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TRANSMITTAL
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New NY Bridge Project Office
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Project: Tappan Zee Hudson River Crossing Project
Authority: Walter Reichert

Attn: Peter Sanderson
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Enclosed please find the following:

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Signature: 

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Transmittal Title: **Annual Water Quality Monitoring Report: 2014 Monitoring Activities**

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- ☒ To GPI Environmental
- ☐ To TZC Only - Revision/Comment
- ☐ To TZC Engineering
- ☐ To TZC Contracts
- ☒ To Environmental Compliance Team
- ☒ To Elvis
- ☒ To NYSTA

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- ☐ For Approval
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- ☐ Furnish as Submitted
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Item #	Copies	Type	Design Package ID	Document Name
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**Water Quality Monitoring Plan
Annual Monitoring Report
2014 Monitoring Activities
for the
New NY Bridge Project**

**Revision 0
March 6, 2015**

Prepared by
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1.0 Introduction

This report summarizes the results of water quality monitoring in 2014 for armoring and production pile driving in Zone C as well as visual observations of pile dewatering, pile excavations, cofferdam construction, production pile driving, and concrete placement in accordance with New York State Department of Environmental Conservation Permit DEC ID 3-9903-00043/00013 (NYSDEC Permit) Condition 65.

1.1 Permit Modifications

The New York State Thruway Authority (NYSTA) and Tappan Zee Constructors, LLC (TZC) received the following modifications to the NYSDEC Permit during 2014:

July 3, 2014 – NYSDEC issued a permit modification which included the following conditions:

- Permit Condition 27A: The overlying water in the barge may be pumped to the water column after 12 hours of settling.
- Permit Condition 45: *At least 45 days before any in-water demolition work begins* the Permittee must submit a plan to the Department providing details of all in-water demolition-related work including, among other things, a detailed plan for any dredging, cofferdams, or silt curtains. The plan will demonstrate conformity with all special conditions (45-51) in this Bridge Demolition Section. The Department may specify water quality monitoring requirements that differ from those listed in condition 59 through 67 to reflect the details of the demolition plans.
- Permit Condition 59: *At least 45 days before starting dredging activities*; decanting activities; removal of large debris fields; pile driving in zone C; channel armoring; cofferdam construction; removal of the existing bridge; or any activity that may cause resuspension of bottom sediments, Permittee must submit a water quality monitoring plan to the Department. If activities occur concurrently in multiple locations, each activity that may cause resuspension of bottom sediments must be monitored separately. The plan must be in effect at all times during these activities. The above activities may start when the Department has given written approval of the plan.
- Permit Condition 60: The plan shall include monitoring for total suspended solids (TSS), turbidity (visual monitoring) and the following contaminants: total mercury, dissolved nickel, copper, lead, zinc, PCB and naphthalene and benzo(a)pyrene. The plan must: (i) describe procedures for background sampling and sampling at the edge of a 500-foot mixing zone around the activities identified in condition 59, above; (ii) require whole water samples in the vertical water column (from at least 3 depths in water greater than 20 feet deep, from two depths in waters between 10 and 20 feet deep, and at mid-depth in waters less than 10 feet deep) along a transect within the plume; and (iii) include an upstream transect. When silt curtains are deployed, monitoring should take place at the nearest practicable distance from the silt curtain. Monitoring may be temporarily

suspended due to weather or other safety concerns. Conditions resulting in suspension of monitoring must be documented in the reports described in conditions 62 and 65.

- Permit Condition 61: The following Water Quality Standards must be achieved immediately outside of the silt curtain, at the edge of the 500-foot mixing zone, or, if necessary to maintain a safe survey distance, at the nearest distance practicable around the activities identified condition 59, above, subject to the monitoring requirements of condition 64 below. When a Detection Limit listed below is greater than the listed Water Quality Standard, the Water Quality Standard will be presumed to be met when analytical results demonstrate compliance with the Detection Limit. Where background concentrations exceed the Water Quality Standard, the limit at the edge of the mixing zone is 30% over background, with the exception of TSS which shall be 100 mg/L above ambient. Monitoring for turbidity is visual only with no laboratory analysis required.

Contaminant	Water Quality Standard (ppb)	Detection Limit* (ppb)
Total Mercury	0.0007 – H(FC)	0.050
Dissolved nickel	8.2–A(C)	
Dissolved copper	5.6–A(C)	
Dissolved lead	8.0–A(C)	
Dissolved zinc	66–A(C)	
PCB	1.0x10 ⁻⁶	
Aroclor 1242		0.2
Aroclor 1248		0.2
Aroclor 1254		0.2
Aroclor 1260		0.2
Napthalene	16	
Benzo(a)pyrene	0.0006	0.1
TSS	None from sewage, industrial waste or other wastes that will cause deposition or impair the waters for their best usages.	100 mg/L above ambient
Turbidity	No increase that will cause a substantial visible contrast to natural conditions.	
*Using EPA analytical method with the lowest possible detection limit as promulgated under 40CFR Part 136.		

- Permit Condition 62: All analytical results must be sent to DEC by fax or email within 48 hours of receipt of data results, followed by a mailed hard copy. Exceedances should be highlighted.

- Permit Condition 63: In the event of exceedance of a water quality standard, the department will be notified and the Permittee and the Department will determine if there is a need for procedural changes.
- Permit Condition 64: Water quality monitoring must be conducted daily (every day the activity occurs) at the start of each activity identified in condition 59, above, and during dredging of East Sediment Mound #3. Monitoring may be temporarily suspended due to weather or other safety concerns. Conditions resulting in suspension of monitoring must be documented in the reports described in condition 62 and 65.
 - A. If there are no water quality standard exceedances for five consecutive monitoring events, water quality monitoring for that activity may be reduced with Department approval. Daily visual turbidity monitoring must continue for all activities throughout the duration of the in-river operation.
 - B. TSS monitoring must be conducted daily for each bridge removal activity and for dredging and bottom profiling activities when they occur. If there are no TSS exceedances for five consecutive monitoring events for dredging and bottom profiling activities, TSS monitoring may be reduced to twice per week.
 - C. If, during the reduced sampling for any activity, turbidity resulting in a substantial visible contrast to the Hudson River is observed immediately outside of a silt curtain or at the edge of the 500-foot mixing zone or if there is an exceedance of 100 mg/L above the ambient TSS value, corrective action shall be taken and TSS monitoring frequency shall return to daily (every day that the activity occurs) for that activity until such time as TSS concentrations are less than 100 mg/L above ambient values on two consecutive measurements and turbidity does not result in a substantial visible contrast to the Hudson River. NYSDEC may specify additional monitoring until compliance is demonstrated. Samples shall be collected until NYSDEC approves resumption of reduced monitoring.
- Permit Condition 65: Three copies of a monitoring report summarizing the results of the monitoring and analyses shall be submitted to the Department within 30 days of completion of the in-river Authorized Activity in any calendar year.
- Permit Condition 66: All laboratory analyses required by this permit must be conducted by a laboratory certified by the New York State Department of Health.
- Permit Condition 67: Nothing contained in this Permit shall be construed as authorizing a violation of Water Quality Standards.
- Permit Condition 70: All decant water must be held in the decant-holding scow for a minimum of 12 hours

August 28, 2014 – NYSDEC issued a reduction in water quality monitoring for Pile Driving in Zone C to daily visual monitoring for turbidity.

1.2 Plan Revisions

The Water Quality Monitoring Plan (WQMP) was revised in accordance with the Permit Modification specified in Section 1.1 above. The schedule below provides the revisions of the WQMP for 2014:

- January 1 – August 7 2014: Water Quality Monitoring Plan Revision 3
- July 15, 2014: Water Quality Monitoring Plan Revision 4 submitted to NYSTA
- July 24, 2014: Water Quality Monitoring Plan Revision 5 submitted to NYSDEC
- August 1, 2014: Water Quality Monitoring Plan Revision 6 submitted to NYSDEC
- August 8, 2014: Water Quality Monitoring Plan Revision 6 accepted by NYSDEC

2.0 Monitored Construction Activities

The following construction activities were monitored by TZC in 2014 per the Water Quality Monitoring Plan.

