

Appendix D

Field Documentation

D-02 – Surface Sediment Sampling Field Forms

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Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 301
 Subcontractor/Crew: Matt Martin > HDR Time: 1500
Ed Brandt Water Depth: 2.5'
 Tide: Mid-high
 Weather: Humid - 90° - Sunny

Bulk Sediment Sample ID: GC-SD301-0.0-0.5 Grab Penetration 0.5' Sample Time: 1500
 Number of Sampling Attempts: 1
 Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP _____ MS/MSD _____

Floating Debris (describe): None
 Water Color: brown
 Clarity: clear
 Turbidity: clear
 Sheen: none observed

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input checked="" type="checkbox"/>	
AVS/SEM <input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
<u>PCB Cons</u> <input checked="" type="checkbox"/>	

+ Archive Sample

SED SAMPLE DESCRIPTION

Color: _____ Moisture: Dry SI. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose
 Other Descriptors: SM - silty sand - black (10YR 2/1) - pose -
organically plant material + plastic, wet, trace gravel
(conglomerate)

COMMENTS/OBSERVATIONS

Sampler Signature/Date

M. Murphy 6/23/10

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: GC-SD302-0.0-0.5
 Subcontractor/Crew: Matt > HDR Time: 1430
Cesey Water Depth: 5.0
 Tide: Mid-tide
 Weather: P. Cloudy

Bulk Sediment Sample ID: GC-SD302-0.0-0.5 Grab Penetration 0.5 Sample Time: 1430

Number of Sampling Attempts: 11

Problems During Collection: Problem w/ grab sampler pin / trigger

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): NONE

Water Color: Brown

Clarity:

Turbidity:

Sheen: slight sheen brought up w/ sediment

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs

☒

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C

TCL SVOCs

☒

8 oz Amber, wide mouth glass; protect from light, 4°C

TCL Pesticides

☒

8 oz wide mouth glass; 4°C

TCL PCBs

☒

8 oz wide mouth glass; 4°C

TAL Metals + Hg

☒

8 oz wide mouth glass; 4°C

Cyanide

☒

8 oz wide mouth glass; 4°C

TOC

☒

4 oz wide mouth glass; 4°C

Grainsize

☒

AVS/SEM

☒

4 oz wide mouth glass; no headspace; 4°C

Toxicity

☒

3 x 1-gallon HDPE buckets; 4°C

+ archive sample

SED SAMPLE DESCRIPTION

Color:

Black - 10YR 2/1

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules w/ coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

OL - 10YR 2/1 - organic silt - low plasticity trace sand / silt
sheen noted on surface of sediment
septic/organic odor - fibrous organic matter

COMMENTS/OBSERVATIONS

PID 2.5 ppm

Sampler Signature/Date

M. J. 3/17/10

Reviewed by

[Signature]

Date

3/19/10

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>R. Clennan</u>	Station ID: <u>GC-SD-304</u>		
Subcontractor/Crew: <u>HDR - Steve, Don</u>	Time: <u>1530</u> / <u>6/17/10</u>		
	Water Depth: <u>7 ft. 2 in</u>		
	Tide: <u>High</u>		
	Weather: <u>partly cloudy, breeze, mid 70's</u>		
Bulk Sediment Sample ID: <u>GC-SD304-00 0-00.5</u>		Grab Penetration <u>0.5</u> ft	Sample Time: <u>1530</u>
Number of Sampling Attempts: <u>1</u>			
Problems During Collection: <u>None</u>			
QC SAMPLE DATA			
QA/QC Sample IDs: <div style="display: flex; justify-content: space-between;"> <u>NONE</u> DUP _____ MS/MSD _____ </div>			
Floating Debris (describe): <u>None</u>			
Water Color: <u>Inky black</u>			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs TCL SVOCs TCL Pesticides TCL PCBs TAL Metals + Hg Cyanide TOC Grainsize AVS/SEM Toxicity	<div style="display: flex; flex-direction: column; align-items: center;"> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> </div>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C 8 oz Amber, wide mouth glass; protect from light, 4°C 8 oz wide mouth glass; 4°C 8 oz wide mouth glass; 4°C 8 oz wide mouth glass; 4°C 8 oz wide mouth glass; 4°C 4 oz wide mouth glass; 4°C 4 oz wide mouth glass; no headspace; 4°C 3 x 1-gallon HDPE buckets; 4°C	
<u>+ Archive sample</u>			
SED SAMPLE DESCRIPTION			
Color: <u>7.5Y 2.5/1 black</u>		Moisture: Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input type="checkbox"/> <u>Wet</u> <input checked="" type="checkbox"/>	
Major Description:		Clay <input type="checkbox"/> Silty Clay <input type="checkbox"/> <u>Silt</u> <input checked="" type="checkbox"/> Clayey Sand <input type="checkbox"/> Sandy Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravelly Sand <input type="checkbox"/> Gravel <input type="checkbox"/> Grvly Clay <input type="checkbox"/>	
Minor Description:		<u>Organic</u> <input checked="" type="checkbox"/> Mottled <input type="checkbox"/> Plastic <input type="checkbox"/> M. Plastic <input type="checkbox"/> Nodules <input type="checkbox"/> v f coarse-grained <input type="checkbox"/> Ang / SA / SR / Rounded <input type="checkbox"/>	
Other Descriptors:		<u>Well / poorly / mod - sorted</u> <input type="checkbox"/> <u>well / poorly / mod - cemented</u> <input type="checkbox"/> <u>Loose</u> <input type="checkbox"/>	
<u>UNC odor</u> <u>No visible debris</u> <u>USCS: OL</u>			
COMMENTS/OBSERVATIONS			
Sampler Signature/Date: <u>ROR OL 6/17/10</u>			

Reviewed by [Signature] Date 7-19-10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Michael Murphy</u>		Station ID: <u>305</u>	
		Time: <u>1530</u>	
Subcontractor/Crew: <u>Casey > HDR</u> <u>Moff</u>		Water Depth: <u>9.5'</u>	
		Tide: <u>High</u>	
		Weather: <u>P. Cloudy - 80°-low wind</u>	
Bulk Sediment Sample ID: <u>GC-SD305-0.0-0.5</u>		Grab Penetration <u>7"</u>	Sample Time: <u>1530</u>
Number of Sampling Attempts: <u>1111 = 4</u>			
Problems During Collection: <u>water in grab sampler 1st 3 attempts/deployments</u>			
QC SAMPLE DATA			
QA/QC Sample IDs:			
<u>NONE</u> DUP _____, MS/MSD _____			
Floating Debris (describe): <u>None</u>			
Water Color: <u>brown</u>			
Clarity: <u>None</u>			
Turbidity: <u>unable to see to bottom</u>			
Sheen: <u>Floating, sheen nearby</u>			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
<u>+ Archive Sample</u>			
SED SAMPLE DESCRIPTION			
Color:		Moisture: Dry St. Moist Moist V. Moist <u>Wet</u>	
Major Description:		Clay Silty Clay <u>Silt</u> Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay	
Minor Description:		<u>Organic</u> Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded	
		<u>Well / poorly / mod - sorted</u> <u>well / poorly / mod - cemented</u> <u>Loose</u>	
Other Descriptors: <u>DL - Organic silt - 10YR 2/1 - organic/septic like odor</u> <u>fibrous plant material - leaves + grasses</u>			
COMMENTS/OBSERVATIONS			
<u>PID 6-8</u>			
Sampler Signature/Date: <u>[Signature]</u> <u>6/17/10</u>			

Reviewed by [Signature]

Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Michael Murphy</u>		Station ID: <u>306</u>	
		Time: <u>1640</u>	
Subcontractor/Crew: <u>Cesey > HDR</u> <u>Matt</u>		Water Depth: <u>8.5</u>	
		Tide: <u>High</u>	
		Weather: <u>P. Cloudy 80° low hum</u>	
Bulk Sediment Sample ID: <u>GC-SD306-0.0-as</u>		Grab Penetration: <u>6"</u>	Sample Time: <u>1640</u>
Number of Sampling Attempts: <u>III => 3</u>			
Problems During Collection: <u>none</u>			
QC SAMPLE DATA			
QA/QC Sample IDs:			
<u>NONE</u> DUP _____, MS/MSD _____			
Floating Debris (describe): <u>NONE</u>			
Water Color: <u>brown</u>			
Clarity: <u>cloudy - crush to see to bottom</u>			
Turbidity: <u>floppy solids</u>			
Sheen: <u>sheen noted on sediment surface</u>			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
SED SAMPLE DESCRIPTION			
Color: <u>Black</u>	Moisture: Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input type="checkbox"/> <u>Wet</u>		
Major Description: <u>Clay Silty Clay</u> <u>Silt</u> Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay			
Minor Description: <u>Organic</u> Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded			
Well / poorly / mod - sorted well / poorly / mod - cemented Loose			
Other Descriptors: <u>OL - Organic silt - 10% RZ, (black) - well sorted/poorly</u> <u>graded - 10% gravelly mix (silt/sand) fibrous plant material</u> <u>strong septic like odor</u>			
COMMENTS/OBSERVATIONS			
<u>- Sheen noted on sediment</u>			
<u>- Pic not collected at this location</u>			
<u>PID 2.2 ppm</u>			
Sampler Signature/Date: <u>[Signature]</u> <u>6/17/10 1640</u>			

