



John R. Kasich, Governor
 Mary Taylor, Lt. Governor
 Scott J. Nally, Director

May 3, 2013

RE: CUYAHOGA COUNTY
 CITY OF BROOK PARK
 NASA GLENN RESEARCH CENTER
 NPDES PERMIT NO. OH0000418
 OHIO EPA PERMIT NO. 3IO00001

Donald Easterling - Environmental Program Manager
 NASA Glenn Research Center
 21000 Brookpark Road
 Cleveland, Ohio 44135

Dear Mr. Easterling:

This letter is a follow-up to our meeting and inspection of the facility's stormwater management system(s) on April 2, 2013. NASA was also represented by Ms. Ransook Ivanina and Ms. Stacey Yanetta. The purpose of the inspection was to obtain and review information in anticipation of renewal of the facility's National Pollutant Discharge Elimination System (NPDES) permit.

Facility Description

NASA's Glenn Research Center is one of ten NASA centers. The facility supports all of NASA's missions and major programs. The facility researches, designs, develops, and tests innovative technology for aeronautics and spaceflight.

Sanitary and process wastewaters are discharged to the Northeast Ohio Regional Sewer District (NEORS) Southerly Wastewater Treatment Center.

NPDES Permit Status

The NPDES permit for this facility expired on August 31, 2012. Receipt of a renewal application by Ohio EPA authorizes the facility to discharge beyond the expiration date. The permit authorizes the discharge from the following outfalls:

Outfall No.	Sources	Treatment Employed	Receiving Water
001	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Rocky River
003	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Rocky River
004	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Rocky River
006	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Abrams Creek
007	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Abrams Creek
008	Storm Water runoff, NCCW, AC Condensate, Vacuum Pumps	None	Abrams Creek

Inspection Findings/Compliance Status

During the inspection, the following items were noted and discussed with you:

A visual observation of the discharges from the respective stormwater outfalls did not indicate any adverse visual impacts to the receiving streams. It was noted that signs had been installed at all of the outfall locations.

The facility is continuing to implement Mercury Pollutant Minimization Program (PMP) at Outfall 001. Please note that a condition of the Mercury variance requires that the facility achieve an Annual Mean Effluent Concentration (AMEC) of 12 ng/l.

Discharge monitoring reports (DMR) received by Ohio EPA for the period, March 2008 – March 2013, were reviewed. A summary of the final effluent discharge data is listed in Table A. Additionally, the effluent data was reviewed for compliance with the final effluent limitations and monitoring requirements of the NPDES permit. The specific violations of the permit limitations for the past 12-month period are listed in Table 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.

NPDES Permit Renewal Changes

The following changes are expected to be incorporated into the draft renewal permit:

- Based on a review of historical data, the existing chlorine-monitoring requirement at Outfall 007 will be removed.
- Based on a review of historical data, the existing Oil & Grease monitoring requirement at Outfall 001 will be removed.
- Testing will be required for Total Dissolved Solids and Specific Conductance at Outfall 001.

Should you have any comments or questions concerning this letter, please feel free to call me at (330) 963-1196.

Respectfully,



Ermelindo Gomes
Environmental Engineer
Division of Surface Water

EG/cs

Table A: NASA Glenn Research Center (Permit No. 3IO00001) Discharge Data (3/2008 – 3/2013)

Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 th	95 th	
<u>Outfall 001</u>						
pH	Annual	S.U.	244	7.82	8.4	7-9.1
Oil and Grease, Total	Annual	mg/l	244	0	0	0-3.46
Flow Rate	Annual	MGD	207	0.056	0.891	0.001-1.77
Chlorine, Total Residual	Annual	mg/l	63	0	0.52	0-0.82
Mercury, Total (Low Level)	Annual	ng/l	62	13.8	47.1	0-138
<u>Outfall 003</u>						
Specific Conductance at 25 Degrees C	Annual	Umho/cm	232	1660	9320	117-52800
pH	Annual	S.U.	244	7.87	8.5	6.7-9.3
Residue, Total Dissolved	Annual	mg/l	244	1560	14000	68-41400
Flow Rate	Annual	MGD	244	0.022	0.084	0.008-0.514
Chlorine, Total Residual	Annual	mg/l	244	0	0.01	0-0.2
<u>Outfall 004</u>						
Specific Conductance at 25 Degrees C	Annual	Umho/cm	239	1460	10000	188-37000
pH	Annual	S.U.	245	8.25	8.9	6.9-9.4
Residue, Total Dissolved	Annual	mg/l	244	2140	7460	154-48100
Flow Rate	Annual	MGD	244	0.001	0.0472	0.001-0.79
Chlorine, Total Residual	Annual	mg/l	244	0	0.2	0-0.67
<u>Outfall 006</u>						
Specific Conductance at 25 Degrees C	Annual	Umho/cm	237	1490	7370	124-21600
pH	Annual	S.U.	245	8.1	8.6	7-9.51
Residue, Total Dissolved	Annual	mg/l	244	1400	8840	90-21200
Flow Rate	Annual	MGD	245	0.017	0.0844	0.008-0.195
Chlorine, Total Residual	Annual	mg/l	244	0	0.02	0-0.24
<u>Outfall 007</u>						
Specific Conductance at 25 Degrees C	Annual	Umho/cm	233	2610	7940	204-25700
pH	Annual	S.U.	244	8.13	8.49	7-8.8
Residue, Total Dissolved	Annual	mg/l	244	2510	10900	152-51600
Flow Rate	Annual	MGD	244	0.026	0.125	0.008-0.29
Chlorine, Total Residual	Annual	mg/l	244	0	0.01	0-0.01

Table A: NASA Glenn Research Center (Permit No. 3IO00001) Discharge Data (3/2008 – 3/2013)

Parameter	Season	Units	# Obs.	Percentiles		Data Range
				50 th	95 th	
Outfall 008						
Specific Conductance at 25 Degrees C	Annual	Umho/cm	231	1530	6970	120-22400
pH	Annual	S.U.	245	8.2	8.7	6.6-9.18
Residue, Total Dissolved	Annual	mg/l	244	1490	11200	142-36600
Flow Rate	Annual	MGD	245	0.061	0.551	0.003-0.551
Chlorine, Total Residual	Annual	mg/l	244	0	0.01	0-1.63

Table B: NASA Glenn Research Center (Permit No. 3IO00001) Effluent Violations (3/2012 – 3/2013)

Reporting Period	Station	Parameter	Limit Type	Limit	Reported Value	Violation Date
June 2012	001	Mercury, Total	30D Conc	37.1	59.9	6/1/2012
June 2012	001	pH	1D Conc	9.0	9.07	6/20/2012
June 2012	008	Chlorine, Total Residu	1D Conc	0.019	.17	6/20/2012
July 2012	004	Chlorine, Total Residu	1D Conc	0.019	.63	7/6/2012
July 2012	004	Chlorine, Total Residu	1D Conc	0.019	.48	7/11/2012
July 2012	008	Chlorine, Total Residu	1D Conc	0.019	.2	7/11/2012
August 2012	006	Chlorine, Total Residu	1D Conc	0.019	.24	8/3/2012
October 2012	003	Chlorine, Total Residu	1D Conc	0.019	.12	10/25/2012