2.1 Cofferdam Construction

Cofferdam construction commenced in 2013. Cofferdam construction commenced in 2014 on July 17, 2014 and ended on October 14, 2014. Construction was scheduled for 5 days a week, 8 hours per day during this period. Cofferdams were constructed about the footprints of Piers [REDACTED] (westbound), [REDACTED], and [REDACTED]. Cofferdam construction was performed by TZC. Cofferdams located around the footprints of Piers [REDACTED] were dewatered via suction pumps. During the dewatering process a series of leaks in the cofferdam interlocking joints were identified. TZC utilized several methods for repairing the leaks which included wooden wedges, oakum, and a mix of sand and pulverized stone.

2.2 Pile Driving (Platforms)

The Westchester temporary north trestle (platform) construction commenced in 2013. Westchester temporary north trestle construction commenced in 2014 on February 27, 2014 and was completed on March 19, 2014. Temporary platform construction was scheduled to occur 4 days a week 10 hours per day during this period. Temporary platform construction operations were performed by Trevcon Construction (TCC) as subcontractor to TZC.

The Rockland temporary north trestle and permanent platform construction commenced in 2013. The Rockland temporary north trestle construction commenced in 2014 on February 28, 2014 and was completed on October 17, 2014. Platform construction was scheduled to occur 5 days a week, 8 hours per day during this period. Rockland platform construction was performed by TZC.

2.3 Dredged Channel Armoring

Dredged Channel Armoring (armoring) commenced in 2013. Armoring commenced in 2014 on January 13, 2014 and was completed on July 12, 2014. Armoring was scheduled to occur intermittently 6 days a week (Monday through Saturday), 10 hours per day during this period. Armoring was performed by Weeks Marine, Inc. (WMI).

2.4 Production Pile Driving in Zone C

Production Pile Driving in Zone C (pile driving in zone C) commenced in 2013. Pile driving in zone C commenced in 2014 on January 18, 2014 and was completed on October 31, 2014. Pile driving was scheduled to occur intermittently between 7AM to 7PM from Monday through Friday and from 12PM to 7PM on Saturday during this period. Pile driving was performed by TZC using barge-based cranes. Piles were driven at Piers [REDACTED].

2.5 Production Pile Driving Outside of Zone C

Production Pile Driving outside of Zone C (pile driving outside zone C) commenced in 2013. Pile driving outside of zone C commenced in 2014 on February 21, 2014 and continued through December 2014. Pile driving was scheduled to occur intermittently between 7AM to 7PM from Monday through Friday and from 12PM to 7PM on Saturday during this period. Pile driving was performed by TZC using barge-based cranes. [REDACTED] piles were driven at Piers [REDACTED] (vibratory only in 2014), [REDACTED]. [REDACTED] piles were driven at Piers 5 thru 16, 19, 22 thru 27, and 36 thru 38.

2.6 Concrete Placement

2.6.1 Tremie Concrete

TZC placed tremie concrete in Piers [REDACTED] to seal the annular space between the pile and pre-cast pile cap. The placement of tremie concrete was monitored for observations of turbidity extending outside of the pile cap during the pour.

2.6.2 Non-Tremie Concrete

TZC placed concrete in Piers [REDACTED]. Concrete placement was monitored for incidental release of concrete to the Hudson River.

2.7 Pile Dewatering

Pile dewatering began on March 12, 2014 and continued through December 2014. Pile dewatering was performed by TZC using suction and/or hydraulically driven submersible pumps.

2.8 Pile Excavation

Pile excavation began on March 22, 2014 and continued through December 2014. Pile excavation was completed by TZC using a crane mounted, cable-actuated spherical grab.

2.9 Pier and Cofferdam Dewatering

Pier dewatering began on September 5, 2014 and continued through December 2014. Pier dewatering was performed by TZC using suction and submersible pumps. Cofferdam dewatering began on May 22, 2014 and continued through December 2014. Cofferdam dewatering was performed by TZC using suction pumps.

3.0 Water Quality Monitoring Activities

Water quality monitoring was performed in accordance with the Water Quality Monitoring Plan (Plan) throughout 2014. Visual observations of activities were conducted and documented by a barge-based or vessel-based observer during the activities identified in Table 1 of the Water Quality Monitoring Plan, Revision 6..

Due to logistical (e.g., equipment availability), construction schedule, and equipment mechanical issues, there were multiple days or tides when construction activities did not occur such that water quality samples were not collected.

4.0 Results

Analytical results of whole water quality samples collected for 2014 are summarized in Table 1 and described below. There were no exceedances of the permit standards for total mercury, dissolved nickel, dissolved lead, dissolved zinc, PBCs, naphthalene, and benzo(a)pyrene. During the 2014 water quality monitoring program, 98% of the 580 samples collected were reported at concentrations below the water quality limits as set forth in NYSDEC Permit Condition 61 (Table 1).

Table 1. Construction Activity Whole Water Sample Exceedances

Construction Activity	No. of Samples	Exceedances	Percent of Samples Under Permit Limits
Armoring	329	8	98%
Pile Driving	255	3	99%
Total	584	11	98%

TZC also monitored construction operations through daily visual monitoring for turbidity that results in a substantial visible contrast to the ambient conditions of the Hudson River. Visual

monitoring was documented through environmental checklists, visual inspection forms, and/or field compliance reports. Table 2 below summarizes the visual monitoring completed for construction operations after approval of Revision 6 of the Water Quality Monitoring Plan on August 8, 2014.

Table 2. Summary of Visual Monitoring for Turbidity from
August 8, 2014 to December 31, 2014

Construction Activity	No. of Observations	No. of Observations with Visible Turbidity	Percent of Observations Free of Visible Turbidity
Pile Driving, Zone C	77	0	100%
Pile Driving, Outside Zone C	309	0	100%
Pile Dewatering	53	1	98%
Cofferdam Construction	14	0	100%
Pier and Cofferdam Dewatering	68	1	99%
Concrete Placement	157	19	88%
General Construction Work ¹	214	0	100%
Total	892	21	98%

¹General construction work includes, but is not limited to, the following activities: Pile excavation, formwork, pile splicing, installation of piles under self-weight, rebar installation, or other above water construction.

4.1 Dredged Channel Armoring

Attachment 1 provides a summary of samples collected for armoring. TZC collected 329 whole water quality samples during 100 days of monitoring. Water quality results indicate there were no exceedances on 93 of the 100 monitored days (Attachment 1).

There were eight TSS exceedances during the armoring operation in 2014. Table 3 below provides a summary of the exceedances. Exceedances were typically observed in the bottom sample and no exceedance was observed in the corresponding surface sample with the exception of the ebb sample on April 28, 2014 (Table 3). WMI enacted a corrective action of extending the chute further into the water column in response to the exceedance. Following exceedances WMI reviewed the activity for potential changes to the placement means and methods. As demonstrated by the few and intermittent observations of exceedances during the armoring activity the best management practices (BMPs) were properly deployed to prevent the re-suspension of bottom sediments in the Hudson River.

Table 3. TSS Exceedances during the 2014 Armoring

Date (mm/dd/yy)	Tide Cycle	Sample Depth	Up-current concentration (ppm)	Down-current concentration¹ (ppm)
04/04/14	Flood	Bottom	54.4	178.0
04/28/14	Ebb	Surface	48.8	290.0
04/28/14	Ebb	Bottom	49.2	189.0
05/03/14	Flood	Bottom	47.2	196.0
05/06/14	Flood	Bottom	33.6	139.0
05/22/14	Flood	Bottom	28.8	141.0
06/17/14	Ebb	Bottom	74.4	187.0
06/28/14	Flood	Bottom	30.0	212.0

¹ Permit limit is >100 ppm above ambient

Visual monitoring for turbidity was conducted for each day that armoring occurred. There were zero exceedances of turbidity observed extending beyond the 500-foot mixing zone. On May 5, 2014 TZC identified a material on the surface of the Hudson River extending beyond the 500-foot mixing zone. The observation was reported to NYSDEC. NYSDEC determined the observed material to be a substantial visible contrast to the natural conditions of the Hudson River and therefore an exceedance of Permit Condition 61. TZC identified the material as finely-pulverized rock dust from the bedding material deposited as the first layer armoring. As a corrective action to the observed exceedance TZC, in coordination with NYSTA and NYSDEC, eliminated the placement of the bedding material from the dredged channel armoring process on May 29, 2014. Table 4 provides a summary of observations of the rock dust extending beyond the 500-foot mixing zone.

