STV

May 27, 2010

Ms. Tara Diaz
NYSDEC- Division of Environmental Remediation
Remedial Bureau A
625 Broadway, 11th Floor
Albany, New York 12233-7015

Re: Analytical Results of Sediment Sampling
LIRR- Manhasset Substation # V-00396-1
Manhasset, New York

Dear Ms. Diaz:

STV Incorporated (STV) performed sediment sampling, based on comment two of the New York State Department of Environmental Conservation's (NYSDEC) review letter, dated February 2, 2009, to address the proposed sampling of sediments at the outfall of the drainage swale and to further investigate and delineate dredging limits, as well as the remediation of contaminated sediments.

~~**Description of Field Activities**~~

On July 24, 2009 a dye test was conducted to assess the location of the outfall of the drainage swale. A dye was placed in the upstream culvert west of the Manhasset Substation and flushed through the system to confirm the location of the drainage outfall.

Once the outfall was confirmed, a sediment sampling program was conducted to evaluate possible mercury impacts to the sediments in the vicinity of the drainage swale outfall and to delineate the horizontal and vertical extent of the impacts. The locations of the sediment borings are presented in Figure 1.

As a part of the initial investigation a sediment sampling program was conducted on September 9, 2009. A total of twelve (12) sediment borings were advanced immediately west of the headwall to a depth of 24 inches. It was anticipated that four (4) sediment samples would be taken from each location at 0-2 inches below grade surface (in bgs.), 6-8 in bgs.; 12-14 in bgs.; and 20-22 in bgs. In some instances because of insufficient recovery at the deeper depths, the sediment sample interval between 12-24 in bgs was consolidated into one (1) sample (i.e. 12-24 in bgs) for that particular boring.

One (1) duplicate sample was collected at sediment boring SS-1 (6-8 in bgs), and one (1) rinsate blank for quality assurance/quality control (QA/QC) purposes.

The scope of work required that only the first two samples (0-2 and 6-8 in bgs.) from each of the twelve (12) sediment borings be analyzed for mercury. If mercury concentrations were found to be present in excess of the NYSDEC's Technical Guidance for Screening Contaminated Sediments, the contingent sediment samples (12-14 and 18-20 in bgs. or in some cases 12-24 in bgs) also would be analyzed for mercury.

225 PARK AVENUE SOUTH
NEW YORK, NEW YORK 10003-1604
(212) 777-4400 FAX: (212) 529-5237

Five (5) of the twelve (12) sediment borings revealed mercury concentrations in excess of NYSDEC's Technical Guidance for the Screening of Contaminated Sediments Guidelines. To fully delineate the area in the vicinity of the drainage swale outfall, additional samples were taken over three separate events. The samples, sample depths and sample event dates are as follows:

- *January 27, 2010:*
  - One (1) sample from 24-30 in bgs. was collected from sample locations SS-4, SS-6, SS-7, SS-7, SS-9, and SS-10.
  - Four (4) samples from 0-2 in bgs., 6-8 in bgs.; 12-14 in bgs.; and 20-22 in bgs were collected from seven (7) sample locations SS-11 to SS-17 located in the receiving stream channel. If first two samples (0-2 and 6-8 in bgs.) from each of the seven (7) sediment borings had mercury concentrations in excess of the NYSDEC's Technical Guidance for Screening Contaminated Sediments, the contingent sediment samples (12-14 and 20-22 in bgs.) were to be analyzed for mercury.

- *March 24, 2010:*
  - Three (3) samples from 30-36 in bgs. and three contingent samples from 36-42 in bgs were collected from three (3) sample locations SS-6, SS-9, and SS-10. Contingent samples were only to be analyzed if mercury concentrations exceeded the ERL concentration of 0.15 ppm in the upper horizon.
  - One sample from 30-36 in bgs. was collected from sample location SS-11.

- *April 16, 2010:*
  - One (1) samples from 42-48 in bgs. was collected from sample locations SS-10.

The borings were advanced using a combination of a 2-inch steel hand-auger and 2-inch Soil Sampling Kit with slide hammer and 12-inch long, 2-inch diameter disposal plastic sleeves. Each boring was continuously sampled.

Sediment samples were screened continuously from the ground surface to the sample depth. They were field-screened with a photo ionization detector (PID) for VOCs and for visible evidence and olfactory observations.

