective collection systems. Rocky River has recently completed a sanitary sewer separation project in the "Valley View" area. This work is expected to reduce the wet-weather impacts to CSO 053.

Laboratory
The review of the plant laboratory noted that the following permit parameters are currently being analyzed in-house: DO, pH, Temperature, cBOD, Suspended Solids, E. Coli, Ammonia, and Phosphorus. The balance of the permit parameters are analyzed by Wastewater Labs (e.g. Metals, TKN, etc.) and Mercury One (Mercury). The following highlights were noted during the review:

- The laboratory was clean and well organized. Laboratory personnel appear well-versed in the required sampling and analytical testing protocols.

- Please ensure that laboratory thermometers are checked at operating temperatures against the NIST-traceable thermometer at least once per year.

- It was noted that that bacterial samples are routinely reported as "AN" on Fridays. Please note that the NPDES permit only incudes exceptions for days when the **plant** is not normally staffed. For daily parameters, this provision only applies to Saturdays, Sundays, and legal municipal holidays.

Discharge Monitoring Reports

Discharge monitoring reports (DMRs) received by Ohio EPA for the period, January 2006 – January 2012, were reviewed. A summary of the data, including bypasses and/or overflows, is listed in Attachment A. Additionally, the DMR data for the past 24 months was reviewed for compliance with the final effluent limitations and monitoring requirements of the NPDES permit. The violations are listed in Attachment B.

Summary

Failure to list specific deficiencies or violations in this communication does not relieve the City of Lakewood from the responsibility of complying with all applicable Ohio EPA laws and regulations. Please be advised that present or past instances of non-compliance can continue as subjects of pending or future enforcement actions.

If you should have any questions please, contact this office at (330) 963-1196.

Respectfully,

Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG/cs

cc: Bill Crute, Division Manager, City of Lakewood WWTP,

Attachment A: Lakewood WWTP Data Summary (1/2006- 1/2012)							
Station Code	Parameter Name	Units	# of Obs.	# < MDL	Min	Avg	Max
1	Water Temperature	C	2222	0	7.5	17.7	25.5
1	Dissolved Oxygen	mg/l	2220	0	0.0	6.1	10.2
1	Chemical Oxygen Demand (Low Level)	mg/l	159	0	10.0	25.9	53.0
1	Total Suspended Solids	mg/l	1496	0	1.0	9.8	54.0
1	Oil and Grease, Total	mg/l	317	311	0.0	0.0	4.0
1	Nitrogen, Ammonia (NH3)	mg/l	159	0	0.0	0.1	2.4
1	Nitrogen Kjeldahl, Total	mg/l	157	75	0.0	0.8	5.0
1	Nitrite Plus Nitrate, Total	mg/l	97	0	6.7	20.9	162.0
1	Phosphorus, Total (P)	mg/l	625	0	0.1	0.7	1.9
1	Cyanide, Free	mg/l	37	37	0.0	0.0	0.0
1	Nickel, Total Recoverable	ug/l	37	28	0.0	5.9	32.0
1	Silver, Total Recoverable	ug/l	95	92	0.0	0.3	15.0
1	Zinc, Total Recoverable	ug/l	37	0	12.0	29.8	70.0
1	Cadmium, Total Recoverable	ug/l	37	37	0.0	0.0	0.0
1	Lead, Total Recoverable	ug/l	37	37	0.0	0.0	0.0
1	Chromium, Total Recoverable	ug/l	37	36	0.0	0.3	10.0
1	Copper, Total Recoverable	ug/l	95	14	0.0	12.2	50.0
1	Chromium, Dissolved Hexavalent	ug/l	37	37	0.0	0.0	0.0
1	Fecal Coliform	#/100 ml	493	0	1.0	149.9	6930.0
1	E. coli	#/100 ml	450	0	1.0	132.5	6480.0
1	Flow Rate	MGD	2222	0	3.6	8.5	40.5
1	Mercury, Total (Low Level)	ng/l	73	0	1.4	14.6	98.0
1	pH, Maximum	S.U.	2222	0	6.6	7.2	8.6
1	pH, Minimum	S.U.	2222	0	6.5	6.9	7.0
1	CBOD 5 day	mg/l	1179	0	0.1	1.8	30.0
2	Total Suspended Solids	mg/l	58	0	21.0	182.7	622.0
2	Flow Rate	MGD	52	0	0.0	1.0	9.6
2	Overflow Occurrence	No./Month	266	0	0.0	1.0	30.0
2	Overflow Volume	Million Gallons	255	0	0.0	0.9	10.2
2	CBOD 5 day	mg/l	56	0	4.0	61.3	210.0
2	Bypass Occurrence, Number per month	No./Month	53	0	1.0	1.0	1.0
2	Bypass Duration, Hours per month	Hr/Month	53	0	1.0	5.9	21.0
2	Duration of Discharge	Hours	234	0	1.0	6.0	52.0
52	Total Suspended Solids	mg/l	21	0	45.0	355.9	1516.0
52	Flow Rate	MGD	20	0	0.0	0.1	0.2
52	Overflow Occurrence	No./Month	343	0	1.0	1.0	1.0
52	Overflow Volume	Million Gallons	340	0	0.0	0.5	6.0
52	CBOD 5 day	mg/l	21	0	22.0	88.9	426.0
52	Bypass Occurrence, Number per month	No./Month	21	0	1.0	1.0	1.0
52	Bypass Duration, Hours per month	Hr/Month	20	0	1.0	10.9	23.0