Table 4. Reported Observations of Rock Dust beyond 500-Foot Mixing Zone

Date (mm/dd/yy)	Tide Cycle	Corrective Action
05/05/14	Ebb	Extending chute from 5-feet to 6-feet into the water.
05/09/14	Ebb	Chute had been extended from 6-feet to 7-feet into the water. NYSDEC onsite and determined turbidity was not substantial.
05/12/14	Flood	Observation was similar to conditions observed by NYSDEC on May 9, 2014 which was determined to be not substantial.
05/14/14	Flood	Extended chute 8-feet into the water and wetted prior to placement.
05/23/14	Ebb	Material was wetted prior to placement.
06/03/14	Flood	NYSDEC onsite and determined turbidity was not substantial.
06/12/14	Ebb	Stone dust was similar to conditions observed by NYSDEC on May 9, 2014 which was determined to be not substantial.

4.2 Pile Driving in Zone C

Attachment 2 provides a summary of samples collected for pile driving in Zone C. TZC collected 255 whole water quality samples during 70 days of monitoring in 2014. Water quality results indicate that there were no exceedances for 67 of the 70 days sampled (Attachment 2).

There were three reported exceedances associated with pile driving in Zone C in 2014. Per Permit Condition 61, the TSS limit was exceeded in one sample and the dissolved copper limit was exceeded in two samples. Table 5 below provides a summary of reported exceedances.

Table 5. Reported Exceedances during the 2014 Pile Driving in Zone C

Date (mm/dd/yy)	Pier No.	Pile Driving Method	Tide	Sample Depth	Analyte	Up-current concentration	Down-current concentration
05/12/14	32	Vibratory	Flood	Bottom	TSS	89.2 ppm	222 ppm ¹
07/16/14	33	Impact	Ebb	Mid-Water	Dissolved Copper	3.9 ppb	6.5 ppb ²
08/13/14	28	Impact	Ebb	Bottom	Dissolved Copper	< 3.0 ppb ³	6.9 ppb ²

¹ Permit limit is >100 ppm above ambient

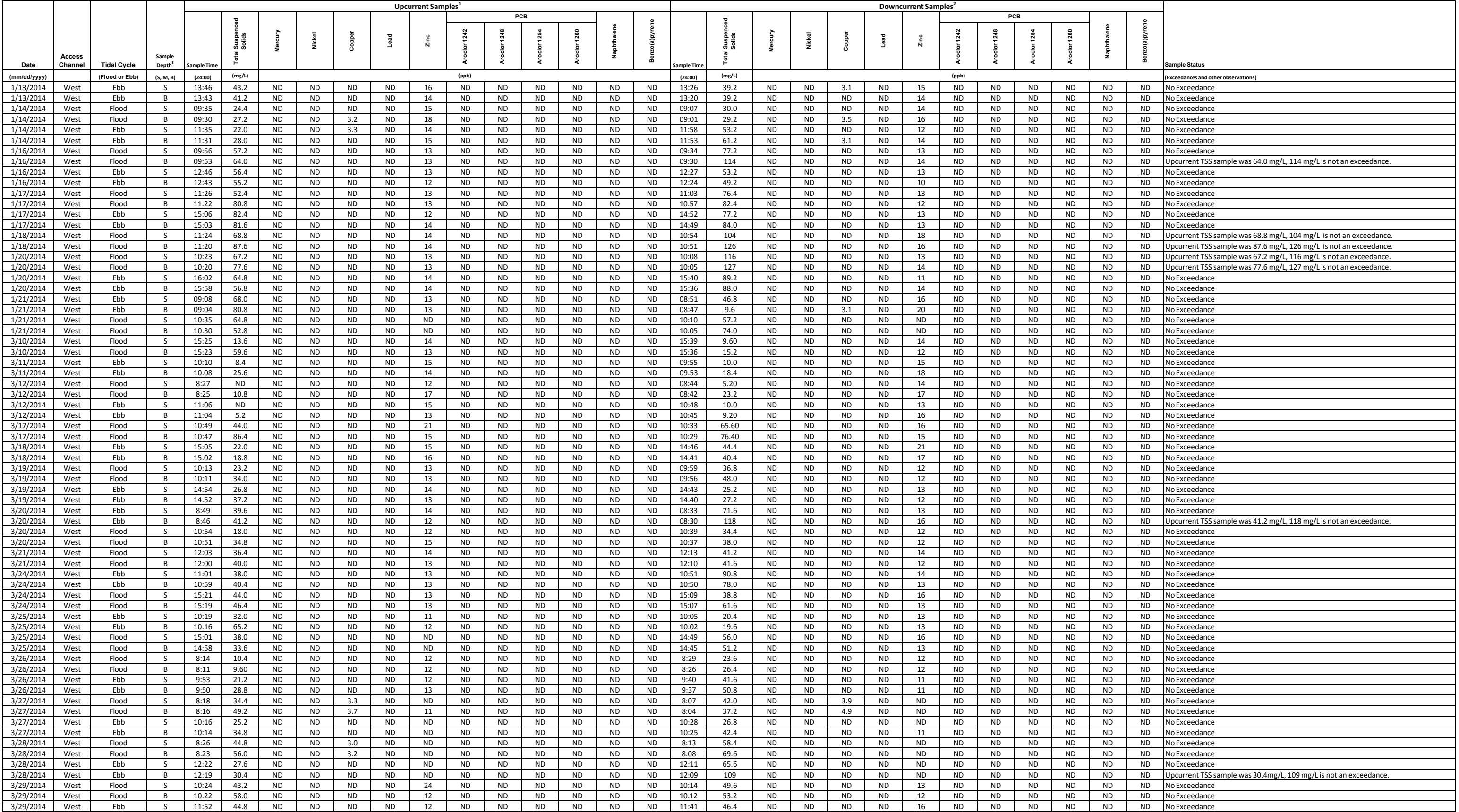
² Permit Limit is 5.6 ppb

³ Method Detection Limit is 3.0 ppb

There were no observations of visible turbidity extending beyond the 500-foot mixing zone in 2014.

Attachment 1

Summary of Dredged Channel Armoring Water Quality Monitoring



New NY Bridge Project



Date	Access Channel	Tidal Cycle	Sample Depth ¹	Upcurrent Samples ¹												Downcurrent Samples ²												Sample Status		
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB					Naphthalene	Benzo(a)pyrene
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
3/29/2014	West	Ebb	B	11:51	44.4	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	11:39	40.4	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	No Exceedance
4/1/2014	West	Flood	S	13:39	41.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	13:24	42.0	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/1/2014	West	Flood	B	13:37	46.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13:21	49.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/1/2014	West	Ebb	S	15:16	32.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	14:59	50.4	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/1/2014	West	Ebb	B	15:13	44.4	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	14:57	43.6	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/2/2014	West	Ebb	S	9:11	41.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:51	49.6	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No Exceedance
4/2/2014	West	Ebb	B	9:09	43.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:49	49.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/2/2014	West	Flood	S	11:26	37.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	11:10	34.4	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/2/2014	West	Flood	B	11:24	40.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11:07	32.8	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/3/2014	West	Ebb	S	8:49	45.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	8:32	49.6	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/3/2014	West	Ebb	B	8:47	48.0	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	8:30	39.6	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	No Exceedance
4/3/2014	West	Flood	S	13:03	32.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:48	36.4	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/3/2014	West	Flood	B	13:01	35.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:46	40.8	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/4/2014	West	Ebb	S	9:04	35.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:48	40.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/4/2014	West	Ebb	B	9:02	41.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:46	42.0	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/4/2014	West	Flood	S	11:37	36.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11:20	63.6	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/4/2014	West	Flood	B	11:35	54.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11:18	178 ⁴	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 54.4mg/L, 178 mg/L TSS is an exceedance.
4/5/2014	West	Ebb	S	10:33	32.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	10:16	43.6	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance
4/5/2014	West	Ebb	B	10:32	31.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:15	45.6	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/5/2014	West	Flood	S	12:32	34.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:44	29.2	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	No Exceedance
4/5/2014	West	Flood	B	12:30	39.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:42	31.6	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/7/2014	West	Ebb	S	9:13	23.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:54	24.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/7/2014	West	Ebb	B	9:10	24.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:51	17.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/9/2014	West	Ebb	S	10:38	22.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10:24	16.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/9/2014	West	Ebb	B	10:36	22.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10:22	14.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/9/2014	West	Flood	S	16:59	25.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16:45	18.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/9/2014	West	Flood	B	16:56	23.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	16:43	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/10/2014	West	Flood	S	8:25	9.20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:13	14.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/10/2014	West	Flood	B	8:23	12.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:11	28.8	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/10/2014	West	Ebb	S	10:50	13.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:34	26.0	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance
4/10/2014	West	Ebb	B	10:48	14.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:32	47.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/11/2014	West	Flood	S	8:40	19.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:23	24.8	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/11/2014	West	Flood	B	8:38	20.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:19	88.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/11/2014	West	Ebb	S	10:14	29.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	9:58	19.6	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No Exceedance
4/11/2014	West	Ebb	B	10:11	27.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	9:55	20.0	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance
4/12/2014	West	Flood	S	9:32	42.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	9:17	35.0	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceed

