CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Superfund Site

Project #: 395863.03.03

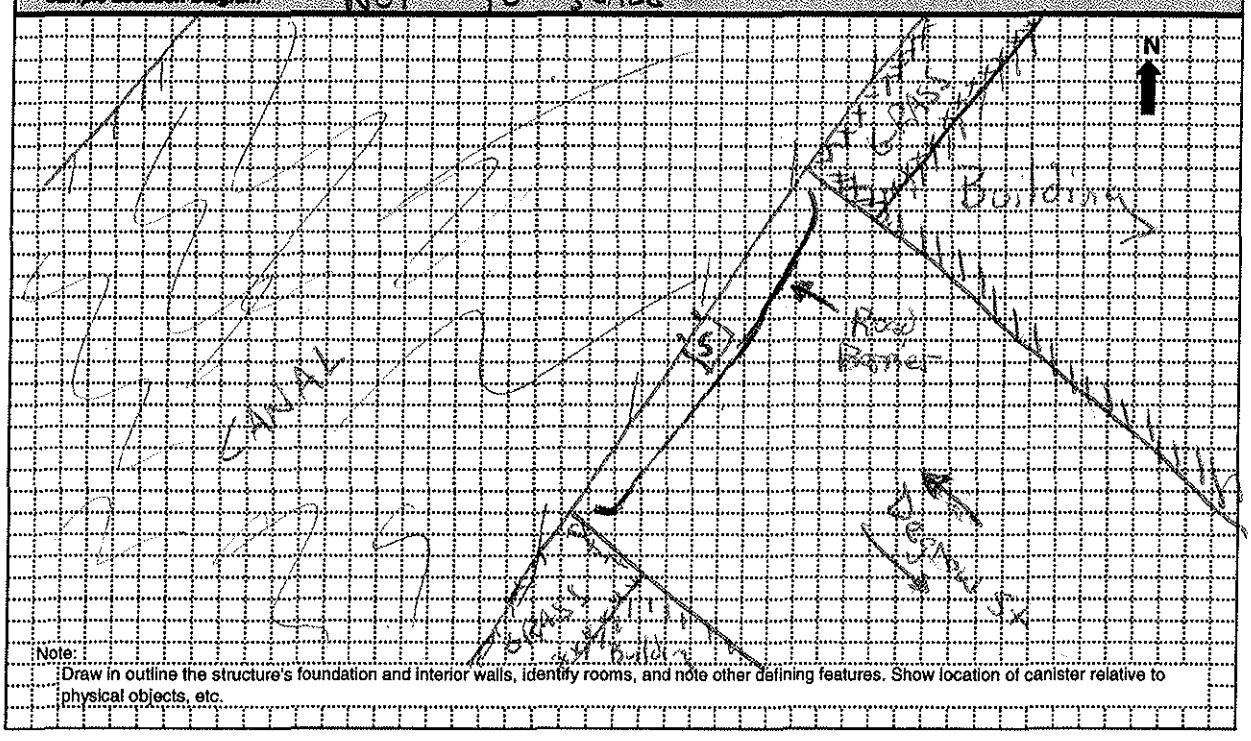
By: MM

Date: 9/1/10 - 9/8/10 - 9/9/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)	
501	GC-AS501-C-1	2798	4999	-29/-30	24-hour	9/1/10 1734	9/8/10 1939	-5	24-hour	
501	GC-AS501-S-1	2907	2839	0/-28	24-hour	9/1/10 1726	9/9/10 0814	-10	~~4~~ ~~4~~	← RAN >24 hours