The samples were sent to Test America of Shelton, Connecticut and analyzed for mercury. Test America is a New York State Department of Health (NYSDOH) Environmental Laboratory Approved Program (ELAP)-certified laboratory (New York Certification No. NY10602). The samples were logged, placed on ice in a cooler, at or below 4° C, and delivered under a chain-of-custody by a Test America courier to the laboratory for analysis. The chain-of-custody forms are presented in *Appendix B*.

Duplicate sediment samples and rinsate blank samples were collected for quality assurance/quality control (QA/QC) purposes.

Discussion of Findings

This section discusses the field observations, analytical data and findings. Tabulated mercury detections are presented in *Appendix A* of the letter report. The complete laboratory analytical data reports are presented in pdf format on a CD in *Appendix B*.

The analytical results were compared to the NYSDEC regulatory standards and guidelines used to interpret the sediment analytical results. The 22 November 1993, Technical Guidance for Screening Contaminated Sediments makes use of the sediment guidance values from a number of sources. For evaluation of risk from contaminants in marine and estuarine sediment, the Division of Fish, Wildlife and Marine Resources uses the Long et al (1995) guidance values rather than the Long and Morgan (1990) values, and is reproduced directly from: Long, E.R., MacDonald, D.D., Smith, S.L., and F.D. Calder, 1995 "Incidence of Adverse Biological Effects Within Ranges of Chemical Concentrations in Marine and Estuarine Sediments". As a result, the sediment analytical results were compared to the NYSDEC's Technical Guidance for the Screening of Contaminated Sediments Guidelines Effects Range Low (ERL- 0.15 ppm) and Effects Range Medium (ERM- 0.71 ppm) in Appendix 4 Table 3 for Marine and Estuarine Sediments.

The sediment was a brown to black silty sand with some non-decomposed organic matter and plastic, fabric, concrete debris. It had a distinctive strong organic odor typical of decomposing vegetative matter. No PID readings were recorded for any of the sediment samples.

Analytical results revealed that the mercury impacts in the vicinity of the drainage swale outfall were fully delineated both horizontally and vertically except in the case of SSHW-5 (0.19 mg/Kg) where rock bottoms made hand-augering extremely difficult, and SS-8 (0.16 mg/Kg), which is only slightly above the ERL value of 0.15 ppm.

The sediment sample locations and mercury concentrations after horizontal and vertical delineation are presented below in Table 1.

Table 1

Final Mercury Concentrations after Horizontal and Vertical Delineation

Sample ID	Sample Interval (in bgs)	NYSDEC Technical Guidance for Screening Contaminated Sediments Effects Range Low (ERL) (ppm)	NYSDEC Technical Guidance for Screening Contaminated Sediments Effects Range Medium (ERM) (ppm)	Concentration (mg/Kg)
SSHW-5	6 - 8	0.15	0.71	**0.19**
SSHW-20	12 – 14	0.15	0.71	0.088J
SS-1	0 - 2	0.15	0.71	0.099
SS-2	12 – 14	0.15	0.71	0.11
SS-3	12 – 14	0.15	0.71	0.063J
SS-4	24 - 30	0.15	0.71	0.067
SS-5	0 – 2	0.15	0.71	0.13
SS-6	30 - 36	0.15	0.71	0.13
SS-7	24 - 30	0.15	0.71	0.08
SS-8	12 – 14	0.15	0.71	**0.16**
SS-9	30 - 36	0.15	0.71	0.026
SS-10	42 – 48	0.15	0.71	0.14
SS-11	0 – 2	0.15	0.71	0.044J
SS-12	0 -2	0.15	0.71	0.079
SS-13	0 – 2	0.15	0.71	0.024J
SS-14	0 – 2	0.15	0.71	0.032
SS-15	0 – 2	0.15	0.71	0.15
SS-16	0 – 2	0.15	0.71	0.046
SS-17	0 – 2	0.15	0.71	0.021

Bold exceeds ERL.
J – Estimate Value.

Conclusions

Based on a review of the results of the Sediment Investigation, STV concludes the following:

- Mercury contamination has been vertically delineated in the vicinity of the drainage swale outfall except in the case of SSHW-5 at the outfall and SS-8.