New NY Bridge Project



Date	Access Channel	Tidal Cycle	Sample Depth ¹	Upcurrent Samples ¹												Downcurrent Samples ²												Sample Status		
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB					Naphthalene	Benzo(a)pyrene
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
4/24/2014	West	Ebb	B	12:47	102	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:29	94.4	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/24/2014	West	Flood	S	15:30	65.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	15:46	84.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/24/2014	West	Flood	B	15:27	84.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	15:43	110	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 84.0 mg/L, 110 mg/L TSS is not an exceedance.
4/25/2014	West	Flood	S	8:14	46.8	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	8:02	51.6	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/25/2014	West	Flood	B	8:12	64.8	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	8:01	68.4	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/25/2014	West	Ebb	S	14:09	62.4	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	13:54	65.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/25/2014	West	Ebb	B	14:08	75.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13:52	78.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/26/2014	West	Flood	S	8:10	50.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	7:48	50.0	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance
4/26/2014	West	Flood	B	8:07	69.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	7:44	52.0	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/26/2014	West	Ebb	S	12:24	78.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:03	66.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/26/2014	West	Ebb	B	12:20	76.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:00	84.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/28/2014	West	Flood	S	8:57	73.2	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	8:44	82.0	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
4/28/2014	West	Flood	B	8:55	86.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	8:42	96.4	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance
4/28/2014	West	Ebb	S	13:01	48.8	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	12:50	290 ⁴	ND	ND	3	ND	13	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 48.8 mg/L, 290 mg/L TSS is an exceedance.
4/28/2014	West	Ebb	B	12:59	49.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	12:48	189 ⁴	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 49.2 mg/L, 189 mg/L TSS is an exceedance.
4/30/2014	West	Flood	S	8:44	58.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	9:02	56.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/30/2014	West	Flood	B	8:42	62.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:59	103	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 62.8 mg/L, 103 mg/L TSS is not an exceedance.
4/30/2014	West	Ebb	S	13:56	40.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	13:42	46.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	No Exceedance
4/30/2014	West	Ebb	B	13:54	43.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	13:40	54.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/1/2014	West	Ebb	S	8:52	48.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:32	98.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/1/2014	West	Ebb	B	8:49	49.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:28	88.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/1/2014	West	Flood	S	10:03	31.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	9:48	41.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/1/2014	West	Flood	B	10:01	44.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	9:46	46.4	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/2/2014	West	Ebb	S	9:26	48.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	9:17	66.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/2/2014	West	Ebb	B	9:24	77.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9:14	73.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/3/2014	West	Ebb	S	9:39	44.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	9:24	54.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/3/2014	West	Ebb	B	9:36	62.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9:21	67.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/3/2014	West	Flood	S	11:15	33.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10:59	41.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/3/2014	West	Flood	B	11:12	47.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10:56	196 ⁴	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 47.2 mg/L, 196 mg/L TSS is an exceedance.
5/5/2014	West	Ebb	S	8:58	49.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:42	78.4	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/5/2014	West	Ebb	B	8:56	53.6	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:40	83.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/5/2014	West	Flood	S	12:39	40.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	13:03	41.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/5/2014	West	Flood	B	12:37	46.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13:01	104	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 46.0 mg/L, 104 mg/L TSS is not an exceedance.
5/6/2014	West	Ebb	S	8:18	36.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:04	35.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/6/2014	West	Ebb	B	8:16	34.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	8:02	42.0	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	No Exceedance
5/6/2014	West	Flood	S	13:53	24.8	ND	ND	ND	ND																					



Date	Access Channel	Tidal Cycle	Sample Depth ¹	Upcurrent Samples ¹												Downcurrent Samples ²												Sample Status		
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB					Naphthalene	Benzo(a)pyrene
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
5/19/2014	West	Ebb	B	16:49	32.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	16:33	32.8	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance
5/20/2014	West	Ebb	S	8:57	75.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:40	86.8	ND	ND	3.0	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance	
5/20/2014	West	Ebb	B	8:55	88.4	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:37	84.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/20/2014	West	Flood	S	12:33	32.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:16	58.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/20/2014	West	Flood	B	12:30	57.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:14	71.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/21/2014	West	Ebb	S	10:23	50.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	10:04	107	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 50.0 mg/L, 107 mg/L is not an exceedance..	
5/21/2014	West	Ebb	B	10:21	74.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	10:00	112	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 74.8 mg/L, 112 mg/L is not an exceedance.	
5/21/2014	West	Flood	S	13:04	28.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:47	30.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/21/2014	West	Flood	B	13:02	46.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:45	34.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/22/2014	West	Ebb	S	10:49	46.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:35	50.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/22/2014	West	Ebb	B	10:47	50.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:33	77.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance	
5/22/2014	West	Flood	S	14:04	23.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	13:49	45.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance	
5/22/2014	West	Flood	B	14:02	28.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	13:48	141 ¹	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 28.8 mg/L, 141 mg/L TSS is an exceedance.	
5/23/2014	West	Flood	S	7:08	41.6	ND	ND	3.0	ND	11	ND	ND	ND	ND	ND	6:59	27.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/23/2014	West	Flood	B	7:07	30.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	6:57	36.0	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	No Exceedance	
5/23/2014	West	Ebb	S	8:43	17.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:31	23.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance	
5/23/2014	West	Ebb	B	8:41	23.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:30	32.0	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	No Exceedance	
5/27/2014	West	Flood	S	8:41	45.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	8:28	45.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/27/2014	West	Flood	B	8:39	50.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:26	44.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance	
5/27/2014	West	Ebb	S	12:33	19.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	12:18	30.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/27/2014	West	Ebb	B	12:31	19.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	12:15	38.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No Exceedance	
5/28/2014	West	Flood	S	8:32	21.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:12	35.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance	
5/28/2014	West	Flood	B	8:30	21.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:10	19.2	ND	ND	3.1	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance	
5/28/2014	West	Ebb	S	13:19	24.4	ND	ND	3.2	ND	11	ND	ND	ND	ND	ND	13:03	28.0	ND	ND	3.2	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/28/2014	West	Ebb	B	13:17	27.6	ND	ND	3.2	ND	10	ND	ND	ND	ND	ND	13:01	36.8	ND	ND	3.4	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/29/2014	West	Flood	S	7:48	33.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8:05	35.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance	
5/29/2014	West	Flood	B	7:45	35.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:02	24.8	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	No Exceedance	
5/30/2014	West	Flood	S	8:29	22.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	8:12	23.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/30/2014	West	Flood	B	8:24	27.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	8:10	27.6	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	No Exceedance	
5/30/2014	West	Ebb	S	14:04	19.6	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	13:52	26.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
5/30/2014	West	Ebb	B	14:02	33.2	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	13:51	30.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No Exceedance	
5/31/2014	West	Ebb	M	7:49	34.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	7:34	104	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS sample was 34.0 mg/L, 104 mg/L TSS is not an exceedance.	
5/31/2014	West	Flood	M	9:48	43.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	10:03	92.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
6/2/2014	West	Ebb	S	10:22	29.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10:09	30.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No Exceedance	
6/2/2014	West	Ebb	B	10:20	50.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	10:07	33.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No Exceedance	
6/2/2014	West	Flood	S	12:52	16.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	12:32	25.2	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	No Exceedance	
6/2/2014	West	Flood	B	12:50	14.0	ND	ND	ND	ND	11																				