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - traffic - vehicle

[S] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

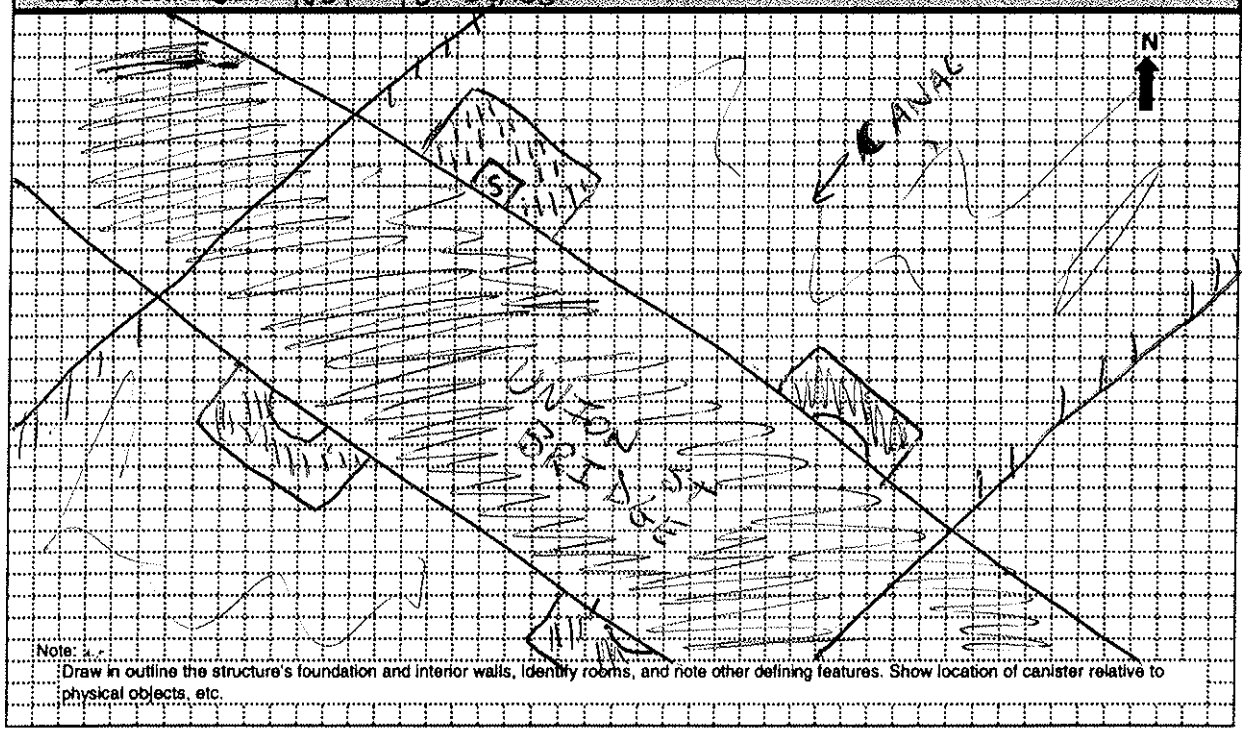
Project Name: Gowanus Canal Superfund Site Project #: 395863.03.03

By: MM Date: 7/7/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
502	GC-AS502-C-1	3090	3055	0/-29.5	24-hour	7/7/10 1510	7/8/10 1742	-3.5	24-hour
502	GC-AS502-S-1	2537	3938	0/29.5	24-hour	7/7/10 1512	7/8/10 1831	-4.0	24-hour