Attachment A: Lakewood WWTP Data Summary (1/2006- 1/2012)							
Station Code	**Parameter Name**	**Units**	**# of Obs.**	**# < MDL**	**Min**	**Avg**	**Max**
52	Duration of Discharge	Hours	340	0	1.0	6.8	24.0
53	Total Suspended Solids	mg/l	20	0	37.0	231.5	654.0
53	Flow Rate	MGD	30	0	0.0	0.0	0.1
53	Overflow Occurrence	No./Month	321	0	1.0	1.0	1.0
53	Overflow Volume	Million Gallons	313	0	0.0	0.1	1.0
53	CBOD 5 day	mg/l	20	0	31.0	95.3	200.0
53	Bypass Occurrence, Number per month	No./Month	30	0	1.0	1.0	1.0
53	Bypass Duration, Hours per month	Hr/Month	29	0	1.0	5.0	17.0
53	Duration of Discharge	Hours	321	0	1.0	6.0	24.0
54	Total Suspended Solids	mg/l	11	0	20.0	161.0	538.0
54	Overflow Occurrence	No./Month	105	0	1.0	1.0	1.0
54	Overflow Volume	Million Gallons	105	0	0.0	0.0	0.8
54	CBOD 5 day	mg/l	11	0	6.0	21.4	42.0
54	Duration of Discharge	Hours	105	0	1.0	4.1	24.0
55	Total Suspended Solids	mg/l	19	0	20.0	211.4	480.0
55	Flow Rate	MGD	21	0	0.0	0.0	0.3
55	Overflow Occurrence	No./Month	300	0	1.0	1.0	1.0
55	Overflow Volume	Million Gallons	300	0	0.0	0.1	9.0
55	CBOD 5 day	mg/l	19	0	10.0	50.8	100.0
55	Bypass Occurrence, Number per month	No./Month	21	0	1.0	1.0	1.0
55	Bypass Duration, Hours per month	Hr/Month	21	0	1.0	2.6	8.0
55	Duration of Discharge	Hours	300	0	1.0	5.2	24.0
56	Total Suspended Solids	mg/l	18	0	28.0	252.2	624.0
56	Flow Rate	MGD	24	0	0.0	0.1	1.2
56	Overflow Occurrence	No./Month	214	0	1.0	1.0	1.0
56	Overflow Volume	Million Gallons	214	0	0.0	0.8	13.8
56	CBOD 5 day	mg/l	18	1	0.0	57.9	170.0
56	Bypass Occurrence, Number per month	No./Month	24	0	1.0	1.0	1.0
56	Bypass Duration, Hours per month	Hr/Month	24	0	1.0	4.2	19.0
56	Duration of Discharge	Hours	214	0	1.0	4.3	19.0
57	Total Suspended Solids	mg/l	15	0	97.0	375.9	1198.0
57	Flow Rate	MGD	4	0	0.0	0.0	0.0
57	Overflow Occurrence	No./Month	210	0	1.0	1.0	1.0
57	Overflow Volume	Million Gallons	210	0	0.0	0.1	1.1
57	CBOD 5 day	mg/l	15	0	25.0	91.8	350.0
57	Bypass Occurrence, Number per month	No./Month	4	0	1.0	1.0	1.0
57	Bypass Duration, Hours per month	Hr/Month	4	0	1.0	1.5	2.0
57	Duration of Discharge	Hours	210	0	1.0	4.6	24.0