Reviewed by

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Rachel Ciennon Station ID: GC-SD306
 Subcontractor/Crew: Ed Brandt - HDR Time: 1150
Matt Pappalardo - HDR Water Depth: N/A
 Tide: ?
 Weather: Sunny, low 90s

Bulk Sediment Sample ID: GCSD306-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 1200

Number of Sampling Attempts: _____

Problems During Collection: _____

QC SAMPLE DATA

QA/QC Sample IDs: _____

NONE

DUP _____

MS/MSD _____

Floating Debris (describe): _____

Water Color: _____

Clarity: _____

Turbidity: _____

Sheen: _____

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color: Black 10YR 2/1 Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose
 Other Descriptors: Black 10YR 2/1 silt (organic) trace to little fine sand,
strong septic-like odor

COMMENTS/OBSERVATIONS

Sampler Signature/Date

[Signature] 6/24/10

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Clannon

Station ID: GC-SD-307A

Time: 1650 / 10/17/10

Subcontractor/Crew: ADR - Steve, Don

Water Depth: 6.0 ft

Tide: _____

Weather: partly cloudy, mid 70s

Bulk Sediment Sample ID: GC-SD307A-00.0-005

Grab Penetration 0.5 ft

Sample Time: 1650

Number of Sampling Attempts: 1

Problems During Collection: _____

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP _____

MS/MSD _____

Floating Debris (describe): None

Water Color: Inky black/gray

Clarity: moderate

Turbidity: moderately turbid

Sheen: None

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
TCL SVOCs
TCL Pesticides
TCL PCBs
TAL Metals + Hg
Cyanide
TOC
Grainsize
AVS/SEM
Toxicity

☒
☒
☒
☒
☒
☒
☒
☒
☒
☒

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
8 oz Amber, wide mouth glass; protect from light, 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
4 oz wide mouth glass; 4°C
4 oz wide mouth glass; 4°C
4 oz wide mouth glass; no headspace; 4°C
3 x 1-gallon HDPE buckets; 4°C

+ PCB Congeners

+ Archive

SED SAMPLE DESCRIPTION

Color: 7.54 25/1 black

Moisture: Dry ☐ Sl. Moist ☐ Moist ☐ V. Moist ☒ Wet

Major Description: Clay ☐ Silty Clay ☐ Silt ☐ Clayey Sand ☐ Sandy Clay ☐ Sand ☐ Gravelly Sand ☐ Gravel ☐ Grvly Clay ☐

Minor Description: Organic ☐ Mottled ☐ Plastic ☐ M. Plastic ☐ Nodules ☐ v f coarse-grained ☐ Ang / SA / SR / Rounded ☐

Well / poorly / mod - sorted ☐ well / poorly / mod - cemented ☐ Loose ☐

Other Descriptors: UNC odor

Few organics (twigs, leaf matter);
Trace fine-med sand

COMMENTS/OBSERVATIONS

Sampler Signature/Date

R. Clannon

6/17/10

Reviewed by

T. Khan

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Mennon

Station ID: GC-SD307B

Time: 6/18/10 1555

Subcontractor/Crew: HDR - S. Niero

Water Depth: 7.0 ft

D. Henshaw

Tide: high tide 1400, lowering

Weather: Sunny, v. light breeze, High 80s

Bulk Sediment Sample ID: GC-SD307B-00.0-005 Grab Penetration 0.5 ft Sample Time: 1555

Number of Sampling Attempts: 1/1 (Sampled on 7th attempt - parent sample -

Problems During Collection: None to add deployments necessary to achieve recovery for toxic sample

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): None

Water Color: Inky Black

Clarity: moderately clear

Turbidity: very turbid / murky

Sheen: none evident

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs	<input checked="" type="checkbox"/>
TCL SVOCs	<input checked="" type="checkbox"/>
TCL Pesticides	<input checked="" type="checkbox"/>
TCL PCBs	<input checked="" type="checkbox"/>
TAL Metals + Hg	<input checked="" type="checkbox"/>
Cyanide	<input checked="" type="checkbox"/>
TOC	<input checked="" type="checkbox"/>
Grainsize	<input checked="" type="checkbox"/>
AVS/SEM	<input checked="" type="checkbox"/>
Toxicity	<input checked="" type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

+ PCB Congener
 and Archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules vf. f coarse-grained Ang / SA / SR / Rounded

Well poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: Black (254 2.5/1) silt, trace vf. f sand trace to little organics, no odor faint UNC odor; (OL) PID: 1.1 ppm

COMMENTS/OBSERVATIONS

Sampler Signature/Date

R. Mennon 6/18/10

Reviewed by

R. Mennon

Date

7/19/10

** VOC Only **

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York	
Samplers/Inspectors: <u>Michael Murphy</u>	Station ID: <u>307B (VOC only)</u>
Subcontractor/Crew: <u>Matt</u> <u>Ed</u>	Time: <u>1420 6/23/10</u>
	Water Depth: <u>9.0'</u>
	Tide: <u>Mid - tide</u>
	Weather: <u>Sunny - 90°</u>
Bulk Sediment Sample ID: <u>GC-SD 307B-0.0.0.5</u>	Grab Penetration <u>0.5</u> ft Sample Time: <u>1420</u>
Number of Sampling Attempts: <u>(1)</u>	
Problems During Collection: <u>None</u>	
QC SAMPLE DATA	
QA/QC Sample IDs: <u>NONE</u>	DUP _____ MS/MSD _____
Floating Debris (describe): _____	
Water Color: _____	
Clarity: _____	
Turbidity: _____	
Sheen: <u>- slight sheen (on)</u>	
Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input type="checkbox"/>	
AVS/SEM <input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
SED SAMPLE DESCRIPTION	
Color: <u>Black</u>	Moisture: Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input checked="" type="checkbox"/> Wet
Major Description: <u>Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay</u>	
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules <u>vi</u> coarse-grained Ang / SA / SR / Rounded</u>	
<u>Well / poorly / mod - sorted well / poorly / mod - cemented Loose</u>	
Other Descriptors: <u>- no sheen noted on sediment surface</u> <u>- slight sheen noted on H₂O in vials</u>	
COMMENTS/OBSERVATIONS	
<u>- down stream of outfall</u>	
Sampler Signature/Date: <u>[Signature] 6/23/10</u>	

Reviewed by [Signature]

Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 308A
 Subcontractor/Crew: Matt Martin & HDR Time: 920
Ed Brant Water Depth: 0'
 Tide: Mid - low
 Weather: Sunny 85° - humid

Bulk Sediment Sample ID: GC-SD308A-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 950
 Number of Sampling Attempts: 0/1
 Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs: NONE MM 7/19/10 DUP DUP-01, MS/MSD _____

Floating Debris (describe): organic matter
 Water Color: brown
 Clarity: clear / brown
 Turbidity: low
 Sheen: none observed

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grain size
 AVS/SEM
 Toxicity
 PCB Conc

☒
☒
☒
☒
☒
☒
☒
☒
☒
☒
☒

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

+ archive

SED SAMPLE DESCRIPTION

Color: _____ Moisture: _____ Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules vf. coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: SM - Silty sand - reddish brown - few gravel (medium)
moist/wet - broken glass fragments - no odor

COMMENTS/OBSERVATIONS

Sampler Signature/Date

[Signature] 6/23/10

Reviewed by

[Signature]

Date

7/19/10

Samplers/Inspectors: Michael Murphy Station ID: 308B
 Subcontractor/Crew: Matt Time: 1000 6/23/10
Ed Water Depth: 3'
 Tide: HW → low
 Weather: Sunny - 85° - mostly clear

Number of Sampling Attempts: 1
Problems During Collection: NONE

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Water Color: Brown / Clay

Clarity: *Clear*

Turbidity: Clear / Cloud

Sheen:

Sample Analytical Parameters:

TCL VOCs

TCL SVOCs

TCL Pesticides

TCL PCBs

TAL Metals + Hg

Cyanide

TOC

Grainsize

AVS/SEM

Toxicity

PCB Case

Bottleware/Preservation:

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C

8 oz Amber, wide mouth glass; protect from light, 4 °C

8 oz wide mouth glass: 4°C

8 oz wide mouth glass; 4 °C

8 oz wide mouth glass; 4 °C

8 oz wide mouth glass: 4 °C

4 oz wide mouth glass; 4 °C

4 oz wide mouth glass; no headspace; 4 °C

3 x 1-gallon HDPE buckets; 4 °C

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M.Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod / sorted well / poorly / mod - cemented Loose

Other Descriptors:

01- Black (10YR 2/1) organic silt - clay - trace

about organic matter, fine gravel (sub angular), homogeneous

COMMENTS/OBSERVATIONS

Sampler Signature/Date

Reviewed by

Date _____

6/23/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 309
 Subcontractor/Crew: Matt > HDR Time: 1015
Casey Water Depth: 13.1
 Tide: High → M.D
 Weather: Sunny - 80° - low humid

Bulk Sediment Sample ID: GC-SD 309-0.0-0.15 Grab Penetration 7" Sample Time: 1015

Number of Sampling Attempts: 111

Problems During Collection: - none

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): lake bottle, organic debris