Sample Location Diagram NOT TO SCALE



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - traffic - boat/vehicle

S1 - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

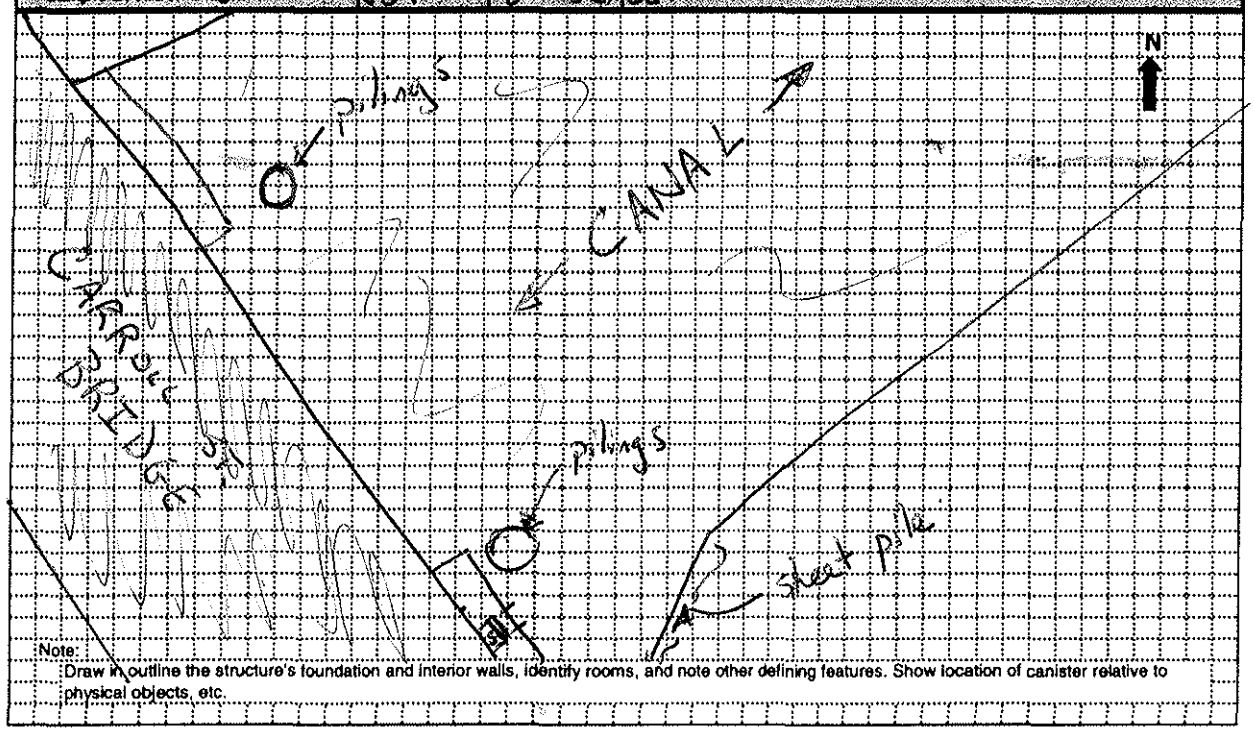
Project Name: Gowanus Canal SuperFund site Project #: 395863.03.03

By: MM Date: 7/7/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
503	GC-AS503-C-1	2754	4764	0/-30+	24-hour	7-7-10 1540	7-8-10 1841	-4.5	24-hour
503	GC-AS503-C-1	3431	3130	0/29.5	24-hour	7-7-10 1540	7-8-10 1804	-4.0	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - vehicle traffic

[5] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

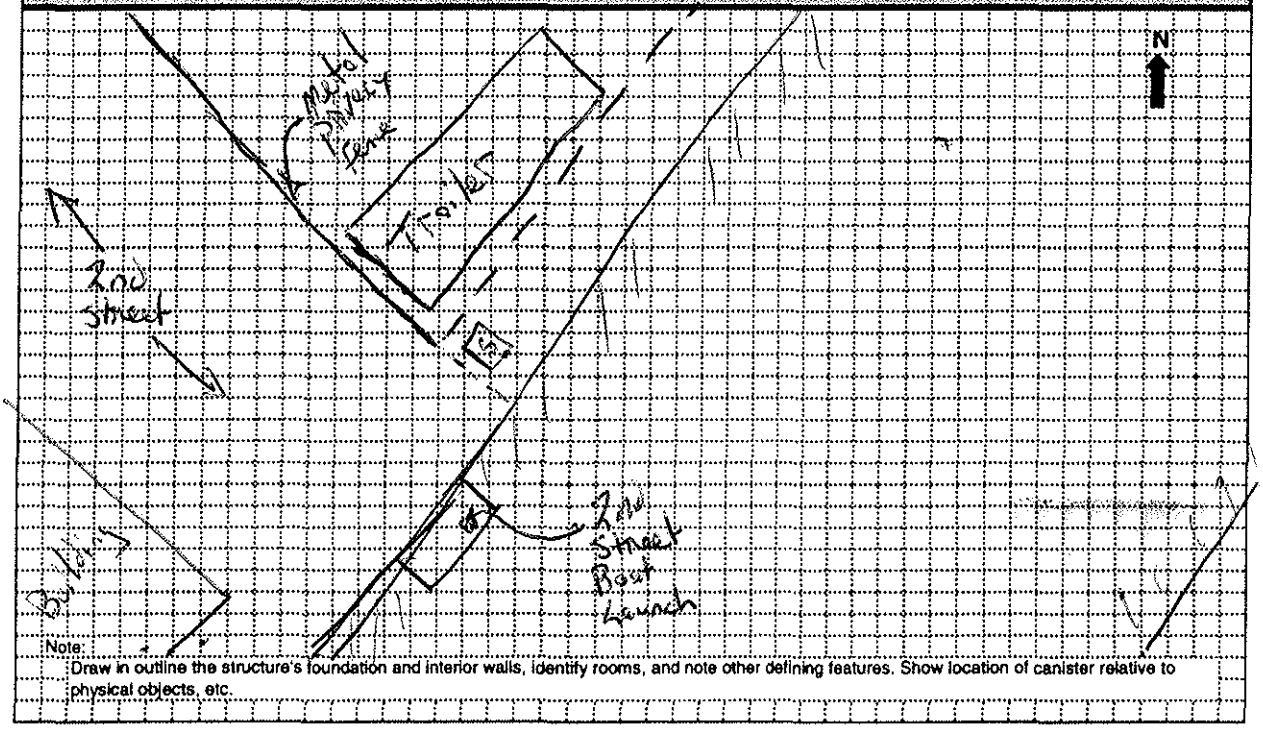
Project Name: Gowanus Canal Superfund Site Project #: 395863.03.03

