

**Environmental
Protection Agency**

James R. Tate, Governor
Frank LaRocca, Lt. Governor
Doreen L. Connerly, Director

October 1, 2010

RE: CUYAHOGA COUNTY
NEORSD SOUTHERLY WWTP
NPDES PERMIT NO. OH0024651
OHIO EPA PERMIT NO. 3PF00002
COMPLIANCE EVALUATION INSPECTION

Mr. David McNeeley
Director of Operation & Maintenance
Northeast Ohio Regional Sewer District
3900 Euclid Avenue
Cleveland, OH 44115

Dear Mr. McNeeley:

On August 31, 2010, an inspection was conducted of the Northeast Ohio Regional Sewer District (NEORSD) Southerly Wastewater Treatment Plant (WWTP) by the undersigned. The facility was represented by John Augustine, George Schur, Robert Dominak, and Elizabeth Toot-Levy. The purpose of the inspection was to evaluate the facility's compliance status with respect to the 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, and biosolids management. A tour of the laboratory facilities at the Environmental & Maintenance Services Center (EMSC) was provided by Frank Foley, Mark Citriglia, and Ms. Toot-Levy on September 1, 2010.

NPDES Permit Status

The NPDES permit for this facility expired on March 31, 2005. Receipt of a timely renewal application by Ohio EPA on October 4, 2004 authorizes NEORSD to discharge beyond the expiration date.

Facility Description

NEORSD Southerly WWTP serves a population of greater than 600,000 in the Greater Cleveland area through a combined sewer system. The 175 MGD facility provides treatment to an average daily flow rate flow of 125 MGD, with a peak capacity of 400 MGD. The treatment processes include screening, grit removal, grease collection, primary settling, two-stage activated sludge biological process, final settling, tertiary filtration, chlorination and dechlorination. The treated effluent is discharged to the Cuyahoga River via Outfall 3PF00002001. Solids removed from the facility's various treatment processes (excluding grease) is thermally conditioned, dewatered, incinerated, and stored in a series of ash lagoons prior to disposal and/or reuse. Grease from the facility is currently trucked to Easterly WWTP for incineration.

Inspection Findings

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

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1. The facility appeared to be well maintained and operated. All treatment processes necessary for the treatment of dry and wet weather flows were in service. The final effluent at Outfall 001 was visually clear with no observable floating debris or Oil & Grease in the discharge.
2. The facility was proceeding with construction of the new biosolids and incineration facility. This \$140 M renewable energy facility will include construction of three 100 ton/day capacity fluidized bed incinerators and a steam-powered turbine that produces electricity. Upon completion, the existing Zimpro process and multiple hearth incinerators will be decommissioned.
3. Sampling and onsite analytical procedures for field parameters (e.g. pH, Chlorine, Temperature, etc.) appeared to be consistent with the requirements of the NPDES permit. It was noted, however, that the thermometer in the effluent sampler was inoperative. We understand that the thermometer has been replaced and temperature recording protocols have been implemented for the samplers.
4. With the exception of organic analyses, all laboratory analytical testing is performed at EMSC. The laboratory is currently accredited by the National Environmental Laboratory Accreditation Program (NELAP). In general, the laboratory areas appeared to be clean and well organized. Samples received in the laboratory are logged and tracked through the entirety of the various analytical testing stations.

Discharge Monitoring Reports (DMR)

Discharge monitoring reports (DMR) received by Ohio EPA for the period January 2007 through August 2010 were reviewed. A summary of the Outfall 001 and Outfall 002 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.

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.

