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LEHIGH COUNTY AUTHORITY
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Monday, May 05, 2014

Michael Brunamonti, P.E.
Environmental Program Manager
Commonwealth of Pennsylvania
Department of Environmental Protection
2 Public Square
Wilkes-Barre, PA 18711-0790

Dear Mr. Brunamonti:

Please accept this letter and attachments as Lehigh County Authority's submission to the conditions of NPDES Permit 0026000.

Heavy rains resulting from a front that stalled over the northeastern portion of the country soaked the region with more than 4" of precipitation causing street and small stream flooding throughout the facility's service area. Combined with elevated ground water levels and high antecedent soil moisture, the rainfall from this wet-weather event caused the hydraulic capacity of the treatment facility (87 MGD) to be exceeded. In addition, debris and stone moved through the collection system by peak wet weather flows resulted in jamming of the scrapper mechanism on one of the facility's influent bar screens rendering it inoperable for about an hour. The impact of isolating this screen for cleaning was an increase in the volume of wastewater bypassed during this timeframe which increased the overall total volume of bypassed wastewater being reported.

If you should have any questions or concerns, please feel free to contact me at (610) 437-7641.

Sincerely,

Robert J. Kerchusky Jr.
Wastewater Services Manager

RJK

Attachments: Bypass Report from Gretchen Schleppy

xc: Sheena Ripple, PADEP Water Quality Specialist, Bethlehem Office
Pat Mandes, Compliance Director
Steven Stahlberg, Chief Operator
Compliance Office, City of Allentown

CITY OF ALLENTOWN BYPASS REPORT

To: Robert Kerchusky, Manager of Operations

From: Gretchen, Laboratories Manager

Date: Tuesday, May 06, 2014

Subject: Plant bypassing on April 30th and May 1st, 2014

In order to comply with NPDES Permit # PA0026000, section A.2.D, with respect to plant bypassing on April 30th and May 1st, 2014, a description of the non-compliant discharge follows.

POINT SOURCE: 003

REASON: Heavy rains resulting from a front that stalled over the northeastern portion of the country soaked the region with more than 4" of precipitation causing street and small stream flooding throughout the facility's service area. Combined with elevated ground water levels and high antecedent soil moisture, the rainfall from this wet-weather event caused the hydraulic capacity of the treatment facility (87 MGD) to be exceeded. In addition, debris and stone moved through the collection system by peak wet weather flows resulted in jamming of the scrapper mechanism on one of the facility's influent bar screens rendering it inoperable for about an hour. The impact of isolating this screen for cleaning was an increase in the volume of wastewater bypassed during this timeframe which increased the overall total volume of bypassed wastewater being reported.

DURATION:

18:50 04/30/14	START
06:10 05/01/14	STOP
11.33 HOURS	

Total Duration
11.33 HOURS

FLOW:

19:45	04/30/14	206,691	gallons
21:45	04/30/14	212,868	gallons
23:45	05/01/14	428,781	gallons
01:45	05/01/14	220,934	gallons
03:45	05/01/14	98,354	gallons*
Total		1,1,67,628	gallons

*intermittent flow between 03:45 and 06:10 on 05/01/14

Total Flow
1,167,628 gallons (1.17 MG)

CITY OF ALLENTOWN BYPASS REPORT

SAMPLE TIME: 19:45 04/30/14				
BOD5	87	mg/L	149.97	lbs.
Total Suspended Solids	100	mg/L	172.38	lbs.
Ammonia Nitrogen	7.9	mg/L	13.62	lbs.
pH	6.88			
SAMPLE TIME: 21:45 04/30/14				
BOD5	64	mg/L	113.62	lbs.
Total Suspended Solids	81	mg/L	143.80	lbs.
Ammonia Nitrogen	4.8	mg/L	8.52	lbs.
pH	6.89			
SAMPLE TIME: 23:45 04/30/14				
BOD5	46	mg/L	164.50	lbs.
Total Suspended Solids	53	mg/L	189.53	lbs.
Ammonia Nitrogen	3.7	mg/L	13.23	lbs.
pH	6.95			
SAMPLE TIME: 01:45 05/01/14				
BOD5	36	mg/L	66.33	lbs.
Total Suspended Solids	38	mg/L	70.02	lbs.
Ammonia Nitrogen	3.2	mg/L	5.90	lbs.
pH	6.95			
SAMPLE TIME: 03:45 05/01/14				
BOD5	29	mg/L	23.79	lbs.
Total Suspended Solids	32	mg/L	23.59	lbs.
Ammonia Nitrogen	3.1	mg/L	2.54	lbs.
pH	6.98			