Water Color: brown

Clarity: water is clear in pan - cloudy - visible to see canal floor

Turbidity: slight turbid

Sheen: No sheen observed

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs

☒

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C

TCL SVOCs

☒

8 oz Amber, wide mouth glass; protect from light, 4°C

TCL Pesticides

☒

8 oz wide mouth glass; 4°C

TCL PCBs

☒

8 oz wide mouth glass; 4°C

TAL Metals + Hg

☒

8 oz wide mouth glass; 4°C

Cyanide

☒

8 oz wide mouth glass; 4°C

TOC

☒

4 oz wide mouth glass; 4°C

Grainsize

☒

4 oz wide mouth glass; no headspace; 4°C

AVS/SEM

☒

3 x 1-gallon HDPE buckets; 4°C

Toxicity

☒

102 wide mouth 4°C

PCB congeners

☒

+ archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry SI. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

OL - organic silt - fine plastic - homogeneous
fine gravel (65%) - wet

COMMENTS/OBSERVATIONS

PID headspace - 1.1

Sampler Signature/Date

[Signature]

6/18/10 1015

Reviewed by

[Signature]

Date

7/14/10

** VOC Only **

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Michael Murphy</u>		Station ID: <u>309 (VOC only)</u>	
Subcontractor/Crew: <u>Matt > HDR</u> <u>ED</u>		Time: <u>1400</u>	
		Water Depth: <u>8.7</u>	
		Tide: <u>mid-tide</u>	
		Weather: <u>Sunny 90°</u>	
Bulk Sediment Sample ID: <u>GC-SD309-0.0-0.5</u>		Grab Penetration	Sample Time: <u>1400</u>
Number of Sampling Attempts: <u>①</u>			
Problems During Collection: <u>None</u>			
QC SAMPLE DATA			
QA/QC Sample IDs: <u>NONE</u> DUP _____ MS/MSD _____			
Floating Debris (describe): <u>Organic matter / garbage</u>			
Water Color: _____			
Clarity: _____			
Turbidity: _____			
Sheen: _____			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grain size	<input type="checkbox"/>		
AVS/SEM	<input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
SED SAMPLE DESCRIPTION			
Color: <u>Black</u>	Moisture: Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input checked="" type="checkbox"/> Wet		
Major Description: <u>Clay Silty Clay</u>	<u>Clayey Sand</u> <u>Sandy Clay</u> <u>Sand</u> <u>Gravelly Sand</u> <u>Gravel</u> <u>Grvly Clay</u>		
Minor Description: <u>Organic Mottled Plastic M. Plastic</u>	<u>Nodules</u> <u>coarse-grained</u> <u>Ang / SA / SR / Rounded</u>		
<u>Well / poorly / mod - sorted</u> <u>well / poorly / mod - cemented</u> <u>Loose</u>			
Other Descriptors: <u>- no sheen noted</u> <u>- collected along side bridge</u>			
COMMENTS/OBSERVATIONS			
<u>RIA 0.0</u>			
Sampler Signature/Date: <u>[Signature]</u> <u>6/23/10</u>			

Reviewed by [Signature]

Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	<u>Rachel Clemon - CH2M Hill</u>	Station ID:	<u>GC-SD310</u>
		Time:	<u>0920</u>
Subcontractor/Crew:	<u>Math Papula - HDR</u>	Water Depth:	<u>5.6 ft</u>
	<u>Ed Brandt - HDR</u>	Tide:	<u>high-falling</u>
		Weather:	<u>mostly sunny, high 80s</u>
Bulk Sediment Sample ID:	<u>GC-SD310-0.0-0.5</u>	Grab Penetration	<u>0.5</u> ft
		Sample Time:	<u>0950</u>
Number of Sampling Attempts:	<u>6 deployments to achieve volume required for toxicology sample</u>		
Problems During Collection:	<u>None</u>		
QC SAMPLE DATA			
QA/QC Sample IDs:	<div style="display: flex; justify-content: space-between;"> <u>NONE</u> DUP _____ MS/MSD _____ </div>		
Floating Debris (describe):			
Water Color:			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:	Bottleware/Preservation:		
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
<u>AB Consener</u>	<input checked="" type="checkbox"/>		
SED SAMPLE DESCRIPTION			
Color:	<u>Black 10YR2/1</u>		
Major Description:	Clay Silty Clay <u>(Silt)</u> Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay		
Minor Description:	<u>Organic</u> Mottled Plastic M.Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded		
Other Descriptors:	<u>Well / poorly / mod - sorted well / poorly / mod - cemented (Loose)</u> <u>Organic S.H (10YR2/1) trace to little fine sand</u> <u>Some organics (algae, leaves debris (plastic)), for +</u> <u>Septic PUNC odor.</u>		
COMMENTS/OBSERVATIONS			
<u>PID: 1.7 ppm</u>			
Sampler Signature/Date: <u>[Signature] 6/18/10</u>			

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 311
 Subcontractor/Crew: Mott & HDR Time: 1100
 Water Depth: 5.4'
 Tide: Mid-Low
 Weather: Sunny - 80° - mod Humidity

Bulk Sediment Sample ID: GC-SD311-0.0-0.15 Grab Penetration 0.15 ft Sample Time: 1105

Number of Sampling Attempts: 1

Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): None

Water Color: Clear/none - brown

Clarity: Clear

Turbidity: Clear

Sheen: none noted

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

GC - Organic silt - low pushback -
strong septic like odor, sheen noted on sediment surface

COMMENTS/OBSERVATIONS

PID - 0.10

Sampler Signature/Date

[Signature]
6/23/10

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 312
 Subcontractor/Crew: Mett > HDR Time: 1140
Ed Water Depth: 2.6
 Tide: low - mid
 Weather: Sunny - 80° - mod humid

Bulk Sediment Sample ID: GC-SD312-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 1140

Number of Sampling Attempts: 1

Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): Garbage + Floating organic matter

Water Color: brown

Clarity: clear

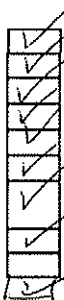
Turbidity: none observed

Sheen: none observed

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity



3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

PCB congeners

+ archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry SI. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

OL - Organic silt - black (10YR 2/1) - trace organic matter (fibers) - wet strong organic odor, non plastic homogeneous, v. soft, loose, poorly sorted / in plastic

COMMENTS/OBSERVATIONS

PBD - 0.5

Sampler Signature/Date

[Signature]

6/23/10

Reviewed by

[Signature]

Date

7/19/2010

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>R. Menon</u>		Station ID: <u>SED-30-313</u>	
Subcontractor/Crew: <u>HDR: Steve Neri, Don Henshaw</u>		Time: <u>10:20 AM</u> Sample Time: <u>10:30 AM</u>	
		Water Depth: <u>6.0' SCA; 7.2" when anchored out</u>	
		Tide: <u>low</u>	
		Weather: <u>Sunny, clear, high 70s</u>	
Bulk Sediment Sample ID: <u>GC-SED313-00.0-005</u>		Grab Penetration: <u>0.5</u> ft	Sample Time: <u>11</u>
Number of Sampling Attempts: _____			
Problems During Collection: <u>See notes below; several attempts made @ scraped location only recovered water and rocks, moved to just inside turning basin mouth for collection</u>			
QC SAMPLE DATA			
QA/QC Sample IDs: <u>NONE</u> <u>DUP</u> <u>✓ (R) No dup collected, MS/MSD</u>			
Floating Debris (describe): <u>None</u>			
Water Color: <u>clear to translucent, inkly black</u>			
Clarity: <u>moderately clear</u>			
Turbidity: <u>low to moderate</u>			
Sheen: <u>Yes; when sed. disturbed and ponar brought up</u>			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
SED SAMPLE DESCRIPTION			
Color: <u>2.54 25/1</u>	Moisture: <u>Dry</u> <u>Sl. Moist</u> <u>Moist</u> <u>V. Moist</u> <u>(Wet)</u>		
Major Description: <u>Clay Silty Clay (Silt)</u>	<u>Clayey Sand</u> <u>Sandy Clay</u> <u>Sand</u> <u>Gravelly Sand</u> <u>Gravel</u> <u>Grly Clay</u>		
Minor Description: <u>Organic</u>	<u>Mottled Plastic</u> <u>M. Plastic</u> <u>Nodules</u> <u>vf f coarse-grained</u> <u>Ang / SA / SR / Rounded</u>		
Other Descriptors: <u>Well / poorly / mod - sorted</u>	<u>well / poorly / mod - cemented</u> <u>Loose</u>		
<u>PHC-like odor (moderate)</u>			
<u>PID Rdg: 12.0 ppm on % moisture sample</u>			
<u>2.54 25/1 Black silt, trace f-m sand, trace organics, well sorted</u>			
<u>USCS: OL</u>			
COMMENTS/OBSERVATIONS			
<u>1st Attempt - No Recovery</u>			
<u>2nd Att. - Few Rock fragments</u>			
<u>3rd Att. - Rock fragments</u>			
<u>4th Attempt - (new loc.) - all water</u>			
<u>5th Attempt - rocks</u>			
<u>Attempts: 11/1 - Attempt 9, just inside mouth of turning basin, achieved acceptable recovery</u>			
<u>PID reading in sample 12.0; Sheen on water appeared when ponar first brought up</u>			
Sampler Signature/Date: _____			

Reviewed by [Signature]