- With regard to horizontal delineation, exceedences were noted along the northern (SS-2) and southern (SS-4, SS-7 and SS-10) edges of the outfall area. Therefore we will further sample the area to the north of SS-2 and the area to the south of SS-4, SS-7 and SS-10 and include the data in an addendum to the RAWP.

Recommendations:

- Excavation and removal of mercury impacted sediments (See Figure 2). Limits of excavation will be presented in Section 3.0 Project Plans and Specifications of STV's Remedial Action Workplan.

- Over excavate to 12 in bgs. in the vicinity of SSHW-5 and to depth of 18 in bgs. in the vicinity of SS-8.

- Since exceedences were noted along the northern (SS-2) and southern (SS-4, SS-7 and SS-10) edges of the outfall area, the LIRR intends to over excavate these areas as shown on Figure 2.

- Proper handling and disposal of mercury contaminated sediments;

- Sampling and analysis of post-endpoint excavation samples; and

- Back fill and site restoration with certified clean sand.

Please contact me with any questions or comments.

Sincerely,

STV Incorporated

Brian Connolly
Project Scientist

E. Peter Burger, P.E.
Senior Project Manager

Figures

SS-8

DATE			9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -24
UNITS			mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)			
MERCURY	0.15	0.71	4.3	0.0275	0.16

SS-5

DATE			9/9/09	9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.061	0.13	NA	NA

SS-6

DATE			9/9/09	9/9/09	9/9/09	1/27/10	3/24/210
DEPTH (INCHES)			0 - 2	6 - 8	12 -24	24-30	30-36
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)					
MERCURY	0.15	0.71	0.21	2.3	0.69	0.36	0.13

SS-2

DATE			9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -24
UNITS			mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)			
MERCURY	0.15	0.71	1.8	0.49	0.11

SS-11

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010	3/24/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -24	24-22	24-30
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)					
MERCURY	0.15	0.71	0.044J	0.14	0.054J	0.55	0.15

SS-1

DATE			9/9/09	9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.099	0.12	NA	NA

SS-9

DATE			9/9/09	9/9/09	9/9/09-	3/27/2010	3/24/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -24	24-30	30-36
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)					
MERCURY	0.15	0.71	0.54	0.98	0.61	0.36	0.026J

SSHW-5

DATE			9/9/09	9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.059	0.19	NA	NA

SS-12

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.079	0.017J	0.029J	0.024J

SSHW-20

DATE			9/9/09	9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.14	0.23	0.068J	0.076J

SS-13

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.024	0.1	0.048J	0.024J

SS-3

DATE			9/9/09	9/9/09	9/9/09	9/9/09
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.55	1.0	0.063J	0.091J

SS-14

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.032J	0.016J	0.052J	0.035J

SS-4

DATE			9/9/09	9/9/09	9/9/09	9/9/09	3/27/10
DEPTH (INCHES)			0 - 2	6 - 8	12 -14	20 -22	24 -30
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)					
MERCURY	0.15	0.71	0.21	0.15	0.48	1.9	0.067

SS-15

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.15	0.025J	0.017J	0.016J

SS-7

DATE			9/9/09	9/9/09	9/9/09	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -24	24-30
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.60	2.3	1.9	0.06

SS-16

DATE						
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.046J	0.017J	ND	0.011J

SS-10

DATE			9/9/09	9/9/09	9/9/09	3/27/2010	3/24/2010	3/24/2010	4/16/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -24	24-30	30-36	36-42	42-48
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)							
MERCURY	0.15	0.71	0.30	1.1	0.94	0.2	0.43	0.59	0.14

SS-17

DATE			1/27/2010	1/27/2010	1/27/2010	1/27/2010
DEPTH (INCHES)			0 - 2	6 - 8	12 -16	20-22
UNITS			mg/Kg	mg/Kg	mg/Kg	mg/Kg
ANALYTE	NYSDEC Effects Range Low (ppm)	NYSDEC Effects Range Med. (ppm)				
MERCURY	0.15	0.71	0.021J	0.12J	0.053J	0.029J

SS-11
SS-12
SS-13
SS-14
SS-15
SS-16
SS-17
SS-8
SS-5
SS-6
SS-9
SS-10
SS-7
SS-4
SS-3
SS-1
SS-2
SSHW-5
SSHW-20
HEADWALL
AREA OF EXCAVATION