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

Respectfully,



Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG/mt

cc: John Augustine, Superintendent, NEORSO Southerly WWTP

ATTACHMENT A: NEORS D EASTERLY EFFLUENT SUMMARY (1/2007 -- 8/2010)

Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 th	95 th	
Outfall 001						
Water Temperature	Annual	C	1339	17.3	24.2	9-25
Dissolved Oxygen	Summer	mg/l	675	7.4	8.5	5.7-9.2
Dissolved Oxygen	Winter	mg/l	664	9.2	11.1	5.6-12.1
Residue, Total Dissolved	Annual	mg/l	1323	714	1230	295-2050
Total Suspended Solids	Annual	mg/l	1334	2	5	0-18
Oil and Grease, Hexane Extr Method	Annual	mg/l	96	0	3.2	0-3.7
Nitrogen, Ammonia (NH3)	Summer	mg/l	671	0.17	0.53	0.04-1.15
Nitrogen, Ammonia (NH3)	Winter	mg/l	644	0.1	0.666	0.01-3.28
Nitrite Plus Nitrate, Total	Annual	mg/l	1316	15.1	20.3	4.5-23
Phosphorus, Total (P)	Annual	mg/l	1317	0.54	0.931	0.06-1.36
Cyanide, Free	Annual	mg/l	95	0.0015	0.0024	0.0004-0.0029
Nickel, Total Recoverable	Annual	ug/l	200	12	21.6	4.6-31.3
Zinc, Total Recoverable	Annual	ug/l	200	36	52	13.1-66.3
Cadmium, Total Recoverable	Annual	ug/l	200	0	0.3	0-0.7
Lead, Total Recoverable	Annual	ug/l	200	0	0.705	0-6.1
Chromium, Total Recoverable	Annual	ug/l	200	2	3.2	0-5.2
Copper, Total Recoverable	Annual	ug/l	200	11.8	19.4	4.8-26.8
Chromium, Dissolved Hexavalent	Annual	ug/l	97	0	5	0-5.46
Fecal Coliform	Annual	#/100 ml	672	37	826	0-21400
Flow Rate	Summer	MGD	675	88.7	171	66.6-292
Flow Rate	Winter	MGD	664	117	249	70.5-381
Flow Rate	Annual	MGD	1339	101	224	66.6-381
Chlorine, Total Residual	Annual	mg/l	687	0	0	0-0.066
Acute Toxicity, Ceriodaphnia dubia	Annual	TUa	15	0	0	0-0
Chronic Toxicity, Ceriodaphnia dubia	Annual	TUc	15	0	0.336	0-1.12
Acute Toxicity, Pimephales promelas	Annual	TUa	16	0	0	0-0
Chronic Toxicity, Pimephales promelas	Annual	TUc	16	0	0	0-0
pH, Maximum	Annual	S.U.	1339	7	7.3	6.6-8.3
pH, Minimum	Annual	S.U.	1339	6.8	7.1	6.5-7.4
Mercury, Total Recoverable	Annual	ug/l	44	0.002	0.005	0.001-0.0059
CBOD 5 day	Summer	mg/l	673	0	3	0-13
CBOD 5 day	Winter	mg/l	655	0	3.36	0-12.9
Outfall 002						
Total Suspended Solids	Annual	mg/l	51	76	182	27-248
Flow Rate	Summer	MGD	16	26.9	51.2	3.06-52.5
Flow Rate	Winter	MGD	36	42.1	171	0.38-269
Flow Rate	Annual	MGD	52	30.9	151	0.38-269
CBOD 5 day	Summer	mg/l	16	23.2	35.3	11-36
CBOD 5 day	Winter	mg/l	35	24	42.1	8-56
Bypass Occurrence, Number per month	Annual	No./Month	52	1	1	1-2

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Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 th	95 th	
Bypass Occurrence, Number per month	Annual	No./Month	52	1	1	1-2
Bypass Duration, Hours per month	Annual	Hr/Month	52	7.15	14.8	0.17-23.8

ATTACHMENT B: NEORS D SOUTHERLY OUTFALL 001 EFFLUENT VIOLATIONS (1/2007 – 8/2010)						
Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2008	001	Chlorine, Total Residu	1D Conc	.021	.056	6/16/2008
October 2009	001	Chlorine, Total Residu	1D Conc	.021	.066	10/15/2009