Date 7/19/2010

* VOC only *

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York	
Samplers/Inspectors: <u>Michael Murphy</u>	Station ID: <u>313 (VOC only)</u>
Subcontractor/Crew: <u>Matt > HDR</u> <u>EO</u>	Time: <u>1305 7/19/10</u>
	Water Depth: <u>4.9'</u>
	Tide: <u>Mid Tide</u>
	Weather: <u>Sunny 90°</u>
Bulk Sediment Sample ID: <u>GC-SD 313-0.0-0.5</u>	Grab Penetration <u>0.5</u> ft Sample Time: <u>1305</u>
Number of Sampling Attempts: <u>①</u>	
Problems During Collection: <u>None</u>	
QC SAMPLE DATA	
QA/QC Sample IDs: <u>NONE</u>	DUP _____ MS/MSD _____
Floating Debris (describe): _____	
Water Color: _____	
Clarity: _____	
Turbidity: _____	
Sheen: <u>tan on water upon retrieval</u>	
Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides	8 oz wide mouth glass; 4°C
TCL PCBs	8 oz wide mouth glass; 4°C
TAL Metals + Hg	8 oz wide mouth glass; 4°C
Cyanide	8 oz wide mouth glass; 4°C
TOC	4 oz wide mouth glass; 4°C
Grainsize	
AVS/SEM	4 oz wide mouth glass; no headspace; 4°C
Toxicity	3 x 1-gallon HDPE buckets; 4°C
SED SAMPLE DESCRIPTION	
Color: <u>Black</u>	Moisture: Dry SI. Moist Moist V. Moist <u>Wet</u>
Major Description: <u>Clay Silty Clay</u> <u>Silt</u> Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay	
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules</u> <u>①</u> coarse-grained Ang / SA / SR / Rounded	
Other Descriptors: <u>Well</u> poorly / mod - sorted well <u>poorly</u> / mod - cemented <u>loose</u>	
Other Descriptors: <u>fibrous organic matter</u>	
COMMENTS/OBSERVATIONS	
<u>* re-collect for VOCs only *</u>	
Sampler Signature/Date: <u>[Signature]</u> <u>6/23/10</u>	

Reviewed by [Signature]

Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Michael Murphy</u>		Station ID: <u>314</u>	
Subcontractor/Crew: <u>Copco > HDR</u>		Time: <u>station 1300</u>	
		Water Depth: <u>6.5</u>	
		Tide: <u>Mid tide</u>	
		Weather: <u>clear / sunny / 70-80</u>	
Bulk Sediment Sample ID: <u>GC-SD314-0.0-0.5</u>		Grab Penetration: <u>0.5</u> ft	Sample Time: <u>1315</u>
Number of Sampling Attempts: <u>11</u>			
Problems During Collection: <u>low recovery</u>			
QC SAMPLE DATA			
QA/QC Sample IDs:			
NONE		<u>DUP</u> , MS/MSD	
Floating Debris (describe): <u>Garbage +</u>			
Water Color: <u>green - brown sheen</u>			
Clarity: <u>hazy - low turbidity</u>			
Turbidity: <u>mod</u>			
Sheen: <u>sheen noted</u>			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
<u>P/B Copco</u>	<input checked="" type="checkbox"/>	<u>will return & another</u>	
SED SAMPLE DESCRIPTION			
Color: <u>Black 10YR 2/1</u>	Moisture: Dry SI. Moist Moist V. Moist <u>Wet</u>		
Major Description: <u>Clay Silty Clay <u>Silt</u> Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay</u>			
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded</u>			
<u>Well / poorly / mod - sorted well / poorly / mod - cemented Loose</u>			
Other Descriptors: <u>OL - organic silt - fer-like odor - trace gravel (<5%)</u>			
<u>Very dark brown / grey (~10YR 3/2) - NAPL floating on H₂O</u>			
<u>of sample - fer-like odor - escaping out of sediment</u>			
<u>pre spec</u>			
COMMENTS/OBSERVATIONS			
<u>Brown slick noted in area</u>			
<u>sheen noted on water surface of sample</u>			
<u>Heavy sheen noted on water upon pour retrieval</u>			
<u>PID - S.O</u>			
Sampler Signature/Date: <u>[Signature]</u> <u>6/17/10</u>			

Reviewed by

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Rachel Clennon-CH2M Hill Station ID: GC-SD314
 Subcontractor/Crew: HDR: Mike Papaleo, Ed Brandt Time: 1030
 Water Depth: 3.2 ft
 Tide: high-falling
 Weather: few clouds; mid 80s

Bulk Sediment Sample ID: GC-SD314-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 0945
 Number of Sampling Attempts: 1
 Problems During Collection: None

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP D-06242010-01 MS/MSD (collected for VOCs only)

Floating Debris (describe):
 Water Color:
 Clarity:
 Turbidity:
 Sheen:

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input type="checkbox"/>	
AVS/SEM <input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color: Black 10YR 2/1 / 7.5Y 4/1 Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented (Loose)
 Other Descriptors: Black silt, organic, 10YR 2/1 / 7.5Y 2/1 trace v. fine sand, moderate far-like odor, sheen

COMMENTS/OBSERVATIONS

PID: 15.4 ppm
-Resampled for VOCs only
 Sampler Signature/Date: [Signature] 10/24/10

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Clemm Station ID: GC-SD315
 Subcontractor/Crew: HDR'S Niero (captain) Time: 1200
D. Henschaw (helper) Water Depth: 16.0 ft 9.5 ft
 Tide: (R) low tide
 Weather: Sunny, clear low 80s

Bulk Sediment Sample ID: GC-SD315-00.0-00.5 Grab Penetration 0.5 ft Sample Time: 1240

Number of Sampling Attempts: 1 (1st location), 1 (2nd location), At 3rd loc. - 1 attempt, plus

Problems During Collection:

QC SAMPLE DATA

QA/QC Sample IDs:

NONE DUP D-06182010-02, MS/MSD

Floating Debris (describe): None

Water Color: light milky gray to clear

Clarity: moderate

Turbidity: moderate

Sheen: Slight Sheen

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
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<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C

+ PCB Congener
 and for Archive
 (R)

4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color: 2.54 2.5/1 black

Moisture: Dry Sl. Moist Moist V. Moist (Wet)

Major Description: Clay Silty Clay (Silt) Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: (Organic) Mottled Plastic M. Plastic Nodules w/ coarse-grained Ang/SA/SR/Rounded

Well/poorly/mod-sorted well/poorly/mod-cemented Loose

Other Descriptors: black (2.54 2.5/1) silt with fm sand, little organic
(twigs, leaf debris), far like odor, USS-02

PID: 28.3 ppm

COMMENTS/OBSERVATIONS

Sampler Signature/Date

R. A. 6/18/10

Reviewed by

Date

7/19/10

VOC only

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York	
Samplers/Inspectors: <u>Michael Murphy</u>	Station ID: <u>315 (VOC only)</u>
Subcontractor/Crew: <u>Mott & HDR</u>	Time: <u>1340</u>
	Water Depth: <u>8.2</u>
	Tide: <u>Mid tide</u>
	Weather: <u>Sunny 90°</u>
Bulk Sediment Sample ID: <u>GC-SD 315-0.0-0.5</u>	Grab Penetration <u>0.5</u> ft Sample Time: <u>1340</u>
Number of Sampling Attempts: <u>1</u>	
Problems During Collection: <u>None</u>	
QC SAMPLE DATA	
QA/QC Sample IDs: <u>NONE</u>	DUP _____, MS/MSD _____
Floating Debris (describe): <u>None</u>	
Water Color: <u>brown</u>	
Clarity: <u>clear</u>	
Turbidity: <u>clear</u>	
Sheen: <u>Yes</u>	
Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input type="checkbox"/>	
AVS/SEM <input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
SED SAMPLE DESCRIPTION	
Color: <u>Black</u>	Moisture: Dry SI. Moist Moist V. Moist <u>Wet</u>
Major Description: <u>Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay</u>	
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules <u>vt</u> coarse-grained Ang / SA / SR / Rounded</u>	
Other Descriptors: <u>Well / poorly / mod - sorted well / poorly / mod - cemented <u>Loose</u></u>	
Comments/Observations	
<u>seen on H₂O upon ponor retrieval</u>	
<u>located in mouth of turning basin</u>	
<u>- Resampled for VOCs only</u>	
Sampler Signature/Date: <u>[Signature] 6/23/10</u>	
Reviewed by: <u>[Signature]</u> Date: <u>7/19/10</u>	

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Clonnan - CH2M Station ID: SD-316
 Subcontractor/Crew: S. Niero - Captain - HDR Time: 1630
M. Papula - first mate HDR Water Depth: 6.0 ft
 Tide: high
 Weather: Sunny, low 80s, light breeze

Bulk Sediment Sample ID: GC-SD316-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 1635
 Number of Sampling Attempts: 11 (2)
 Problems During Collection: None

QC SAMPLE DATA

QA/QC Sample IDs:
 NONE DUP _____ MS/MSD _____

Floating Debris (describe): possible sewage; plastic, styrofoam
 Water Color: mod. green
 Clarity: _____
 Turbidity: mod to high
 Sheen: moderate sheen on water

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input checked="" type="checkbox"/>	
AVS/SEM <input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C; 1 X 1-gal bucket
PCB Congeners <input checked="" type="checkbox"/>	8 oz AMBER

SED SAMPLE DESCRIPTION

Color: Black 104R2/1 Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded
 Other Descriptors: Wet / poorly / mod - sorted well / poorly / mod - cemented Loose
Black 104R2/1 organic silt (OL), trace fine sand, wet, well sorted, faint UHC odor