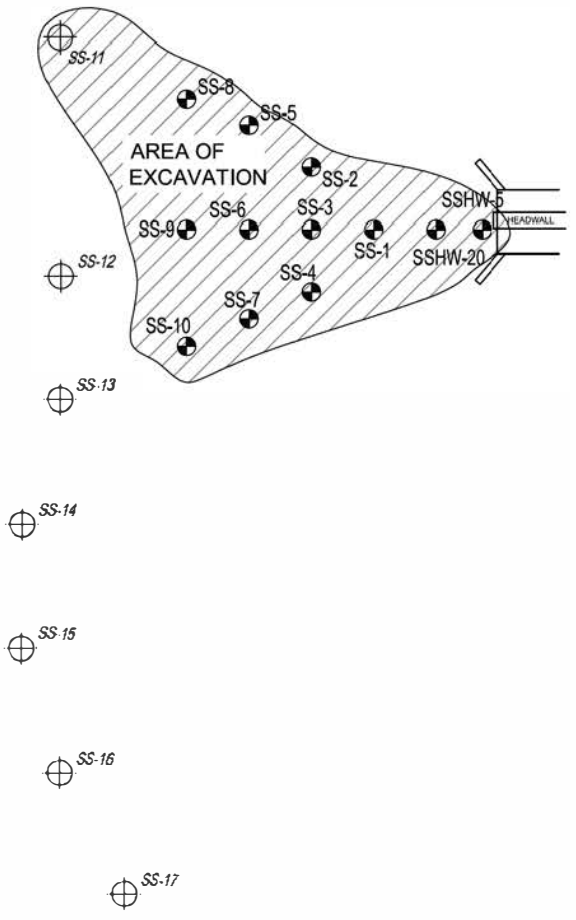
STV Incorporated
225 PARK AVENUE SOUTH, N.Y., N.Y. 10003

PREPARED FOR:
MTA Long Island Rail Road

MANHASSET, NY

OUTFALL
SEDIMENT SAMPLING LOCATIONS

DATE: MAY, 2010
SCALE: 1" = 40'
SHEET NO: FIGURE 1



STV Incorporated
225 PARK AVENUE SOUTH, N.Y., N.Y. 10003

PREPARED FOR:
MTA Long Island Rail Road

MANHASSET, NY

OUTFALL
AREA OF MERCURY IMPACT

DATE: MAY, 2018
SCALE: 1" = 40'
SHEET NO: FIGURE 2

Appendix A

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SSHW-5		SSHW-5		SSHW-20		SSHW-20		SSHW-20		SSHW-20		SS-1		SS-1		Dup: SS-1A	
Laboratory Sample ID			220-10082-23		220-10082-24		220-10082-21		220-10082-22		220-10261-11		220-10261-12		220-10082-1		220-10082-2		220-10082-3	
Sample Depth (inches)			0-2		6-8		0-2		6-8		12-14		20-22		0-2		6-8		6-8	
Sample Date			09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	0.059		**0.19**		0.14		**0.23**		0.088	J	0.079	J	0.099		0.12		0.1	

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-2		SS-2		SS-2		SS-3		SS-3		SS-3		SS-4		SS-4	
Laboratory Sample ID			220-10082-4		220-10082-5		220-10261-3		220-10082-6		220-10082-7		220-10261-2		220-10261-3		220-10082-8		220-10082-9	
Sample Depth (inches)			0-2		6-8		12-24		0-2		6-8		12-14		20-22		0-2		6-8	
Sample Date			09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009		09/09/2009	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	1.8		0.49		0.11		0.55		1		0.063	J	0.091	J	0.21		0.15	

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-4	SS-4	SS-4	SS-5	SS-5	SS-6	SS-6	SS-6	SS-6
Laboratory Sample ID			220-10261-4	220-10261-5	220-11397-1	220-10082-10	220-10082-11	220-10082-12	220-10082-23	220-10261-6	220-11397-2
Sample Depth (inches)			12-14	20-22	24-30	0-2	6-8	0-2	6-8	12-24	24-30
Sample Date			09/09/2009	09/09/2009	01/27/2010	09/09/2009	09/09/2009	09/09/2009	09/09/2009	09/09/2009	01/27/2010
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Mercury	0.15	0.71	0.48	1.1	0.067	0.061	0.13	0.21	2.2	0.69	0.36