Sample Time	# BOD5		# TSS		#NH3	
19:45 04/30/14	149.97	lbs.	172.38	lbs.	13.62	lbs.
21:45 04/30/14	113.62	lbs.	143.80	lbs.	8.52	lbs.
23:45 04/30/14	164.50	lbs.	189.53	lbs.	13.23	lbs.
01:45 05/01/14	66.33	lbs.	70.02	lbs.	5.90	lbs.
03:45 05/01/14	23.79	lbs.	23.59	lbs.	2.54	lbs.
Total	518.21	lbs.	601.98	lbs.	43.81	lbs.

Total Bypass Loading for 8/28/11 Event (pounds)

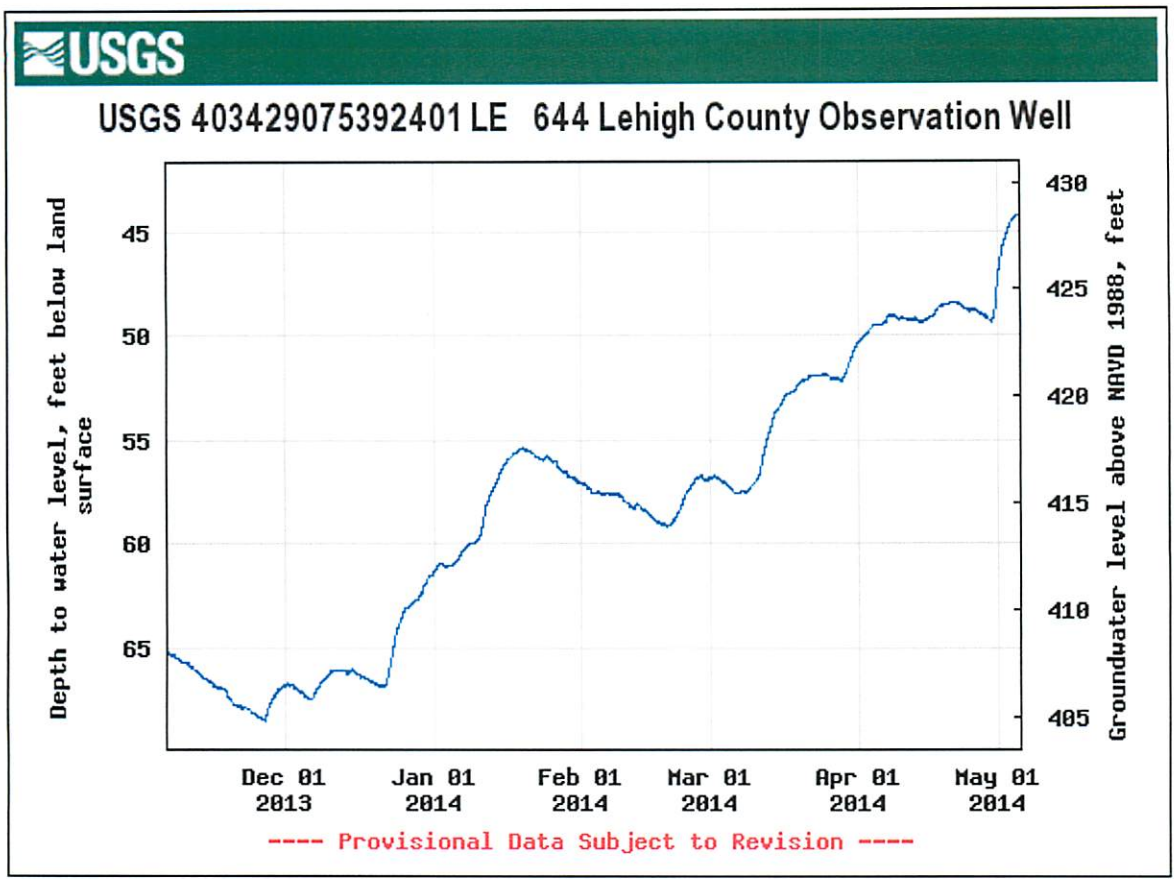
# BOD5	# TSS	# NH3
518.21	601.98	43.81

Sanitary Sewer Overflow (SSO) Report to PADEP

1. Date, Name, Phone # of person completing this report	Date : 05-05-14 Name : Bob Kerchusky Phone # : 610-437-7641 Signature :
2. Your organization name and address ?	Lehigh County Authority, 112 Union Street, Allentown PA 18102
3. Date found and specific location of SSO ?	April 30, 2014 Location: Outfall 003 - Kline's Island Wastewater Treatment Plant
4. How was SSO discovered? By who ?	Outfall 003 flow meter registered flow and the SCADA system alarm sounded, altering the operations staff of a discharge from the bypass. Staff on duty included: Joe Pychincka, TPOII; Larry Brown, Shift Supervisor; and Bob Kerchusky, Wastewater Service Manager.
5. Start and end time of SSO (actual or estimate?)	Start: April 30, 2014 6:45pm End: May 1, 2011 6:10am
6. Date, time and name of person who notified PADEP of SSO ?	Date : 04-30-14 Time : 7:30pm Name : Bob Kerchusky
7. Description and actual or estimated volume of SSO	Description: Bypass from Outfall 003 Total Metered Flow: 1.168 Million Gallons
8. Where, precisely, did SSO go ? (land, roadway, basement, swale, storm sewer, creek, etc)	Headworks Plant Bypass - Outfall 003 discharges to the Little Lehigh Creek which is a tributary to the Lehigh River
9. What caused SSO ? How was it stopped ?	Heavy rains resulting from a front that stalled over the northeastern portion of the country soaked the region with more than 4" of precipitation causing street and small stream flooding throughout the facility's service area. Combined with elevated ground water levels and high antecedent soil moisture, the rainfall from this wet-weather event caused the hydraulic capacity of the treatment facility (87 MGD) to be exceeded. In addition, debris and stone moved through the collection system by peak wet weather flows resulted in jamming of the scrapper