COMMENTS/OBSERVATIONS

PID: 1.2 ppm

Sampler Signature/Date

R. Clonnan

6/21/10

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 317
 Subcontractor/Crew: Steve Time: 1550
Matt Water Depth: 13'
 Tide: Med/high tide
 Weather: Sunny ~80°

Bulk Sediment Sample ID: GC-SD 317-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 1600

Number of Sampling Attempts: 1

Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs:

NONE DUP MS/MSD

Floating Debris (describe): Grobbage & floaty organic matter

Water Color: brown

Clarity: clear/brown

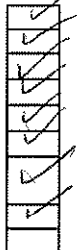
Turbidity: none

Sheen: noted @ water surface + sediment surface

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity



3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

OL - organic silt - trace - Black - 10 YR 2/1
low plastic, sheen noted on sediment surface
wet, heavy jarred

COMMENTS/OBSERVATIONS

PID - 3.0

Sampler Signature/Date

[Signature] 6/22/10

Reviewed by

[Signature]

Date

7/9/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 318
 Subcontractor/Crew: Steve Mott > HDR Time: 1425
 Water Depth: 2.5
 Tide: high/mid
 Weather: sunny 80°

Bulk Sediment Sample ID: GC-SD318 Grab Penetration 0.5 ft Sample Time: 1440
 Number of Sampling Attempts: 1
 Problems During Collection: None

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP _____ MS/MSD _____

Floating Debris (describe): Floating boom, garbage, Floating organic matter
 Water Color: brown
 Clarity: brown/clear
 Turbidity: clear
 Sheen: sheen noted on water surface

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input checked="" type="checkbox"/>	
AVS/SEM <input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
PCB Cong <input checked="" type="checkbox"/>	

+ archive

SED SAMPLE DESCRIPTION

Color: _____ Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules Coarse coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: organic silt - black (10% Zr) - trace gravel - organic matter
Fibrous organic matter - nonorganic, wet

COMMENTS/OBSERVATIONS

210 2.0

ML - 11/6/22

Sampler Signature/Date

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy

Station ID: 319

Time: 905

Subcontractor/Crew: Matt > HDR
Steve

Water Depth: 12'

Tide: Mid tide

Weather: Sunny 80°

Bulk Sediment Sample ID: GC-SD 319-0.0-0.5

Grab Penetration 0.5 ft

Sample Time: 1040

Number of Sampling Attempts: III III III III III III III

Problems During Collection: (gravel) (gravel) (gravel) (gravel) (gravel) (gravel) (gravel)

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): garbage

Water Color: Clear/Brown

Clarity: Clear

Turbidity: Clear

Sheen: Yes

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs

TCL SVOCs

TCL Pesticides

TCL PCBs

TAL Metals + Hg

Cyanide

TOC

Grainsize

AVS/SEM

Toxicity

PCB Congener

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C

8 oz Amber, wide mouth glass; protect from light, 4°C

8 oz wide mouth glass; 4°C

8 oz wide mouth glass; 4°C

8 oz wide mouth glass; 4°C

8 oz wide mouth glass; 4°C

4 oz wide mouth glass; 4°C

4 oz wide mouth glass; no headspace; 4°C; 1x + seal HDPE bucket

3x 1-gallon HDPE buckets; 4°C

8 oz. amber

+Archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

OL - organic silt - few gravel (subrounded / subangular)
black (10% 2%) - sheen noted on sediment surface
non / low plasticity, homogeneous, wet

COMMENTS/OBSERVATIONS

Sample collected approx 200-300' North Cup canal
- located alongside SE bulkhead of 9th St
bridge - unable to collect GPS coordinates
PID - 0.0

Sampler Signature/Date

M. Murphy 6/22

Reviewed by

[Signature]

Date

7/19/10

10 cells
8
↓
111

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 320
 Subcontractor/Crew: Steve Time: 1:345
Matt > HDR Water Depth:
 Tide: Mid-tide
 Weather:

Bulk Sediment Sample ID: GC-SD Grab Penetration 0.4 ft Sample Time: 1405
 Number of Sampling Attempts: III III III
 Problems During Collection: (Washed out) Washed out Washed out 5cc comments

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP MS/MSD

Floating Debris (describe): None
 Water Color: Clear / brown
 Clarity: Clear
 Turbidity: Clear
 Sheen: None on sediment surface

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides	8 oz wide mouth glass; 4°C
TCL PCBs	8 oz wide mouth glass; 4°C
TAL Metals + Hg	8 oz wide mouth glass; 4°C
Cyanide	8 oz wide mouth glass; 4°C
TOC	4 oz wide mouth glass; 4°C
Grainsize	
AVS/SEM	4 oz wide mouth glass; no headspace; 4°C
Toxicity	3 x 1-gallon HDPE buckets; 4°C; 1 x 1-gal HDPE bucket
PCB Congener	8 oz Amber

not archive

SED SAMPLE DESCRIPTION

Color: Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose
 Other Descriptors: SM - Silty Sand - Black (10R 2/10), organic
non-plastic, wet, homogeneous

COMMENTS/OBSERVATIONS

Unable to collect 3rd location GPS
coordinates (near satellite coverage) -
sample collected alongside bulk head near Han. Han Ave
bridge
PID 310

Sampler Signature/Date: M. Murphy 6/22/10

Reviewed by: [Signature] Date: 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Clemon - CH2M

Station ID: GC-SD321

Subcontractor/Crew: S. Niero - HDR-Capella
M. Papula - HDR-First Mate

Time: 1405

Water Depth: 25 ft

Tide: at low 2 hr before high

Weather: Clear, few clouds, high 90s, light breeze

Bulk Sediment Sample ID: GC-SD321-0.0-0.5

Grab Penetration 0.5 ft

Sample Time: 1405

Number of Sampling Attempts: 1

Problems During Collection: None (RC) Many deployments required to collect full volume for toxicity/bioassay sample (approx. 1520)

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe): few pieces plastic, wood

Water Color: light greenish gray

Clarity: mostly clear

Turbidity: low

Sheen: slight (RC)

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
TCL SVOCs
TCL Pesticides
TCL PCBs
TAL Metals + Hg
Cyanide
TOC
Grainsize
AVS/SEM
Toxicity
PCB Congener

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3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
8 oz Amber, wide mouth glass; protect from light, 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
8 oz wide mouth glass; 4°C
4 oz wide mouth glass; 4°C
4 oz wide mouth glass; 4°C
4 oz wide mouth glass; no headspace; 4°C
3 x 1-gallon HDPE buckets; 4°C; 1 x 1-gal. HDPE bucket
8 oz TUBER

+ Archive

SED SAMPLE DESCRIPTION

Color: 104R 2/1 Black

Moisture: Dry Sl. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules vf coarse-grained Ang/SA/SR/Rounded

Well poorly/mod - sorted well/poorly/mod - cemented Loose

Other Descriptors: 104R 2/1 Black organic silt (OL), well sorted trace vf-f sand trace to little gravel, slight sheen on sample pore water

PID: N/A - battery on PID dead

COMMENTS/OBSERVATIONS

Sampler Signature/Date

R. Clemon 6/21/10

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy

Station ID: 322
 Time: 1250

Subcontractor/Crew: Steve > HDR
Matt

Water Depth: 27'
 Tide: low/mid tide
 Weather: Sunny 85°

Bulk Sediment Sample ID: GC-SD322-0.0-0.5 Grab Penetration 0.5' ft Sample Time: 1380

Number of Sampling Attempts: 1

Problems During Collection: None

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP _____, MS/MSD _____

Floating Debris (describe): NONE

Water Color: brown/clear

Clarity: clear

Turbidity: clear

Sheen: NONE

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial/full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

+ Archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry Sl. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules VI coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: OC - Black (10% 2/1) orange silt, trace gravel
(suband) - trace organic plant matter, homogenous, wet

COMMENTS/OBSERVATIONS

PID - 0.0

Sampler Signature/Date

[Signature] 6/22/10

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Michael Murphy Station ID: 323
 Subcontractor/Crew: Steve / HDR Time: 1220
Matt Water Depth: 24'
 Tide: Mid - tide
 Weather: Sunny 85° low humid

Bulk Sediment Sample ID: GC-SD323-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 1230
 Number of Sampling Attempts: 11
 Problems During Collection: NONE

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP _____ MS/MSD _____

Floating Debris (describe): None
 Water Color: clear brown
 Clarity: Clear
 Turbidity: Clear
 Sheen: NONE observed

Sample Analytical Parameters:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

Bottleware/Preservation:

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

+ Archive

SED SAMPLE DESCRIPTION

Color: _____ Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded
 Well / poorly / mod - sorted well / poorly / mod - cemented Loose
 Other Descriptors: DL - organic silt - black - 10YR 2/1 - trace gravel
wet, low plasticity - organic odor - trace fibrous plant material
homogeneous

COMMENTS/OBSERVATIONS

PID - 0.5 ppm

Sampler Signature/Date

[Signature] 6/22/10

Reviewed by [Signature] Date 8/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: R. Clennan Station ID: GC-SD324
 Subcontractor/Crew: S. Nono - Captain Time: 1250
M. Papula - first mate Water Depth: 10.0 @ first drop; 16.0 ft @ 4th attempt
 Tide: mid (high @ 1642)
 Weather: clear, light breeze, low 80s