Date	Access Channel	Tidal Cycle	Sample Depth ²	Upcurrent Samples ¹												Downcurrent Samples ²														Sample Status
				Sample	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260			
6/19/2014	West	Flood	S	13:20	34.0	ND	ND	3.4	ND	10	ND	N	ND	ND	N	ND	13:02	28.4	ND	N	3.4	ND	N	ND	N	ND	ND	ND	No Exceedance	
6/19/2014	West	Flood	B	13:18	38.4	ND	N	3.7	ND	12	ND	N	ND	ND	N	ND	13:00	30.4	ND	N	3.4	ND	13	ND	N	ND	N	ND	ND	No Exceedance
6/20/2014	West	Ebb	S	11:27	90.0	ND	N	3.3	ND	17	ND	N	ND	ND	N	ND	11:09	51.6	ND	N	3.1	ND	15	ND	N	ND	N	ND	ND	No Exceedance
6/20/2014	West	Ebb	B	11:25	62.0	ND	N	3.1	ND	16	ND	N	ND	ND	N	ND	11:07	68.4	ND	N	3.3	ND	15	ND	N	ND	N	ND	ND	No Exceedance
6/20/2014	West	Flood	S	15:57	33.6	ND	ND	ND	ND	14	ND	N	ND	ND	N	ND	16:09	34.8	ND	N	3.3	ND	17	ND	N	ND	N	ND	ND	No Exceedance
6/20/2014	West	Flood	B	15:56	56.0	ND	N	ND	ND	13	ND	N	ND	ND	N	ND	16:08	46.8	ND	N	3.3	ND	16	ND	N	ND	N	ND	ND	No Exceedance
6/21/2014	West	Ebb	S	10:16	22.4	ND	N	4.2	ND	16	ND	N	ND	ND	N	ND	9:58	23.6	ND	N	4.1	ND	12	ND	N	ND	N	ND	ND	No Exceedance
6/21/2014	West	Ebb	B	10:13	64.0	ND	N	4.0	ND	ND	ND	N	ND	ND	N	ND	9:57	27.5	ND	N	4.1	ND	13	ND	N	ND	N	ND	ND	No Exceedance
6/23/2014	West	Ebb	S	13:20	24.4	ND	N	3.9	ND	13	ND	N	ND	ND	N	ND	13:04	40.8	ND	N	4.0	ND	12	ND	N	ND	N	ND	ND	No Exceedance
6/23/2014	West	Ebb	B	13:18	26.4	ND	N	3.5	ND	12	ND	N	ND	ND	N	ND	13:03	60.4	ND	N	4.0	ND	15	ND	N	ND	N	ND	ND	No Exceedance
6/24/2014	West	Ebb	M	11:33	28.0	ND	N	ND	ND	13	ND	ND	ND	ND	N	ND	11:23	47.2	ND	N	ND	ND	16	ND	N	ND	N	ND	ND	No Exceedance
6/25/2014	West	Flood	S	9:43	32.8	ND	ND	ND	ND	12	ND	N	ND	ND	N	ND	9:56	26.0	ND	N	ND	ND	12	ND	N	ND	N	ND	ND	No Exceedance
6/25/2014	West	Flood	B	9:42	34.0	ND	ND	ND	ND	12	ND	N	ND	ND	N	ND	9:55	35.6	ND	N	ND	ND	14	ND	N	ND	N	ND	ND	No Exceedance
6/25/2014	West	Ebb	M	12:22	23.6	ND	N	ND	ND	11	ND	ND	ND	ND	N	ND	12:09	61.2	ND	N	ND	ND	13	ND	N	ND	N	ND	ND	No Exceedance
6/26/2014	West	Flood	M	7:45	34.4	ND	N	4.1	ND	12	ND	N	ND	ND	N	ND	7:57	56.4	ND	N	3.8	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/26/2014	West	Ebb	M	13:31	28.0	ND	N	4.3	ND	13	ND	N	ND	ND	N	ND	13:15	27.6	ND	N	4.1	ND	10	ND	N	ND	N	ND	ND	No Exceedance
6/27/2014	West	Flood	S	10:20	23.2	ND	ND	4.5	ND	16	ND	N	ND	ND	N	ND	10:36	28.4	ND	N	4.5	ND	14	ND	N	ND	N	ND	ND	No Exceedance
6/27/2014	West	Flood	B	10:19	32.4	ND	N	4.6	ND	15	ND	N	ND	ND	N	ND	10:34	28.8	ND	N	4.5	ND	13	ND	N	ND	N	ND	ND	No Exceedance
6/27/2014	West	Ebb	S	13:30	19.6	ND	N	4.5	ND	13	ND	N	ND	ND	N	ND	13:14	40.0	ND	N	4.5	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/27/2014	West	Ebb	B	13:29	21.6	ND	N	4.5	ND	ND	ND	N	ND	ND	N	ND	13:12	29.6	ND	N	4.5	ND	14	ND	N	ND	N	ND	ND	No Exceedance
6/28/2014	West	Flood	S	10:54	29.6	ND	ND	4.4	ND	11	ND	N	ND	ND	N	ND	10:32	28.0	ND	N	4.5	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/28/2014	West	Flood	B	10:52	30.0	ND	N	4.4	ND	11	ND	N	ND	ND	N	ND	10:30	212 ⁴	ND	N	4.5	ND	12	ND	N	ND	N	ND	ND	Upcurrent TSS sample was 30.0 mg/L, 212 mg/L TSS is an exceedance.
6/30/2014	West	Flood	S	12:51	32.5	ND	ND	ND	ND	11	ND	N	ND	ND	N	ND	13:09	31.6	ND	N	ND	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/30/2014	West	Flood	B	12:49	38.8	ND	N	ND	ND	10	ND	N	ND	ND	N	ND	13:08	31.2	ND	N	ND	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/30/2014	West	Ebb	S	15:39	24.0	ND	N	ND	ND	10	ND	N	ND	ND	N	ND	15:25	20.8	ND	N	ND	ND	11	ND	N	ND	N	ND	ND	No Exceedance
6/30/2014	West	Ebb	B	15:37	37.2	ND	N	ND	ND	12	ND	N	ND	ND	N	ND	15:23	22.8	ND	N	ND	ND	10	ND	N	ND	N	ND	ND	No Exceedance
7/1/2014	West	Ebb	M	9:08	20.4	ND	N	ND	ND	11	ND	N	ND	ND	N	ND	8:54	47.2	ND	N	ND	ND	11	ND	N	ND	N	ND	ND	No Exceedance
7/1/2014	West	Flood	S	11:27	35.2	ND	ND	ND	ND	11	ND	N	ND	ND	N	ND	11:09	27.2	ND	N	ND	ND	13	ND	N	ND	N	ND	ND	No Exceedance
7/1/2014	West	Flood	B	11:26	40.8	ND	ND	ND	ND	12	ND	N	ND	ND	N	ND	11:08	32.0	ND	N	ND	ND	11	ND	N	ND	N	ND	ND	No Exceedance
7/2/2014	West	Ebb	M	9:19	46.0	ND	N	3.1	ND	11	ND	N	ND	ND	ND ⁵	ND ⁵	9:02	40.4	ND	N	3.0	ND	N	ND	N	ND	N	ND ⁵	ND ⁵	No Exceedance
7/2/2014	West	Flood	M	10:54	91.2	ND	N	3.3	ND	10	ND	N	ND	ND	ND ⁵	ND ⁵	11:10	57.2	ND	N	3.6	ND	11	ND	N	ND	N	ND ⁵	ND ⁵	No Exceedance
7/3/2014	West	Ebb	M	9:08	28.8	ND	N	3.3	ND	11	ND	N	ND	ND	N	ND	8:53	36.4	ND	N	3.3	ND	12	ND	N	ND	N	ND	ND	No Exceedance
7/3/2014	West	Flood	M	11:02	31.2	ND	N	3.4	ND	15	ND	N	ND	ND	N	ND	11:18	38.0	ND	N	3.2	ND	14	ND	N	ND	N	ND	ND	No Exceedance
7/7/2014	West	Ebb	S	9:01	18.8	ND	N	3.5	ND	ND	ND	N	ND	ND	N	ND	8:45	29.6	ND	N	3.5	ND	10	ND	N	ND	N	ND	ND	No Exceedance
7/7/2014	West	Ebb	B	8:59	23.2	ND	N	3.4	ND	ND	ND	N	ND	ND	N	ND	8:43	42.4	ND	N	3.5	ND	11	ND	N	ND	N	ND	ND	No Exceedance
7/7/2014	West	Flood	M	14:19	26.8	ND	N	3.8	ND	N	ND	N	ND	ND	N	ND	14:04	40.8	ND	N	3.5	ND	N	ND	N	ND	N	ND	ND	No Exceedance
7/8/2014	West	Ebb	M	10:41	19.6	ND	N	3.9	ND	11	ND	N	ND	ND	N	ND	10:29	30.0	ND	N	4.1	ND	12	ND	N	ND	N	ND	ND	No Exceedance
7/8/2014	West	Flood	M	15:17	19.2	ND	N	3.8	ND	11	ND	N	ND	ND	N	ND	15:08	27.2	ND	N	3.9	ND	10	ND	N	ND	N	ND	ND	No Exceedance
7/9/2014	West	Flood	S	8:58	24.8	ND	ND	4.4	ND	12	ND	N	ND	ND	N	ND	8:41	56.8	ND	N	4.0	ND	12	ND	N	ND	N	ND	ND	No Exceedance
7/9/2014	West	Flood	B	8:56	24.0	ND	N	4.2	ND	N	ND	N	ND	ND	N	ND	8:39	60.0	ND	N	4.1	ND	12	ND	N	ND	N	ND	ND	No Exceedance
7/9/2014	West	Ebb	M	11:28	31.2	ND	N	4.3	ND	11	ND	N	ND	ND	N	ND	11:12	34.0	ND	N	4.3	ND	11	ND	N	ND	N	ND	ND	No Exceedance
7/10/2014	West	Flood	S	8:54	24.4	ND	ND	4.1	ND	N	ND	N	ND	ND	N	ND	8:38	28.8	ND	N	4.0	ND	N	ND	N	ND	N	ND	ND	No Exceedance
7/10/2014	West	Flood	B	8:52	29.6	ND	N	4.1	ND	11	ND	N	ND	ND	N	ND	8:36	29.6	ND	N	4.2	ND	10	ND	N	ND	N	ND	ND	No Exceedance
7/10/2014	West	Ebb	S	10:52	30.4	ND	N	3.9	ND	14	ND	N	ND	ND	N	ND	10:37	32.0	ND	N	3.7	ND	11	ND	N	ND	N	ND	ND	No Exceedance
7/10/2014	West	Ebb	B	10:51	23.2	ND	N	3.8	ND	11	ND	ND	ND	ND	N	ND	10:35													