Attachment A: Lakewood WWTP Data Summary (1/2006- 1/2012)							
Station Code	Parameter Name	Units	# of Obs.	# < MDL	Min	Avg	Max
58	Total Suspended Solids	mg/l	15	0	78.0	301.9	1470.0
58	Flow Rate	MGD	5	0	0.0	0.2	0.6
58	Overflow Occurrence	No./Month	201	0	1.0	1.0	1.0
58	Overflow Volume	Million Gallons	202	0	0.0	0.2	2.3
58	CBOD 5 day	mg/l	15	0	13.0	61.5	290.0
58	Bypass Occurrence, Number per month	No./Month	5	0	1.0	1.0	1.0
58	Bypass Duration, Hours per month	Hr/Month	5	0	2.0	6.0	13.0
58	Duration of Discharge	Hours	201	0	1.0	4.6	24.0
59	Total Suspended Solids	mg/l	18	0	30.0	288.1	534.0
59	Flow Rate	MGD	11	0	0.0	1.2	4.2
59	Overflow Occurrence	No./Month	204	0	1.0	1.0	1.0
59	Overflow Volume	Million Gallons	209	0	0.0	0.2	3.3
59	CBOD 5 day	mg/l	18	0	22.0	128.8	611.0
59	Bypass Occurrence, Number per month	No./Month	11	0	1.0	1.0	1.0
59	Bypass Duration, Hours per month	Hr/Month	11	0	1.0	7.1	17.0
59	Duration of Discharge	Hours	209	0	1.0	4.8	22.0
300	Overflow Occurrence	No./Month	7	0	0.0	0.1	1.0
581	pH	S.U.	37	0	7.3	8.0	8.7
581	Ammonia (NH3) In Sludge	mg/kg	37	0	3080.0	5724.9	8890.0
581	Nitrogen Kjeldahl, Total In Sludge	mg/kg	37	0	32900.0	39816.2	52400.0
581	Phosphorus, Total In Sludge	mg/kg	52	0	3.3	19903.5	42000.0
581	Arsenic, Total In Sludge	mg/kg	24	0	4.0	8.4	19.5
581	Cadmium, Total In Sludge	mg/kg	24	11	0.0	1.7	5.0
581	Chromium, Total In Sludge	mg/kg	6	0	57.0	140.3	190.0
581	Copper, Total In Sludge	mg/kg	24	0	379.0	465.9	530.0
581	Lead, Total In Sludge	mg/kg	39	0	3.9	120.3	233.0
581	Nickel, Total In Sludge	mg/kg	39	0	12.0	40.2	71.0
581	Zinc, Total In Sludge	mg/kg	39	0	43.8	558.9	1060.0
581	Selenium, Total In Sludge	mg/kg	24	0	2.1	3.4	5.4
581	Sludge Fee Weight	dry tons	18	0	133.9	243.5	353.6
581	Sludge Weight	Dry Tons	350	0	3.1	17.6	353.6
581	Sludge Solids, Percent Total	%	332	0	17.0	19.3	34.8
581	Sludge Solids, Percent Volatile	%	332	0	19.3	49.3	57.6
581	Mercury, Total In Sludge	mg/kg	24	0	0.3	1.6	3.1
581	Molybdenum In Sludge	mg/kg	24	24	0.0	0.0	0.0
581	2,3,7,8'-TCDD TTE, Total in Sludge	ng/kg	1	0	50.6	50.6	50.6
586	Sludge Fee Weight	dry tons	1	0	37.5	37.5	37.5
601	Water Temperature	C	2222	0	7.5	18.2	35.2
601	Total Precipitation	Inches	2222	0	0.0	0.1	3.1
601	Total Suspended Solids	mg/l	1496	0	12.0	105.2	492.0
601	Nitrogen Kjeldahl, Total	mg/l	175	0	0.0	26.9	211.0