By: MM Date: 7/7/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
504	GC-AS504-C-1	2854	4768	0/-30	24-hour	7-7-10 1610	7-8-10 1811	-5	24-hour
504	GC-AS504-S-1	3927	3993	0/-29	24-hour	7-7-10 1610	7-8-10 1908	-6.5	24-hour

Sample Location Diagram



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - pedestrian

[S] - Sample location

MM

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Superfund Site

Project #: 395863.03.03

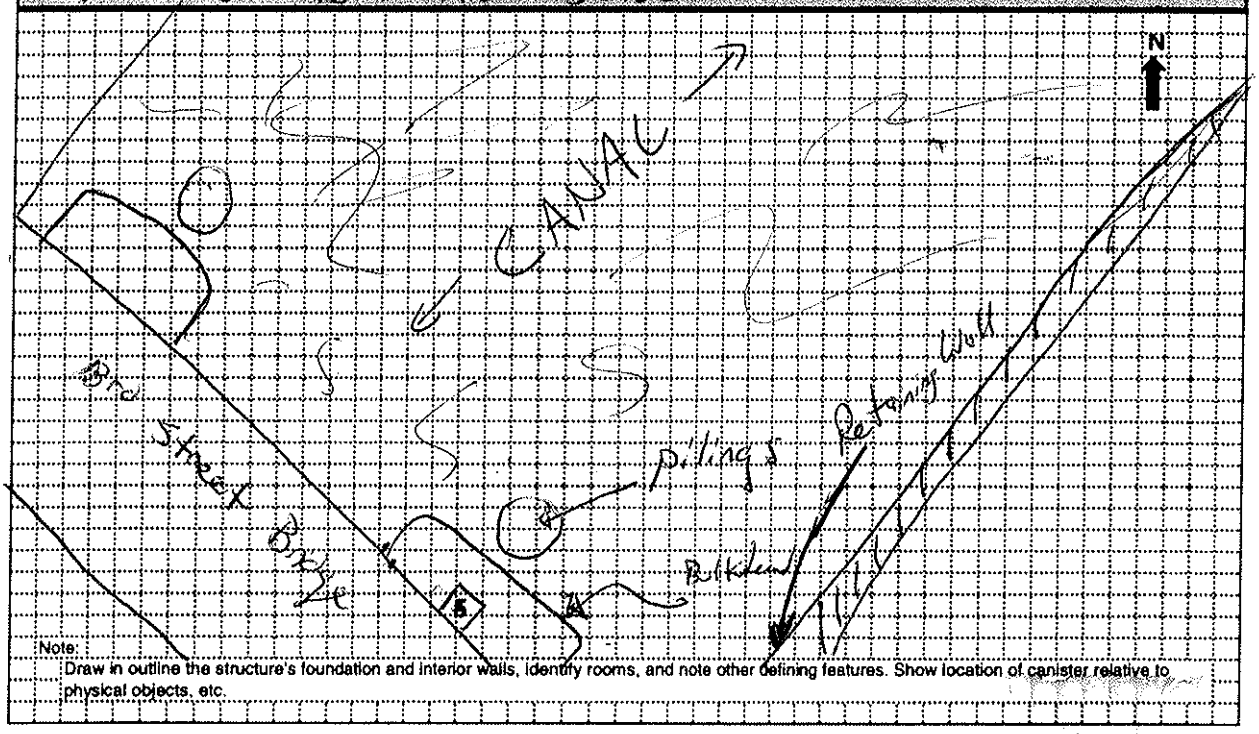
By: MM

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