Notes:

¹ Samples collected at a location up current of the source where the water quality effects of the project are no longer discernible

² Samples collected at the edge of the 500 ft mixing zone

³ S = Near Surface, M = Mid-Depth, B = Near Bottom

⁴ Reported value exceeds the Water Quality Standard as stated in Condition 61 of NYSDEC Permit Facility ID 3-9903-00043/00012-14

⁵ Indicates that parameter was initially analyzed within the recommended hold time and that a re-run was performed outside of the hold time.

ND = Not Detected, sample value below detection limit based on the New York State Department of Environmental Conservation (NYSDEC) Permit Facility ID 3-9903-00043/00012-14

Attachment 2

Summary of Pile Driving Water Quality Monitoring



				Upcurrent Samples ¹												Downcurrent Samples ²												
											PCB											PCB						
											Aroclor1242	Aroclor1248	Aroclor1254	Aroclor1260	Naphthalene	Benz(a)pyrene												
Date	DrivingMethod	TidalCycle	SampleDepth ³	SampleTime	TotalSuspendedSolids	Mercury	Nickel	Copper	Lead	Zinc							SampleTime	TotalSuspendedSolids	Mercury	Nickel	Copper	Lead	Zinc					SampleStatus
(mm/dd/yyyy)	(VibratoryorImpact)	(FloodorEbb)	(S, M, B)	(24:00)	(mg/L)						(ppb)						(24:00)	(mg/L)										(Exceedancesandotherobservations)
1/18/2014	Impact	Flood	S	12:07	29.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	13:15	28.8	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
1/18/2014	Impact	Flood	M	12:04	88.0	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	13:12	38.8	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
1/18/2014	Impact	Flood	B	11:57	113	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	13:09	65.6	ND	ND	ND	ND	13	ND	ND	ND	ND	Upcurrent TSS Sample was 113 mg/L, 65 mg/L is not an exceedance.
1/18/2014	Impact	Ebb	S	15:11	20.8	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	14:51	40.8	ND	ND	ND	ND	17	ND	ND	ND	ND	No exceedance
1/18/2014	Impact	Ebb	M	15:09	35.2	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	14:47	35.6	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
1/18/2014	Impact	Ebb	B	15:06	42.8	ND	ND	4.5	ND	15	ND	ND	ND	ND	ND	ND	14:45	42.8	ND	ND	ND	ND	16	ND	ND	ND	ND	No exceedance
1/20/2014	Impact	Flood	S	10:53	63.2	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	11:13	67.6	ND	ND	ND	ND	13	ND	ND	ND	ND	No exceedance
1/20/2014	Impact	Flood	M	10:48	75.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	11:09	71.6	ND	ND	ND	ND	10	ND	ND	ND	ND	No exceedance
1/20/2014	Impact	Flood	B	10:45	80.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	11:06	82.4	ND	ND	ND	ND	13	ND	ND	ND	ND	No exceedance
2/19/2014	Impact	Flood	S	12:49	16.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	12:27	85.2	ND	ND	ND	ND	13	ND	ND	ND	ND	No exceedance
2/19/2014	Impact	Flood	M	12:45	62.8	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	12:20	96.8	ND	ND	ND	ND	12	ND	ND	ND	ND	No exceedance
2/19/2014	Impact	Flood	B	12:42	73.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	12:16	104	ND	ND	ND	ND	13	ND	ND	ND	ND	Upcurrent TSS Sample was 73.2 mg/L, 104 mg/L is not an exceedance.
2/20/2014	Impact	Ebb	S	09:13	12.4	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	08:54	23.2	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
2/20/2014	Impact	Ebb	M	09:09	17.6	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	08:50	29.6	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
2/20/2014	Impact	Ebb	B	09:06	44.4	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	08:47	NV	ND	ND	ND	ND	14	ND	ND	ND	ND	TSS considered not valid. See memo dated 2/28/2014. No exceedance in valid samples.
2/24/2014	Impact	Ebb	S	09:15	19.2	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	08:56	16.4	ND	ND	ND	ND	16	ND	ND	ND	ND	No exceedance
2/24/2014	Impact	Ebb	M	09:12	16.8	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	08:54	16.4	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
2/24/2014	Impact	Ebb	B	09:10	21.2	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	08:51	19.6	ND	ND	ND	ND	19	ND	ND	ND	ND	No exceedance
2/28/2014	Vibratory	Flood	S	10:13	75.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	09:40	102	ND	ND	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 75.2 mg/L, 102 mg/L is not an exceedance
2/28/2014	Vibratory	Flood	M	10:06	103	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	09:28	132	ND	ND	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 103 mg/L, 132 mg/L is not an exceedance
2/28/2014	Vibratory	Flood	B	09:57	120	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	09:16	122	ND	ND	ND	ND	12	ND	ND	ND	ND	Upcurrent TSS was 120 mg/L, 122 mg/L is not an exceedance
3/1/2014	Impact	Ebb	S	12:55	34.8	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	12:30	28.0	ND	ND	ND	ND	17	ND	ND	ND	ND	No exceedance
3/1/2014	Impact	Ebb	M	12:53	35.2	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	12:27	46.4	ND	ND	ND	ND	18	ND	ND	ND	ND	No exceedance
3/1/2014	Impact	Ebb	B	12:47	44.4	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	12:24	52.0	ND	ND	ND	ND	18	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Ebb	S	15:05	12.4	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	14:46	13.6	ND	ND	ND	ND	17	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Ebb	M	15:02	10.8	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	14:43	16.8	ND	ND	ND	ND	21	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Ebb	B	14:59	20.4	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	14:40	22.8	ND	ND	ND	ND	19	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Flood	S	16:57	8.00	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	16:41	7.60	ND	ND	ND	ND	13	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Flood	M	16:54	10.0	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	ND	16:38	10.0	ND	ND	ND	ND	15	ND	ND	ND	ND	No exceedance
3/10/2014	Impact	Flood	B	16:51	21.2	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	16:35	13.6	ND	ND	ND	ND	12	ND	ND	ND	ND	No exceedance
3/11/2014	Impact	Flood	S	8:42	7.20	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	08:23	11.2	ND	ND	ND	ND	13	ND	ND	ND	ND	No exceedance
3/11/2014	Impact	Flood	M	8:38	13.2	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	08:21	12.8	ND	ND	ND	ND	21	ND	ND	ND	ND	No exceedance
3/11/2014	Impact	Flood	B	8:35	17.6	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	08:18	22.8	ND	ND	ND	ND	20	ND	ND	ND	ND	No exceedance
3/17/2014	Vibratory	Ebb	S	14:36	24.8	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	14:17	24.0	ND	ND	ND	ND	16	ND	ND	ND	ND	No exceedance
3/17/2014	Vibratory	Ebb	M	14:32	44.0	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	14:12	25.6	ND	ND	ND	ND	16	ND	ND	ND	ND	No exceedance
3/17/2014	Vibratory	Ebb	B	14:29	32.4	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	14:09	27.6	ND	ND	ND	ND	18	ND	ND	ND	ND	No exceedance
3/18/2014	Impact	Ebb	S	16:20	10.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	15:57											