Bulk Sediment Sample ID: GC-SD324-00 0-005 Grab Penetration 0.5 ft Sample Time: 1250
 Number of Sampling Attempts: 111 (3) @ scoped locations; more ~10 ft, 1 attempt @ 2nd to 2
 Problems During Collection: Recovery insufficient in first 3 deployments

QC SAMPLE DATA

QA/QC Sample IDs: NONE DUP _____ MS/MSD _____

Floating Debris (describe): organics, few pieces plastic
 Water Color: greenish gray
 Clarity: clear
 Turbidity: slightly turbid
 Sheen: none observed

Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full, 4°C
TCL SVOCs <input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input checked="" type="checkbox"/>	
AVS/SEM <input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input checked="" type="checkbox"/>	3x 1-gallon HDPE buckets; 4°C; 1 x 1 gal bucket + Archive
PCB Congeners <input checked="" type="checkbox"/>	802 AMBER

SED SAMPLE DESCRIPTION

Color: 10YR 2/1 Black Moisture: Dry Sl. Moist Moist V. Moist Wet
 Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
 Minor Description: Organic Mottled Plastic M. Plastic Nodules vlf coarse-grained Ang / SA / SR / Rounded
 Other Descriptors: Well / poorly / mod - sorted well / poorly / mod - cemented Loose
10YR 2/1 organic silt (OL) trace vlf-f sand, moderate septic-like odor, well sorted, no debris
PID: 0.0

COMMENTS/OBSERVATIONS

Sampler Signature/Date

R. Clennan 6/24/10

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	R. Plennon (CH2M)	Station ID:	GC-SD325
Subcontractor/Crew:	S. N'lewo (AOR) M. Papnela (AOR)	Time:	1145
		Water Depth:	13.0 ft / 33.0 ft as
		Tide:	low
		Weather:	Clear, light breeze, high 70's
Bulk Sediment Sample ID:	GC-SD324-00.0-00.5	Grab Penetration	0.5 ft
		Sample Time:	1130
Number of Sampling Attempts:	11 (3) more out after 3 attempts; 2nd loc! 11 (2)		
Problems During Collection:	3rd loc! 11 (2); 4th loc! 1		
QC SAMPLE DATA			
QA/QC Sample IDs:	NONE		
	DUP 0-0621 2010-01 MS/MSD		
Floating Debris (describe):	None observed		
Water Color:	clear to slight inky black		
Clarity:			
Turbidity:			
Sheen:	Slight sheen		
Sample Analytical Parameters:	Bottleware/Preservation:		
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	Biossary 3x2 gal bucket (Re) 1x1 gal bucket
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C; 1 x 1-gal HDPE bucket 4°C	
PCB CONCENTR	<input checked="" type="checkbox"/>	802 AMBER	+ Archive
SED SAMPLE DESCRIPTION			
Color:	104R 2/1 (Black)	Moisture:	Dry SI. Moist Moist V. Moist Wet
Major Description:	Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay		
Minor Description:	Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang/SA/SR/Rounded		
Other Descriptors:	Well/poorly/mod-sorted well/poorly/mod-cemented Loose 104R-2/1 organic silt (OL), trace to little fine sand no evident odor RID: 0.0		
COMMENTS/OBSERVATIONS			
Sampler Signature/Date: <u>[Signature]</u> 6/21/10			

 Reviewed by: [Signature]

Date:

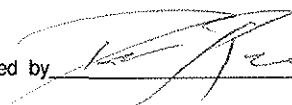
7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	Mike Cunningham	Station ID:	326
	→ ERM, ED → HDR	Time:	13:38
Subcontractor/Crew:		Water Depth:	37'
		Tide:	high
		Weather:	clear sunny, 70-80
Bulk Sediment Sample ID:	GC-SD326-0.0-0.5	Grab Penetration	0-0.5 ft
		Sample Time:	1346
Number of Sampling Attempts:	1		
Problems During Collection:			
QC SAMPLE DATA			
QA/QC Sample IDs:	<div style="display: flex; align-items: center;"> <div style="border: 1px solid black; border-radius: 50%; padding: 2px 5px; margin-right: 10px;">NONE</div> <div style="margin-right: 10px;">DUP</div> <div style="margin-right: 10px;">MS/MSD</div> </div>		
Floating Debris (describe):			
Water Color:			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:	Bottleware/Preservation:		
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
+ Archive			
SED SAMPLE DESCRIPTION			
Color:	black-brown		
Moisture:	Dry SI. Moist <u>Moist</u> V. Moist Wet		
Major Description:	Clay Silty Clay Silt <u>Clayey Sand</u> Sandy Clay Sand Gravelly Sand Gravel Grvly Clay		
Minor Description:	Organic <u>Mottled</u> Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded		
	Well / poorly / mod - sorted well / poorly / mod - cemented Loose		
Other Descriptors:			
COMMENTS/OBSERVATIONS			
7 gallons of sediment included sediment that be come into contact with sample device walls.			
Sampler Signature/Date	Michael E. Cunningham 6/17/2010		

Reviewed by Jar R Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	<u>MC BUREN</u>	Station ID:	<u>45-38-1532-307</u>
Subcontractor/Crew:	<u>EMCON, ED - HDR</u>	Time:	<u>03:32 PM (15:32)</u>
		Water Depth:	<u>37' 25'</u>
		Tide:	<u>high</u>
		Weather:	<u>clear, SUNNY, 70-80</u>
Bulk Sediment Sample ID:	<u>GC-SD327-0.0-0.6'</u>	Grab Penetration	<u>0.6 ft</u>
Number of Sampling Attempts:	<u>1/2</u>	Sample Time:	<u>15:32</u>
Problems During Collection:	<u>Waves pushing sampler over</u>		
QC SAMPLE DATA			
QA/QC Sample IDs:	<u>NONE</u> DUP _____, MS/MSD _____		
Floating Debris (describe):	_____		
Water Color:	_____		
Clarity:	_____		
Turbidity:	_____		
Sheen:	_____		
Sample Analytical Parameters:	Bottleware/Preservation:		
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
AVS/SEM	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
Toxicity	<input type="checkbox"/>		
SED SAMPLE DESCRIPTION			
Color:	<u>Gray to black</u>		
Moisture:	Dry SI. Moist Moist <u>Wet</u>		
Major Description:	<input checked="" type="radio"/> Clay <input type="radio"/> Silty Clay <input type="radio"/> Silt <input type="radio"/> Clayey Sand <input type="radio"/> Sandy Clay <input type="radio"/> Sand <input type="radio"/> Gravelly Sand <input type="radio"/> Gravel <input type="radio"/> Grvly Clay		
Minor Description:	<input checked="" type="radio"/> Organic <input type="radio"/> Mottled <input type="radio"/> Plastic <input type="radio"/> M. Plastic <input type="radio"/> Nodules <input type="radio"/> v f coarse-grained <input type="radio"/> Ang / SA / SR / Rounded		
Other Descriptors:	Well / <u>poorly</u> / mod - sorted well / <u>poorly</u> / mod - cemented <u>Loose</u>		
COMMENTS/OBSERVATIONS			
Sampler Signature/Date	<u>Michael Z. Gungor</u> <u>6/17/2010</u>		

Reviewed by



Date

6/18/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Cummingham</u>		Station ID: <u>328</u>	
		Time: <u>09:48</u>	
Subcontractor/Crew: <u>Ehren, ED → HDR</u>		Water Depth: <u>34.8</u>	
		Tide: <u>intermediate</u>	
		Weather: <u>Sunny 80's</u>	
Bulk Sediment Sample ID: <u>GC-SD 328-0.0-0.5</u>		Grab Penetration: <u>0.5 ft</u>	Sample Time: <u>0955</u>
Number of Sampling Attempts: <u>1/1 - 4 grabs to get all 7 gallons</u>			
Problems During Collection: <u>none, but many mussels in samples</u>			
QC SAMPLE DATA			
QA/QC Sample IDs: <u>NONE</u> DUP _____, MS/MSD _____			
Floating Debris (describe): _____			
Water Color: _____			
Clarity: _____			
Turbidity: _____			
Sheen: _____			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
AVS/SEM	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
Toxicity	<input checked="" type="checkbox"/>	8oz Amber	
congrat		+ Archive	
SED SAMPLE DESCRIPTION			
Color: <u>Black</u>	Moisture: Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input type="checkbox"/> <u>Wet</u> <input checked="" type="checkbox"/>		
Major Description:	Clay <input type="checkbox"/> <u>Silty Clay</u> <input checked="" type="checkbox"/> Silt <input type="checkbox"/> Clayey Sand <input type="checkbox"/> Sandy Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravelly Sand <input type="checkbox"/> Gravel <input type="checkbox"/> Grvly Clay <input type="checkbox"/>		
Minor Description:	Organic <input type="checkbox"/> Mottled <input type="checkbox"/> Plastic <input type="checkbox"/> M. Plastic <input type="checkbox"/> Nodules <input type="checkbox"/> v f coarse-grained <input type="checkbox"/> Ang / SA / SR / Rounded <input type="checkbox"/>		
Other Descriptors:	Well <input type="checkbox"/> <u>poorly</u> / mod - sorted well <input type="checkbox"/> <u>poorly</u> / mod - cemented Loose <input type="checkbox"/>		
COMMENTS/OBSERVATIONS			
<u>PID = 2.0</u>		<u>- Located position from a map because GPS was not working properly</u>	
<u>7 gallons sampled for bioassay</u>			
Sampler Signature/Date: <u>Michael E. Cummingham</u> <u>6/18/2010</u>			