505	GC-AS505-C-1	3533	3959	0/-29	24-hour	7-7-10 1706	7-8-10 1822	-6.0	24-hour
505	GC-AS505-S-1	4434	4778	0/-30+	24-hour	7-7-10 1706	7-8-10 1435	-8.0	24-hour
505	D-07082010-01	3164	4537	-2/-30+	24-hour	7-7-10 1706	7-8-10 1821	-5.5	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - boat/vehicle traffic

Duplicate is of GC-AS505-C-1

[5] - sample location

CH2M HILL *Applied Sciences Laboratory* Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

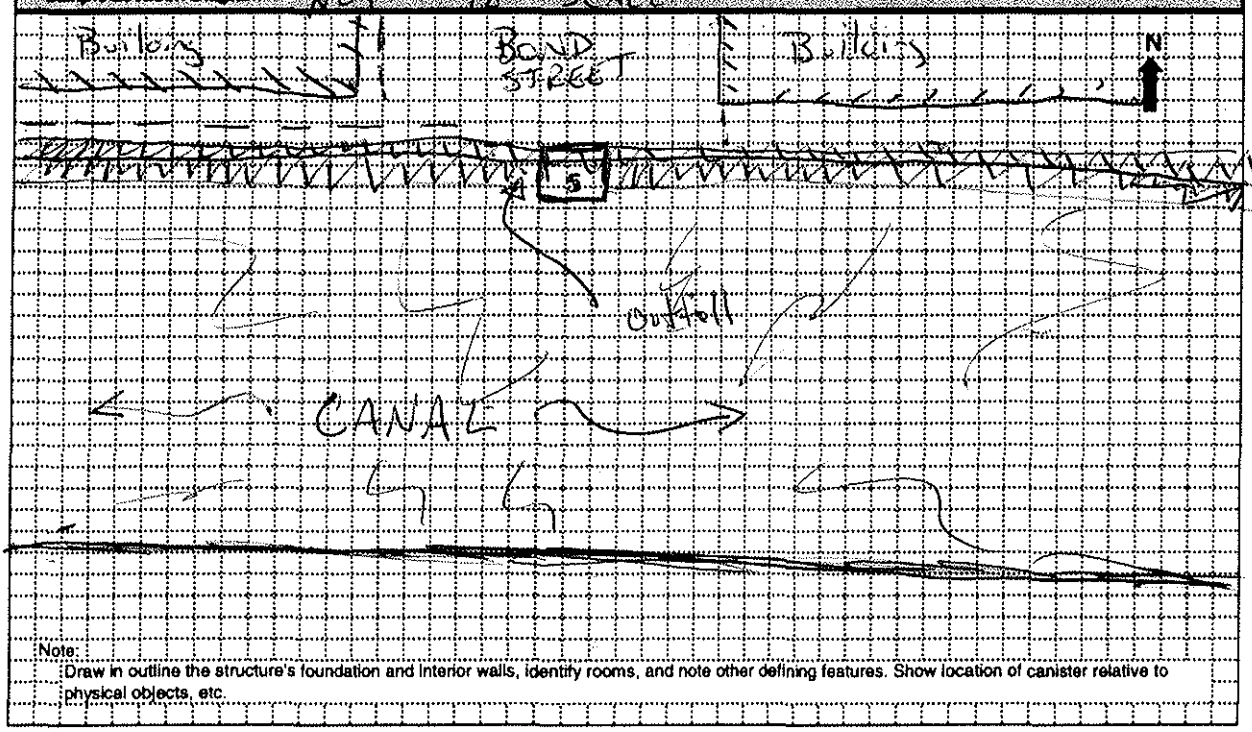
Project Name: Gowanus Canal Superfund Site Project #: 395863.03.03