Date	Driving Method	Tidal Cycle	Sample Depth ³	Upcurrent Samples ¹												Downcurrent Samples ²												Sample Status				
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzof(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB					Naphthalene	Benzof(a)pyrene		
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260					
(mm/dd/yyyy)	(Vibratory or Impact)	(Flood or Ebb)	(S, M, B)	(24:00)	(mg/L)	(ppb)												(24:00)	(mg/L)	(ppb)												(Exceedances and other observations)
4/14/2014	Impact	Ebb	B	17:03	134	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16:46	72.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 134 mg/L, 72.4 mg/L is not an exceedance		
4/15/2014	Impact	Flood	S	8:35	59.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	8:51	61.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
4/15/2014	Impact	Flood	M	8:31	100	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	8:48	86.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 100 mg/L, 86.8 mg/L is not an exceedance		
4/15/2014	Impact	Flood	B	8:29	60.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	8:46	87.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/16/2014	Impact	Flood	S	10:27	98.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	10:47	106	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 98.8 mg/L, 106 mg/L is not an exceedance		
4/16/2014	Impact	Flood	M	10:24	126	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	10:43	127	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 126 mg/L, 127 mg/L is not an exceedance		
4/16/2014	Impact	Flood	B	10:22	166	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	10:41	150	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 166 mg/L, 150 mg/L is not an exceedance		
4/17/2014	Impact	Flood	S	12:45	62.4	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	12:28	67.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
4/17/2014	Impact	Flood	M	12:42	86.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	12:25	69.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
4/17/2014	Impact	Flood	B	12:40	93.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	12:23	75.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/21/2014	Vibratory	Ebb	S	8:26	51.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	8:03	59.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
4/21/2014	Vibratory	Ebb	M	8:23	91.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	8:01	58.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
4/21/2014	Vibratory	Ebb	B	8:20	138	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	ND	7:59	59.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 138 mg/L, 59.2 mg/L is not an exceedance		
4/22/2014	Impact	Flood	S	14:36	45.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14:14	51.2	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No exceedance		
4/22/2014	Impact	Flood	M	14:33	57.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14:11	49.6	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No exceedance		
4/22/2014	Impact	Flood	B	14:30	54.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14:08	64.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
4/23/2014	Impact	Ebb	S	8:40	30.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	8:24	22.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
4/23/2014	Impact	Ebb	M	8:37	22.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	8:21	22.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
4/23/2014	Impact	Ebb	B	8:35	33.2	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	8:19	32.8	ND	ND	4.2	ND	15	ND	ND	ND	ND	ND	ND	No exceedance		
4/25/2014	Impact	Flood	S	9:23	19.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	9:08	24.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/25/2014	Impact	Flood	M	9:20	36.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	9:05	93.6	ND	ND	3.1	ND	14	ND	ND	ND	ND	ND	ND	No exceedance		
4/25/2014	Impact	Flood	B	9:18	68.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	9:04	112	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 68.0 mg/L, 112 mg/L is not an exceedance		
4/25/2014	Impact	Ebb	S	11:12	28.4	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	12:52	28.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/25/2014	Impact	Ebb	M	11:09	22.4	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	12:50	28.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
4/25/2014	Impact	Ebb	B	11:07	36.4	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	12:48	40.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Flood	S	10:38	15.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	10:12	19.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Flood	M	10:35	30.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	10:08	55.6	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Flood	B	10:31	39.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	10:04	71.6	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Ebb	S	11:17	16.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	11:39	25.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Ebb	M	11:14	15.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	11:35	17.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/26/2014	Vibratory	Ebb	B	11:10	44.8	ND	ND	3.5	ND	15	ND	ND	ND	ND	ND	ND	11:31	31.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/28/2014	Vibratory	Ebb	S	14:16	26.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	13:53	28.0	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/28/2014	Vibratory	Ebb	M	14:13	28.4	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	13:51	34.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
4/28/2014	Vibratory	Ebb	B	14:11	36.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	13:49	61.2	ND	ND	3.0	ND	14	ND	ND	ND	ND	ND	ND	No exceedance		
5/2/2014	Impact	Ebb	S	8:56	86.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND																



Date	Driving Method	Tidal Cycle	Sample Depth ²	Upcurrent Samples ¹												Downcurrent Samples ²												Sample Status				
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PCB					Naphthalene	Benzo(a)pyrene		
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260					
(mm/dd/yyyy)	(Vibratory or Impact)	(Flood or Ebb)	(S, M, B)	(24:00)	(mg/L)	(ppb)												(24:00)	(mg/L)	(ppb)												(Exceedances and other observations)
5/23/2014	Impact	Ebb	B	9:53	39.6	ND	ND	3.2	ND	14	ND	ND	ND	ND	ND	ND	9:36	38.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
5/27/2014	Vibratory	Ebb	S	13:10	26.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:58	28.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
5/27/2014	Vibratory	Ebb	B	13:08	38.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12:55	33.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
5/28/2014	Impact	Flood	S	9:20	20.4	ND	ND	3.4	ND	11	ND	ND	ND	ND	ND	ND	9:05	30.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	No exceedance		
5/28/2014	Impact	Flood	B	9:18	65.6	ND	ND	3.3	ND	10	ND	ND	ND	ND	ND	ND	9:03	47.6	ND	ND	3.3	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
5/29/2014	Impact	Flood	S	9:29	30.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9:15	30.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
5/29/2014	Impact	Flood	B	9:25	47.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	9:12	51.2	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
6/2/2014	Impact	Ebb	S	9:40	24.8	ND	ND	3.0	ND	11	ND	ND	ND	ND	ND	ND	9:26	30.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/2/2014	Impact	Ebb	B	9:37	34.0	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	9:23	42.8	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
6/2/2014	Impact	Flood	S	12:02	12.4	ND	ND	3.1	ND	11	ND	ND	ND	ND	ND	ND	11:46	13.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
6/2/2014	Impact	Flood	B	11:59	22.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	11:44	23.6	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
6/3/2014	Impact	Ebb	S	9:35	30.8	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	9:23	26.0	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
6/3/2014	Impact	Ebb	B	9:33	39.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	9:20	66.4	ND	ND	3.1	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/4/2014	Vibratory	Flood	S	15:18	7.20	ND	ND	3.3	ND	14	ND	ND	ND	ND	ND	ND	15:03	9.60	ND	ND	3.4	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
6/4/2014	Vibratory	Flood	B	15:16	195	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	15:01	20.0	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 195 mg/L, 20.0 mg/L is not an exceedance		
6/5/2014	Impact	Flood	S	13:50	10.4	ND	ND	3.0	ND	11	ND	ND	ND	ND	ND	ND	13:34	10.4	ND	ND	3.1	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/5/2014	Impact	Flood	B	13:46	215	ND	ND	3.4	ND	12	ND	ND	ND	ND	ND	ND	13:31	15.6	ND	ND	3.5	ND	12	ND	ND	ND	ND	ND	ND	Upcurrent TSS was 215 mg/L, 15.6 mg/L is not an exceedance		
6/9/2014	Vibratory	Ebb	S	15:51	10.4	ND	ND	3.8	ND	12	ND	ND	ND	ND	ND	ND	15:36	8.00	ND	ND	3.4	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/9/2014	Vibratory	Ebb	M	15:48	10.8	ND	ND	3.1	ND	12	ND	ND	ND	ND	ND	ND	15:34	8.80	ND	ND	3.4	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/9/2014	Vibratory	Ebb	B	15:46	19.2	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	15:32	14.4	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Flood	S	10:48	10.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	10:32	10.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Flood	M	10:45	30.8	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	10:29	20.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Flood	B	10:43	51.6	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	10:27	24.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Ebb	S	14:02	12.0	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	13:51	33.2	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Ebb	B	14:00	34.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	13:49	27.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Flood	S	17:43	15.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	17:32	15.6	ND	ND	ND	ND	18	ND	ND	ND	ND	ND	ND	No exceedance		
6/11/2014	Impact	Flood	B	17:40	18.4	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	17:31	15.6	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/13/2014	Impact	Flood	S	8:30	54.8	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	8:20	26.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/13/2014	Impact	Flood	B	8:28	16.8	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	8:18	64.4	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Ebb	S	11:03	34.0	ND	ND	3.4	ND	14	ND	ND	ND	ND	ND	ND	10:49	29.6	ND	ND	3.0	ND	11	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Ebb	M	11:02	44.0	ND	ND	3.4	ND	11	ND	ND	ND	ND	ND	ND	10:47	43.2	ND	ND	3.0	ND	ND	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Ebb	B	11:00	43.6	ND	ND	3.6	ND	11	ND	ND	ND	ND	ND	ND	10:46	50.5	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Flood	S	11:41	19.2	ND	ND	3.5	ND	12	ND	ND	ND	ND	ND	ND	11:27	25.6	ND	ND	3.2	ND	12	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Flood	M	11:39	26.8	ND	ND	3.5	ND	12	ND	ND	ND	ND	ND	ND	11:26	39.2	ND	ND	3.1	ND	13	ND	ND	ND	ND	ND	ND	No exceedance		
6/17/2014	Impact	Flood	B	11:37	52.8	ND	ND	3.0	ND	12	ND	ND	ND	ND	ND	ND	11:24	41.6	ND	ND	3.3	ND	16	ND	ND	ND						