mechanism on one of the facility's influent bar screens rendering it inoperable for about an hour. The impact of isolating this screen for cleaning was an increase in the volume of wastewater bypassed during this timeframe which increased the overall total volume of bypassed wastewater being reported. Eventually after rain subsided the plant flow returned to a more managable level.
10. Describe extent of contamination and how it was cleaned up	At the completion of a by-pass event, City staff inspects the outfall area and cleans up as necessary. This event required no clean-up as bypass started well beyond the first flush of the collection system therefore no debris was visible.

Sanitary Sewer Overflow (SSO) Report to PADEP

11. What actions will be taken to prevent a re-occurrence ? When ?	The City of Allentown, Lehigh County Authority, and other municipalities that contribute wastewater to the KIWWTP continue work on their RDII reduction programs as required by EPA Adminstrative Order No.CWA-03-2009-0313DN. Details on progress toward reduction of I&I can be found in each respondents semi-anual report. There are no easy fixes for aging infrastruture and work will continue for many years to come.
12. Other comments ?	Upon the prediction of a significant wet-weather event effecting the service area of the KIWWTP, the plant High Flow Procedure and the LCA WLI Wet-Weather Operting Plan are implemented. Activation of these procedure begins when a prediction of ≥ 1" of precipation is recieved from ACCU-WEATHER (a subscription weather service forecast), or internet, local television, and radio broadcasts. A detailed High Flow Activity Report is completed throughout the course of the event. Every effort is made to push the wastewater treatment plant beyond the design hydraulic capacity of 72 MGD in order to prevent a discharge from outfall 003. Typically this equates to pumping between 80 and 87 MDG through the facility during a significant wet-weather event.


USGS
USGS 403429075392401 LE 644 Lehigh County Observation Well
Depth to water level, feet below land surface
45
50
55
60
65
430
425
420
415
410
405
Groundwater level above NAVD 1988, feet
Dec 01 2013
Jan 01 2014
Feb 01 2014
Mar 01 2014
Apr 01 2014
May 01 2014
---- Provisional Data Subject to Revision ----