By: MM Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
506	GC-AS506-C-1	2693	4747	0/-30+	24-hour	7/7/10 1555	7/8/10 1824	-7	24-hour
506	GC-AS506-S-1	4927	3954	0/-30+	24-hour	7/7/10 1555	7/8/10 1815	-4	24-hour
506	D-070820210-02	3351	3026	0/-30+	24-hour	7/7/10 1555	7/8/10 1823	-7	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible intense - boat/vehicle traffic - outfall - nearby building is being painted

- Duplicate is of GC-AS506-S-1

[5] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Superfund Site

Project #: 395863.03.03

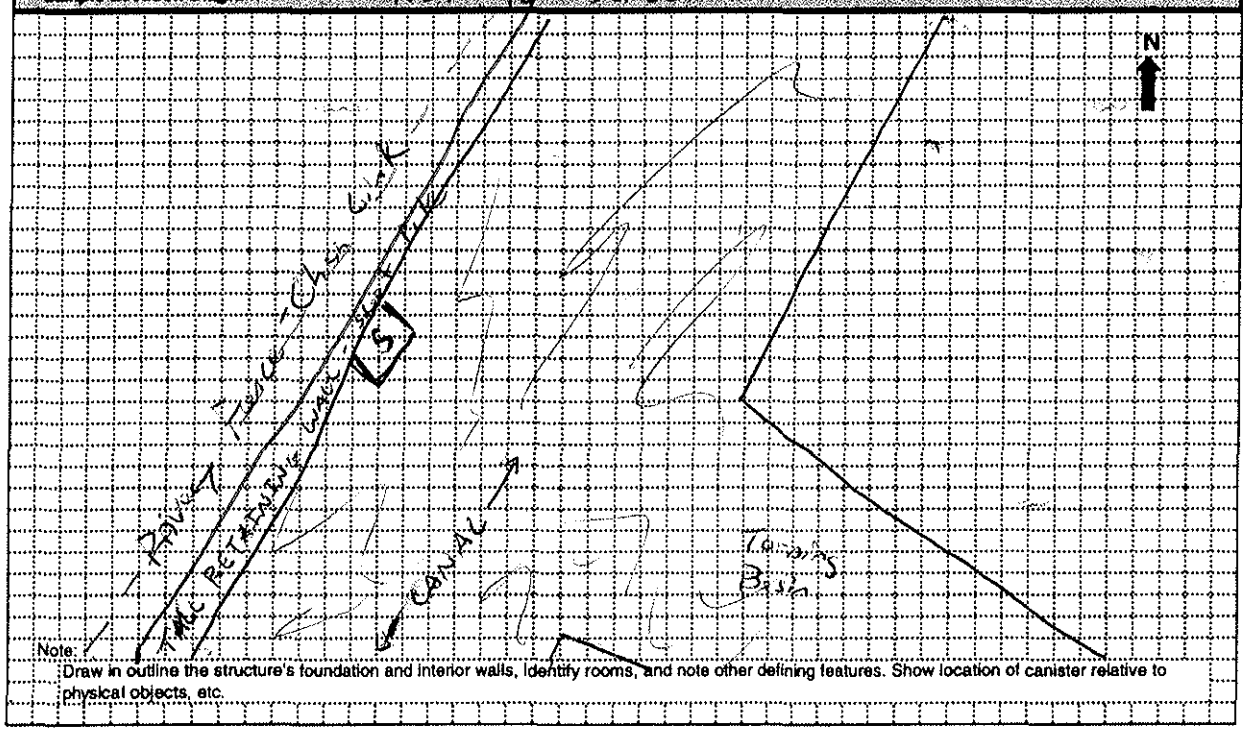
By: MN

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
507	GC-AS507-C-1	2689	3934	0/-27	24-hour	7/7/10 1614	7/8/10 1647	-4.0	24-hour
507	GC-AS507-S-1	3370	4520	0/-30+	24-hour	7/7/10 1614	7/8/10 1920	-4.5	24-hour
507 *	FB-070810-01	4142	3183	0/0	N/A	7/7/10 1615	7/8/10 1920	0	N/A
	* Field Blank was brought to the field and unopened								
	N/A - Not Applicable - not opened								