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: M. Cunningham Station ID: 329
 Subcontractor/Crew: KC, Ehren, ED Time: 1516
 Water Depth: 39.9'
 Tide: High
 Weather: Sunny, calm, 80's

Bulk Sediment Sample ID: GC-SD309-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 15-16

Number of Sampling Attempts: 3/3

Problems During Collection:

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP

MS/MSD

Floating Debris (describe):

Water Color:

Clarity:

Turbidity:

Sheen:

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity
 PCB Congeners

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C
 8 oz Amber

+ Archive

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry SI. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

COMMENTS/OBSERVATIONS

PID = 0.0

Sampler Signature/Date

Michael E. Cunningham

6/18/2010

Reviewed by

Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Boil, Steve, Engrin-ADR Station ID: 329
 Time: 1410
 Subcontractor/Crew: _____ Water Depth: 36.0 ft
 Tide: partly
 Weather: Sunny, high 80's Light wind

Bulk Sediment Sample ID: G-C-SD329-0.0-05 Grab Penetration 0.5 ft Sample Time: 1410

Number of Sampling Attempts: 1

Problems During Collection: None

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP _____

MS/MSD _____

Floating Debris (describe): _____

Water Color: _____

Clarity: _____

Turbidity: _____

Sheen: _____

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

✓

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color: Black 10YR 2/1 (OL) Moisture: Dry SI. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors: _____

COMMENTS/OBSERVATIONS

- Re sampled for VOCs only

Sampler Signature/Date

Reviewed by [Signature]

Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	<u>Mike Cunningham</u>	Station ID:	<u>330</u>
		Time:	<u>12:52</u>
Subcontractor/Crew:	<u>Ehren, ED</u>	Water Depth:	<u>34'</u>
		Tide:	<u>Incoming / high</u>
		Weather:	<u>Sunny, calm, 80's</u>
Bulk Sediment Sample ID: <u>GC-SD330-0.0-0.5</u>		Grab Penetration	<u>0.5 ft</u>
Number of Sampling Attempts: <u>3/3</u>		Sample Time:	<u>12:52</u>
Problems During Collection: <u> </u>			
QC SAMPLE DATA			
QA/QC Sample IDs:			
<div style="display: flex; justify-content: space-between;"> <u>NONE</u> DUP <u> </u> MS/MSD <u> </u> </div>			
Floating Debris (describe): <u> </u>			
Water Color: <u> </u>			
Clarity: <u> </u>			
Turbidity: <u> </u>			
Sheen: <u> </u>			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
PCB CONGENER	<input checked="" type="checkbox"/>	8oz Amber	
<u>+Archive</u>			
SED SAMPLE DESCRIPTION			
Color: <u>Dark Grey</u>	Moisture: Dry Sl. Moist <u>(Moist)</u> V. Moist Wet		
Major Description:	Clay <u>(Silty Clay)</u> Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay		
Minor Description:	Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded		
	Well <u>(poorly)</u> / mod - sorted well <u>(poorly)</u> / mod - cemented Loose		
Other Descriptors: <u> </u>			
COMMENTS/OBSERVATIONS			
<u>667258.03' N } Sample Coordinates</u>			
<u>604635.03' E }</u>			
<u>7 gallons sampled in 3 Attempts</u>			
<u>PID = 0.6 PPM</u>			
Sampler Signature/Date: <u>Michael E. Cunningham</u> <u>6/18/2010</u>			

 Reviewed by

 Date 7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

7/19/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: M. C. Station ID: 331
 Subcontractor/Crew: KC, ED, EHREN Time: 5:08
 Water Depth: 46.4
 Tide: outgoing / High
 Weather: sunny, 70's, calm
 Bulk Sediment Sample ID: GC-SD-331-0.0-0.5' Grab Penetration: 0.5 ft Sample Time: 16:16
 Number of Sampling Attempts: 1/1
 Problems During Collection: —

QC SAMPLE DATA

QA/QC Sample IDs:
NONE DUP —, MS/MSD —

Floating Debris (describe): —

Water Color: —

Clarity: —

Turbidity: —

Sheen: —

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity
 PCB Congener

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3 x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C
 8 oz AMBER

+ Archive

SED SAMPLE DESCRIPTION

Color: Dark Grey Moisture: Dry St. Moist Moist V. Moist Wet

Major Description: Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description: Organic Mottled Plastic M. Plastic Nodules w/ f coarse-grained Ang / SA / SR / Rounded

Well poorly mod - sorted well poorly mod - cemented Loose

Other Descriptors:

clayey-silt is more accurate description of almost all of our samples in the BAY

COMMENTS/OBSERVATIONS

Neat Bay

PID = 0.0

Sampler Signature/Date

Michael E. Gough 6/8/2010

Reviewed by

[Signature]

Date

7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors:	<u>Cunningham</u>	Station ID:	<u>337</u>
		Time:	<u>4:16</u>
Subcontractor/Crew:	<u>KC, ED, Ehlen</u>	Water Depth:	<u>22.4</u>
		Tide:	<u>High / outgoing</u>
		Weather:	<u>Sunny, calm, 80's</u>
Bulk Sediment Sample ID:	<u>GC-50332-0.0-0.5</u>	Grab Penetration	<u>0.5 ft</u>
		Sample Time:	<u>16:16</u>
Number of Sampling Attempts:	<u>1/1</u>		
Problems During Collection:	<u>none</u>		
QC SAMPLE DATA			
QA/QC Sample IDs:	<u>NONE</u>		
	DUP	MS/MSD	
Floating Debris (describe):			
Water Color:			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:	Bottleware/Preservation:		
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
AVS/SEM	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
Toxicity	<input checked="" type="checkbox"/>	8 oz <u>AMBER</u>	
PCB Congenex	<input checked="" type="checkbox"/>	<u>+ Archive</u>	
SED SAMPLE DESCRIPTION			
Color:	<u>Dark Grey</u>		
Moisture:	Dry <input type="checkbox"/> Sl. Moist <input type="checkbox"/> Moist <input type="checkbox"/> V. Moist <input checked="" type="checkbox"/> <u>Wet</u>		
Major Description:	Clay <input checked="" type="checkbox"/> <u>Silty Clay</u> <input type="checkbox"/> Silt <input type="checkbox"/> Clayey Sand <input type="checkbox"/> Sandy Clay <input type="checkbox"/> Sand <input type="checkbox"/> Gravelly Sand <input type="checkbox"/> Gravel <input type="checkbox"/> Grly Clay		
Minor Description:	Organic <input type="checkbox"/> Mottled <input type="checkbox"/> Plastic <input type="checkbox"/> M. Plastic <input type="checkbox"/> Nodules <input checked="" type="checkbox"/> <u>coarse-grained</u> <input type="checkbox"/> Ang / SA / SR / Rounded		
Other Descriptors:	Well / <u>poorly</u> / mod - sorted well / <u>poorly</u> / mod - cemented Loose		
COMMENTS/OBSERVATIONS			
<u>PID = 0.0</u>			
Sampler Signature/Date	<u>Michael E. Cunningham</u> <u>6/18/2010</u>		

Reviewed by

Date

7/19/10

* VOC only *

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Bill, Steve, China-HDR</u>		Station ID: <u>832</u>	
Subcontractor/Crew:		Time: <u>1341</u>	
		Water Depth: <u>14.0 ft</u>	
		Tide: <u>High - mid, mostly</u>	
		Weather: <u>high 80s, Sunny & breeze</u>	
Bulk Sediment Sample ID: <u>GC-SD332-0.0-05</u>		Grab Penetration: <u>0.5</u> ft	Sample Time: <u>1341</u>
Number of Sampling Attempts: <u>1</u>			
Problems During Collection: <u>---</u>			
QC SAMPLE DATA			
QA/QC Sample IDs:			
<u>NONE</u> DUP _____, MS/MSD _____			
Floating Debris (describe):			
Water Color:			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input type="checkbox"/>		
AVS/SEM	<input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
SED SAMPLE DESCRIPTION			
Color: <u>10YR 2/1 OL to Org. Silt</u>	Moisture: Dry Sl. Moist Moist V. Moist <u>Wet</u>		
Major Description: <u>Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay</u>			
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded</u>			
<u>Well / poorly / mod - sorted well / poorly / mod - cemented Loose</u>			
Other Descriptors:			
COMMENTS/OBSERVATIONS			
<u>- Resampled for VOCs only</u>			
Sampler Signature/Date			

Reviewed by [Signature] Date 7/19/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>M. Cunningham</u>		Station ID: <u>333</u>	
		Time: <u>11:21</u>	
Subcontractor/Crew: <u>Ehren, ED</u>		Water Depth: <u>19.8</u>	
		Tide: <u>Intermediate / incoming</u>	
		Weather: <u>SUNNY, 80's, calm</u>	
Bulk Sediment Sample ID: <u>GC-SD333-0.0-0.5</u>		Grab Penetration: <u>0.5</u> ft	Sample Time: <u>11:21</u>
Number of Sampling Attempts: <u>3/3</u>			
Problems During Collection:			
QC SAMPLE DATA			
QA/QC Sample IDs:			
<u>NONE</u> DUP _____, MS/MSD _____			
Floating Debris (describe):			
Water Color:			
Clarity:			
Turbidity:			
Sheen:			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	4 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
PCB Congeners	<input checked="" type="checkbox"/>	8 oz Amber	
SED SAMPLE DESCRIPTION			
Color: <u>Dark Gray</u>	Moisture: Dry St. Moist <u>Moist</u> V. Moist Wet		
Major Description:	Clay <u>Silty Clay</u> Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grly Clay		
Minor Description:	Organic Mottled Plastic M. Plastic Nodules vf f coarse-grained Ang / SA / SR / Rounded		
	Well / <u>poorly</u> / mod - sorted well / <u>poorly</u> / mod - cemented Loose		
Other Descriptors:			
COMMENTS/OBSERVATIONS			
<u>coordinates "AS 15" 667204.85 ft N</u>			
<u>622197.36 ft E</u>			
<u>sediment - 7 gallons sampled</u>			
<u>PID = 2.5</u>			
Sampler Signature/Date: <u>Michael E. Cunningham</u>		<u>6/18/2010</u>	

