



**Environmental
Protection Agency**

Ted Strickland, Governor
Lee Fisher, Lt. Governor
Sam Lonesdale, Director

September 13, 2010

**RE: CUYAHOGA COUNTY
CLEVELAND CROWN WTP
NPDES PERMIT NO. OH0000817
OHIO EPA PERMIT NO. 3IV00060**

Joseph Sika
Regulatory Compliance Manager
City of Cleveland Division of Water
1201 Lakeside Avenue
Cleveland, Ohio 44114

Mr. Sika:

An inspection was conducted by the undersigned of the wastewater management systems serving the Crown Water Treatment Plant on August 11, 2010. In addition to you, the City was represented by Elizabeth Darnell, Plant Manager, Muhammad Hague, Assistant Plant Manager, and John O'Donnell, Assistant Superintendent. The purpose of the inspection was to evaluate the facility's compliance status with respect to the terms and conditions of the above-referenced National Pollutant Discharge Elimination System (NPDES) permit.

The Crown WTP is one of four plants operated by the City of Cleveland Division of Water and serves the greater Cleveland metropolitan area. The facility utilizes conventional treatment processes including chemical addition (alum), flash mixing, flocculation, sedimentation, filtration, fluoridation and chlorination to treat water withdrawn from Lake Erie. Sludge from the sedimentation basins and filter backwash waters are treated and discharged to Lake Erie through one final outfall (001) and two internal outfalls (601 and 602):

Outfall 601

Sludge is collected from the ten sedimentation basins and pumped to four gravity thickeners. This outfall monitors the discharge of supernatant from the thickeners. Thickened sludge is transferred to contact stabilization tanks for further processing and dewatering.

Outfall 602

This outfall monitors the effluent from the backwash water clarifiers. Filter backwash water is collected in a dual compartment equalization tank. The wastewater is pumped to two clarifiers each equipped with a sludge collection mechanism. Settled sludge is pumped to the gravity thickeners for further processing and dewatering.

Outfall 001

The backwash water clarifier effluent and gravity sludge thickener supernatant are combined and monitored prior to discharging to Lake Erie through this dedicated outfall.

At the time of the inspection, the general operation and maintenance of the wastewater management systems appeared to be satisfactory. The final effluent being discharged to Outfall 001 was visually clear.

Discharge monitoring reports (DMR) received by Ohio EPA for the period January 2008 through August 2010, were reviewed. A summary of the discharge data is listed in Attachment A. Additionally, the effluent data was reviewed for compliance with the final effluent limitations and monitoring requirements of the NPDES permit. A summary of the specific violations are cited in Attachment B.

ATTACHMENT A: CROWN WTP EFFLUENT SUMMARY (1/2008 – 8/2010)						
Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 th	95 th	
Outfall 001						
pH	Annual	S.U.	135	7.7	8.2	7.2-8.5
Phosphorus, Total (P)	Annual	mg/l	31	0.1	0.3	0-0.3
Flow Rate	Summer	MGD	65	1.37	1.88	0.63-2.24
Flow Rate	Winter	MGD	70	1.45	2.05	0.74-2.2
Flow Rate	Annual	MGD	135	1.42	2.05	0.63-2.24
Chlorine, Total Residual	Annual	mg/l	943	0	0.02	0-0.03
Outfall 601						
Total Suspended Solids	Annual	mg/l	136	6.5	14	1-20
Flow Rate	Summer	MGD	65	0.76	1.22	0.48-1.65
Flow Rate	Winter	MGD	71	0.85	1.49	0.37-1.67
Flow Rate	Annual	MGD	136	0.795	1.41	0.37-1.67
Outfall 602						
Total Suspended Solids	Annual	mg/l	136	6	13.3	2-113
Flow Rate	Summer	MGD	65	0.58	1.01	0.01-1.31
Flow Rate	Winter	MGD	71	0.49	0.805	0.02-1.83
Flow Rate	Annual	MGD	136	0.53	0.97	0.01-1.83

ATTACHMENT B: CROWN WTP EFFLUENT VIOLATIONS (1/2008 – 8/2010)						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
January 2008	601	Total Suspended Solids	1D Qty	81.86	94.8142	1/9/2008
August 2009	602	Total Suspended Solids	1D Conc	20	30.	8/19/2009
August 2009	602	Total Suspended Solids	1D Conc	20	113.	8/26/2009
August 2009	602	Total Suspended Solids	30D Conc	15	38.75	8/1/2009
August 2009	602	Total Suspended Solids	1D Qty	113.55	312.224	8/26/2009
August 2009	602	Total Suspended Solids	30D Qty	85.162	106.330	8/1/2009

Please be advised that any violations referenced herein are subject to appropriate enforcement actions pursuant to Chapter 6111 of the Ohio Revised Code. Such actions can result in the imposition of fines of up to \$10,000 per day of violation.

Joseph Sika
City of Cleveland Division of Water
September 13, 2010
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Should you have any questions or comments regarding this letter, please contact this office.

Respectfully,



Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG:cl

cc: Elizabeth Darnell, Plant Manager, Crown WTP

File: Industrial/PC/Cleveland Crown Water Plant