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-6		SS-7		SS-7		SS-7		SS-7		SS-8		SS-8		SS-8		SS-9	
Laboratory Sample ID			220-11777-1		220-10082-14		220-10082-15		220-10261-7		220-11397-3		220-10082-16		220-10082-26		220-10261-8		220-10082-17	
Sample Depth (inches)			30-36		0-2		6-8		12-24		24-30		0-2		6-8		12-24		0-2	
Sample Date			03/24/2010		09/09/2009		09/09/2009		09/09/2009		01/27/2010		09/09/2009		09/09/2009		09/09/2009		09/09/2009	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	0.13		**0.4**		**2.3**		**1.9**		0.08		**4.3**		0.0275	J	**0.16**		**0.54**	

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-9	SS-9	SS-9	SS-9	SS-10	SS-10	SS-10	SS-10	SS-10
Laboratory Sample ID			220-10082-18	220-10261-9	220-11397-4	220-11777-2	220-10082-19	220-10082-20	220-10261-10	220-11397-5	220-11777-3
Sample Depth (inches)			6-8	12-24	24-30	30-36	0-2	6-8	12-24	24-30	30-36
Sample Date			09/09/2009	09/09/2009	01/27/2010	03/24/2010	09/09/2009	09/09/2009	09/09/2009	01/27/2010	03/24/2010
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
Mercury	0.15	0.71	0.98	0.61	0.36	0.026 J	0.3	1.1	0.94	0.2	0.43

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			REP032410		SS-10		SS-10		REP041610		SS-11		SS-11		SS-11		SS-11		SS-11	
Laboratory Sample ID			220-11777-5		220-11397-8		220-12009-1		220-12009-2		220-11397-6		220-11397-7		220-11397-8		220-11397-9		220-11777-4	
Sample Depth (inches)			30-36		36-42		42-48		42-48		0-2		6-8		12-14		20-22		24-30	
Sample Date			03/24/2010		3/24/2010		04/16/2010		04/16/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		03/24/2010	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	**0.49**		**0.59**		0.14		0.12		0.044	J	0.14		0.054	J	**0.55**		0.15	

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-12		SS-12		SS-12		SS-12		SS-13		SS-13		SS-13		SS-13		SS-14	
Laboratory Sample ID			220-11397-10		220-11397-21		220-11397-22		220-11397-23		220-11397-24		220-11397-25		220-11397-26		220-11397-27		220-11397-28	
Sample Depth (inches)			0-2		6-8		12-14		20-22		0-2		6-8		12-14		20-22		0-2	
Sample Date			01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	0.079		0.017	J	0.029	J	0.024	J	0.024	J	0.1		0.048	J	0.024	J	0.032	J

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-14		SS-14		SS-14		SS-15		SS-15		SS-15		SS-15		SS-16		SS-16	
Laboratory Sample ID			220-11397-29		220-11397-30		220-11397-11		220-11397-12		220-11397-13		220-11397-14		220-11397-15		220-11397-16		220-11397-17	
Sample Depth (inches)			6-8		12-14		20-22		0-2		6-8		12-14		20-22		0-2		6-8	
Sample Date			01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	0.018	J	0.052	J	0.035	J	0.15		0.025	J	0.017	J	0.019	J	0.046	J	0.017	J

Outfall Drainage Swale
Analytical Results for Additional Sediment Sampling
Manhasset Substation # V-00396-1
Manhasset, New York

Sample ID			SS-16		SS-16		SS-17		SS-17		SS-17		SS-17		Field Blank		FB012710	
Laboratory Sample ID			220-11397-18		220-11397-19		220-11397-20		220-11397-31		220-11397-32		220-11397-33		220-10082-25		220-11397-34FB	
Sample Depth (inches)			12-14		20-22		0-2		6-8		12-14		20-22		6-8		24-30	
Sample Date			01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		01/27/2010		09/09/2009		01/27/2010	
Compound	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Low* (ppm)	NYSDEC Tech. Guidance for Screening Contaminated Sediments Effects Range Medium* (ppm)	(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)		(mg/Kg)	
Mercury	0.15	0.71	ND		0.011	J	0.021	J	0.12	J	0.053	J	0.029	J	ND		ND	

Appendix B