50-180-205
 112
 buckets

Reviewed by [Signature] Date 7/19/10

Ehren
S. Niero
Bill
-Cg
HDBR

* VOC only *

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York	
Samplers/Inspectors: <u>R. Clennon - HDR</u> <u>S. Niero - HDR Captain</u>	Station ID: <u>333</u> Time: <u>1333</u>
Subcontractor/Crew: <u>M. Papaleo - Captain HDR</u> <u>E. Brandt - Captain HDR</u>	Water Depth: <u>15.0 ft</u> Tide: <u>High - mid</u> Weather: <u>Partly sunny, high 80s, light wind</u>
Bulk Sediment Sample ID: <u>GC-SD 333-0.0-0.5'</u>	Grab Penetration: <u>0.5' ft</u> Sample Time: <u>1330</u>
Number of Sampling Attempts: <u>1</u>	
Problems During Collection:	
QC SAMPLE DATA	
QA/QC Sample IDs: NONE DUP MS/MSD	
Floating Debris (describe):	
Water Color:	
Clarity:	
Turbidity:	
Sheen:	
Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input type="checkbox"/>	
AVS/SEM <input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
SED SAMPLE DESCRIPTION	
Color: <u>Black (104R 2/1) Organic Silty</u>	Moisture: Dry SI. Moist Moist V. Moist <u>Wet</u>
Major Description: <u>Clay Silty Clay Silty</u>	Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: <u>Organic Mottled Plastic M. Plastic</u>	Nodules vf f coarse-grained Ang / SA / SR / Rounded
<u>Well / poorly / mod - sorted well / poorly / mod - cemented Loose</u>	
Other Descriptors:	
COMMENTS/OBSERVATIONS	
<u>- Resampled for VOCs only</u>	
Sampler Signature/Date	

333
338
331
44 ft
38 ft
1312

Reviewed by [Signature] Date 7/17/10

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York			
Samplers/Inspectors: <u>Cunningham</u>		Station ID: <u>334</u>	
Subcontractor/Crew: <u>KC, ED, Ehren</u>		Time: <u>8:24</u> <u>1642</u>	
		Water Depth: <u>42.5</u>	
		Tide: <u>High / outgoing</u>	
		Weather: <u>Sunny, hot, 80's</u>	
Bulk Sediment Sample ID: <u>GC-SD 334-0.0-0.5</u>		Grab Penetration: <u>0.5</u> ft	Sample Time: <u>1642</u>
Number of Sampling Attempts: <u>1/1</u>			
Problems During Collection: <u>none</u>			
QC SAMPLE DATA			
QA/QC Sample IDs: <u>NONE</u> DUP _____ MS/MSD _____			
Floating Debris (describe): _____			
Water Color: _____			
Clarity: _____			
Turbidity: _____			
Sheen: _____			
Sample Analytical Parameters:		Bottleware/Preservation:	
TCL VOCs	<input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C	
TCL SVOCs	<input checked="" type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C	
TCL Pesticides	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TCL PCBs	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TAL Metals + Hg	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Cyanide	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
TOC	<input checked="" type="checkbox"/>	8 oz wide mouth glass; 4°C	
Grainsize	<input checked="" type="checkbox"/>		
AVS/SEM	<input checked="" type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C	
Toxicity	<input checked="" type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C	
PCB Congeners	<input checked="" type="checkbox"/>	8 oz AMBER	
SED SAMPLE DESCRIPTION			
Color: <u>Dark Grey</u>	Moisture: Dry SI. Moist <u>Moist</u> V. Moist. Wet		
Major Description: <u>Clay Silty Clay Silt Clayey Sand Sandy Clay <u>Sand</u> Gravely Sand Gravel Grvly Clay</u>			
Minor Description: <u>Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded</u>			
Other Descriptors: <u>Well <u>poorly</u> mod - sorted well / poorly <u>mod - cemented</u> Loose</u>			
COMMENTS/OBSERVATIONS			
<u>Gunkhog + Crab in Sample</u>			
<u>PID = 0.0</u>			
Sampler Signature/Date: <u>Michael E. Cunningham</u> <u>6/18/2010</u>			

by _____

Date 7/12/10

* VOCs Only *

Surface Sediment Sampling Form Gowanus Canal Remedial Investigation Brooklyn, Kings County, New York	
Samplers/Inspectors: <u>Bill, Steve, Elinn - HDR</u>	Station ID: <u>334</u>
	Time: <u>1353 6/24/10</u>
Subcontractor/Crew:	Water Depth: <u>30.0 ft</u>
	Tide: <u>High - mid</u>
	Weather: <u>high 80s sunny, light wind</u>
Bulk Sediment Sample ID: <u>GC-SD334-0.0-0.5</u>	Grab Penetration <u>0.5</u> ft Sample Time: <u>1353</u>
Number of Sampling Attempts: <u>1</u>	
Problems During Collection:	
QC SAMPLE DATA	
QA/QC Sample IDs:	
<u>NONE</u>	DUP _____, MS/MSD _____
Floating Debris (describe):	
Water Color:	
Clarity:	
Turbidity:	
Sheen:	
Sample Analytical Parameters:	Bottleware/Preservation:
TCL VOCs <input checked="" type="checkbox"/>	3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
TCL SVOCs <input type="checkbox"/>	8 oz Amber, wide mouth glass; protect from light, 4°C
TCL Pesticides <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TCL PCBs <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TAL Metals + Hg <input type="checkbox"/>	8 oz wide mouth glass; 4°C
Cyanide <input type="checkbox"/>	8 oz wide mouth glass; 4°C
TOC <input type="checkbox"/>	4 oz wide mouth glass; 4°C
Grainsize <input type="checkbox"/>	
AVS/SEM <input type="checkbox"/>	4 oz wide mouth glass; no headspace; 4°C
Toxicity <input type="checkbox"/>	3 x 1-gallon HDPE buckets; 4°C
SED SAMPLE DESCRIPTION	
Color: <u>Black 104R 2/1 - Q</u>	Moisture: Dry SI. Moist Moist V. Moist <u>Wet</u>
Major Description: <u>Clay</u>	Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay
Minor Description: <u>Organic</u>	Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded
<u>Well / poorly / mod - sorted well / poorly / mod - cemented Loose</u>	
Other Descriptors:	
COMMENTS/OBSERVATIONS	
<u>* Resampled for VOCs only</u>	
Sampler Signature/Date	

Reviewed by [Signature]

Date 7/16/10

Surface Sediment Sampling Form
Gowanus Canal Remedial Investigation
Brooklyn, Kings County, New York

Samplers/Inspectors: Mika Cunningham Station ID: 335
 Subcontractor/Crew: Ehren, ED Time: 16:05
 Water Depth: 17.4'
 Tide: high
 Weather: windy, 70-80, sun

Bulk Sediment Sample ID: GC-SD335-0.0-0.5 Grab Penetration 0.5 ft Sample Time: 16:45

Number of Sampling Attempts: 1/1

Problems During Collection: very windy + choppy - no time to feel around w/ gear

QC SAMPLE DATA

QA/QC Sample IDs:

NONE

DUP _____, MS/MSD _____

Floating Debris (describe): -

Water Color: -

Clarity: -

Turbidity: -

Sheen: -

Sample Analytical Parameters:

Bottleware/Preservation:

TCL VOCs
 TCL SVOCs
 TCL Pesticides
 TCL PCBs
 TAL Metals + Hg
 Cyanide
 TOC
 Grainsize
 AVS/SEM
 Toxicity

☒
☒
☒
☒
☒
☒
☒
☒
☒
☒

3x 40 mL vials/TerraCore with stir bar, 1-40 mL vial, full; 4°C
 8 oz Amber, wide mouth glass; protect from light, 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 8 oz wide mouth glass; 4°C
 4 oz wide mouth glass; no headspace; 4°C
 3 x 1-gallon HDPE buckets; 4°C

SED SAMPLE DESCRIPTION

Color:

Moisture:

Dry SI. Moist Moist V. Moist Wet

Major Description:

Clay Silty Clay Silt Clayey Sand Sandy Clay Sand Gravelly Sand Gravel Grvly Clay

Minor Description:

Organic Mottled Plastic M. Plastic Nodules v f coarse-grained Ang / SA / SR / Rounded

Well / poorly / mod - sorted well / poorly / mod - cemented Loose

Other Descriptors:

COMMENTS/OBSERVATIONS

Sampler Signature/Date

Mika Cunningham 6/17/2010

Reviewed by

[Signature]

Date

7/19/10