Attachment A: Lakewood WWTP Data Summary (1/2006- 1/2012)							
Station Code	Parameter Name	Units	# of Obs.	# < MDL	Min	Avg	Max
601	Cyanide, Free	mg/l	38	37	0.0	0.0	0.0
601	Nickel, Total Recoverable	ug/l	37	25	0.0	9.2	45.0
601	Silver, Total Recoverable	ug/l	95	59	0.0	2.3	20.0
601	Zinc, Total Recoverable	ug/l	38	0	0.0	85.2	400.0
601	Cadmium, Total Recoverable	ug/l	38	37	0.0	1.2	43.7
601	Lead, Total Recoverable	ug/l	67	31	0.0	6.4	72.0
601	Chromium, Total Recoverable	ug/l	67	27	0.0	8.1	120.0
601	Copper, Total Recoverable	ug/l	111	1	0.0	46.2	220.0
601	Chromium, Dissolved Hexavalent	ug/l	37	35	0.0	1.9	50.0
601	Mercury, Total (Low Level)	ng/l	73	0	30.8	163.9	781.0
601	pH, Maximum	S.U.	2218	0	6.9	7.8	14.0
601	pH, Minimum	S.U.	2218	0	3.2	7.3	8.3
601	CBOD 5 day	mg/l	1179	0	8.0	75.9	473.0

Attachment B: Lakewood WWTP Effluent Violations (1/2010 – 1/2012)						
Reporting Period	Station	Parameter (*)	Limit Type	Limit	Reported Value	Violation Date
May 2011	001	Mercury, Total (Low Le	30D Conc	1.3	9.4	5/1/2011
May 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0.00023	5/1/2011
July 2011	001	Mercury, Total (Low Le	30D Conc	1.3	5.2	7/1/2011
July 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0.0001	7/1/2011
September 2011	001	Mercury, Total (Low Le	30D Conc	1.3	8.8	9/1/2011
September 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0 .00019	9/1/2011
January 2012	001	Mercury, Total (Low Le	30D Conc	1.3	5.9	1/1/2012
January 2012	001	Mercury, Total (Low Le	30D Qty	0.000089	0.00012	1/1/2012
December 2011	001	Mercury, Total (Low Le	30D Conc	1.3	6.9	12/1/2011
December 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0 .00078	12/1/2011
June 2011	001	Mercury, Total (Low Le	30D Conc	1.3	7.8	6/1/2011
June 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0 .00037	6/1/2011
August 2011	001	Mercury, Total (Low Le	30D Conc	1.3	14.7	8/1/2011
August 2011	001	Mercury, Total (Low Le	30D Qty	0.000089	0 .00033	8/1/2011
October 2011	001	Mercury, Total (Low Le	30D Conc	1.3	4.9	10/1/2011
November 2011	001	Mercury, Total (Low Le	30D Conc	1.3	1.4	11/1/2011

(*) Mercury violations are pending review/approval of requested variance.