New NY Bridge Project



Dat	Driving Method	Tidal Cycle	Sample Depth ¹	Upcurrent												Downcurrent																
				Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PC				Naphthalene	Benzo(a)pyrene	Sample Time	Total Suspended Solids	Mercury	Nickel	Copper	Lead	Zinc	PC					Naphthalene	Benzo(a)pyrene		
											Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260										Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260					
(mm/dd/yyyy)	(Vibratory or Impact)	(Flood or Ebb)	(S, M, B)	(24:00)	(mg/L)	((24:00)	(mg/L)	((Exceedances and other observations)
8/7/2014	Impact	Ebb	S	10:50	6	N	ND	N	N	ND	N	N	ND	N	ND	N	10:32	5.5	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/7/2014	Impact	Ebb	M	10:48	5.	N	ND	N	N	ND	N	N	ND	N	ND	0.1 ⁵	10:30	5.3	N	N	ND	N	6.	ND	N	N	ND	N	N	Upcurrent Benzo(a)Pyrene was 0.1 ppb, ND is not an exceedance.		
8/7/2014	Impact	Ebb	B	10:46	13.5	N	ND	N	N	7.0	N	N	ND	N	ND	0.2 ⁵	10:28	9	N	N	ND	N	9.	ND	N	N	ND	N	N	Upcurrent Benzo(a)Pyrene was 0.2 ppb, ND is not an exceedance.		
8/9/2014	Vibratory	Flood	S	9:22	10.2	N	ND	N	N	6.7	N	N	ND	N	ND	0.1 ⁵	8:57	24.8	N	N	ND	1.	N	ND	N	N	ND	N	0.1 ⁵	Upcurrent Benzo(a)Pyrene was 0.1 ppb, 0.1 ppb is not an exceedance.		
8/9/2014	Vibratory	Flood	M	9:20	25.2	N	ND	N	N	6.9	N	N	ND	N	ND	0.1 ⁵	8:55	33.8	N	N	ND	1.	N	ND	N	N	ND	N	0.1 ⁵	Upcurrent Benzo(a)Pyrene was 0.1 ppb, 0.1 ppb is not an exceedance.		
8/9/2014	Vibratory	Flood	B	9:17	76.4	N	ND	N	N	6.8	N	N	ND	N	ND	0.1 ⁵	8:53	96	N	N	ND	N	N	ND	N	N	ND	N	N	Upcurrent Benzo(a)Pyrene was 0.1 ppb, ND is not an exceedance.		
8/11/2014	Vibratory	Ebb	S	15:06	10.4	N	ND	N	N	ND	N	N	ND	N	ND	N	14:51	11.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/11/2014	Vibratory	Ebb	M	15:04	11.2	N	ND	N	N	ND	N	N	ND	N	ND	N	14:49	25.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/11/2014	Vibratory	Ebb	B	15:02	22.6	N	ND	N	N	ND	N	N	ND	N	ND	N	14:46	45.4	N	N	ND	N	10	ND	N	N	ND	N	N	No Exceedance		
8/12/2014	Impact	Flood	S	12:47	20.4	N	ND	N	N	ND	N	N	ND	N	ND	N	12:20	47.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/12/2014	Impact	Flood	M	12:44	47.6	N	ND	N	N	ND	N	N	ND	N	ND	N	12:18	97.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/12/2014	Impact	Flood	B	12:40	132	N	ND	N	N	ND	N	N	ND	N	ND	N	12:16	127	N	N	ND	N	N	ND	N	N	ND	N	N	Upcurrent TSS was 132 mg/L, 127 mg/L is not an exceedance.		
8/13/2014	Impact	Ebb	S	8:46	25.4	N	ND	N	N	ND	N	N	ND	N	ND	N	8:29	55.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/13/2014	Impact	Ebb	M	8:44	29.6	N	ND	N	N	ND	N	N	ND	N	ND	N	8:27	71.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/13/2014	Impact	Ebb	B	8:41	42.4	N	ND	N	N	ND	N	N	ND	N	ND	N	8:25	78	N	N	6.9 ⁴	6.	N	ND	N	N	ND	N	N	Upcurrent Copper sample was ND, 6.9 ppb is an exceedance.		
8/14/2014	Vibratory	Flood	S	13:23	13.8	N	ND	N	N	ND	N	N	ND	N	ND	N	13:10	51	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/14/2014	Vibratory	Flood	B	13:21	148	N	ND	N	N	ND	N	N	ND	N	ND	N	13:08	72	N	N	ND	N	N	ND	N	N	ND	N	N	Upcurrent TSS was 148 mg/L, 72 mg/L is not an exceedance.		
8/19/2014	Impact	Flood	S	15:26	25	N	ND	N	N	ND	N	N	ND	N	ND	N	15:13	9.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/19/2014	Impact	Flood	M	15:24	4.	N	ND	N	N	ND	N	N	ND	N	ND	N	15:11	5.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/19/2014	Impact	Flood	B	15:22	5.	N	ND	N	N	ND	N	N	ND	N	ND	N	15:09	5	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/20/2014	Impact	Ebb	S	10:14	4.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:59	5.4	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/20/2014	Impact	Ebb	M	10:12	6.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:57	6.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/20/2014	Impact	Ebb	B	10:11	21.6	N	ND	N	N	ND	N	N	ND	N	ND	N	9:55	12.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/21/2014	Impact	Flood	S	9:32	4.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:16	4.2	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/21/2014	Impact	Flood	M	9:30	6.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:14	ND	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/21/2014	Impact	Flood	B	9:28	14.4	N	ND	N	N	ND	N	N	ND	N	ND	N	9:12	9	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/25/2014	Impact	Ebb	S	13:30	4.	N	ND	3.	N	ND	N	N	ND	N	ND	N	13:12	ND	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/25/2014	Impact	Ebb	M	13:26	N	N	ND	N	N	ND	N	N	ND	N	ND	N	13:09	5.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/25/2014	Impact	Ebb	B	13:24	6.	N	ND	N	N	ND	N	N	ND	N	ND	N	13:07	4.8	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/27/2014	Impact	Flood	S	9:57	6.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:43	4.4	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/27/2014	Impact	Flood	M	9:55	4.	N	ND	N	N	ND	N	N	ND	N	ND	N	9:41	4	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		
8/27/2014	Impact	Flood	B	9:54	22.2	N	ND	N	N	ND	N	N	ND	N	ND	N	9:39	7.6	N	N	ND	N	N	ND	N	N	ND	N	N	No Exceedance		

Notes:

¹ Samples collected at a location up current of the source where the water quality effects of the project are no longer discernible

² Samples collected at the edge of the 500 ft mixing zone

³ S = Near Surface, M = Mid-Depth, B = Near Bottom

⁴ Reported value exceeds the Water Quality Standard as stated in Condition 61 of NYSDEC Permit Facility ID 3-9903-00043/00012-14

⁵ Upcurrent (ambient) concentration exceeds the Water Quality Standard, Downcurrent concentration is less than 30% over background

ND = Not Detected, sample value below detection limit based on the New York State Department of Environmental Conservation (NYSDEC) Permit Facility ID 3-9903-00043/00012-14 NV = Sample not valid and considered unrepresentative of construction activity