Sample Location Diagram NOT TO SCALE



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): Possible influence - boat traffic

[S] - Sample location

MN

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Superfund

Project #: 395863.03.03

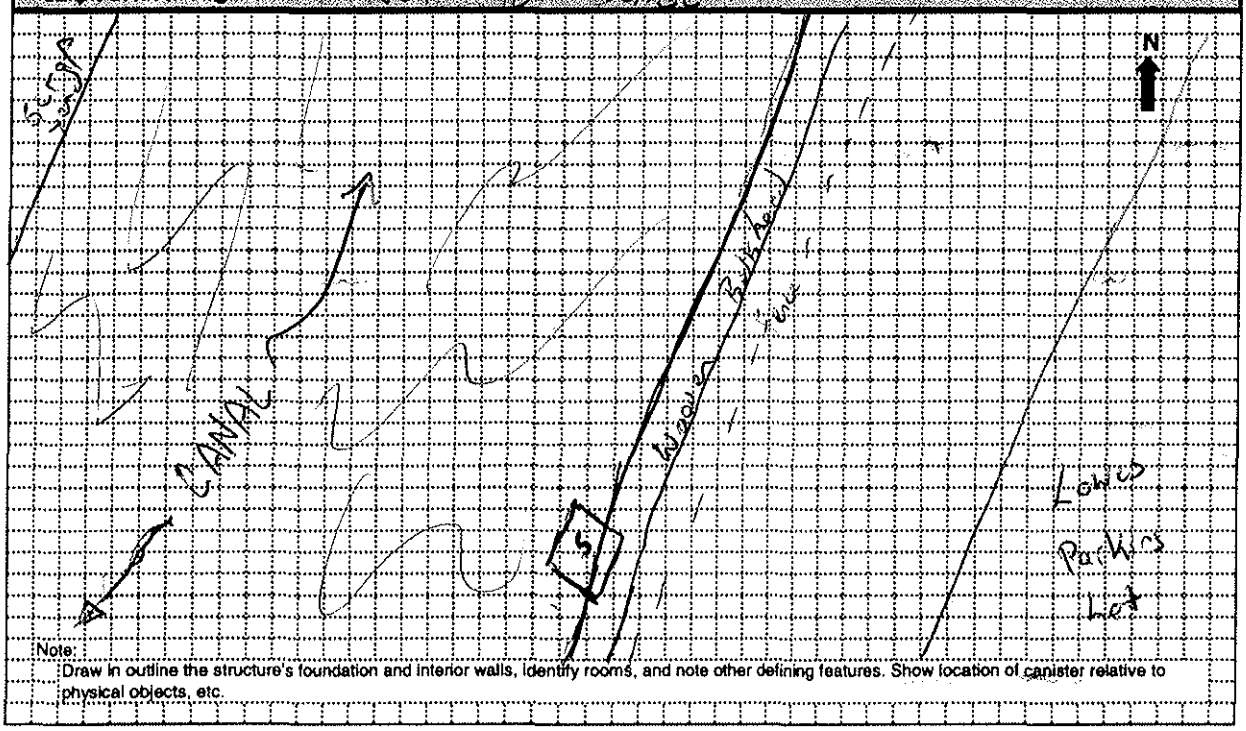
By: MM

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	(MM) Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
508	GC-AS508-C-1	2911	3962	0/-30	24-hour	7/7/10 1843	7/8/10 1452	-5	24-hour
508	GC-AS508-S-1	2745	3767	0/-30	24-hour	7/7/10 1543	7/8/10 1925	-5	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): Possible influence - boat/pedestrian traffic

[5] - Sample location

CH2M HILL *Applied Sciences Laboratory* Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

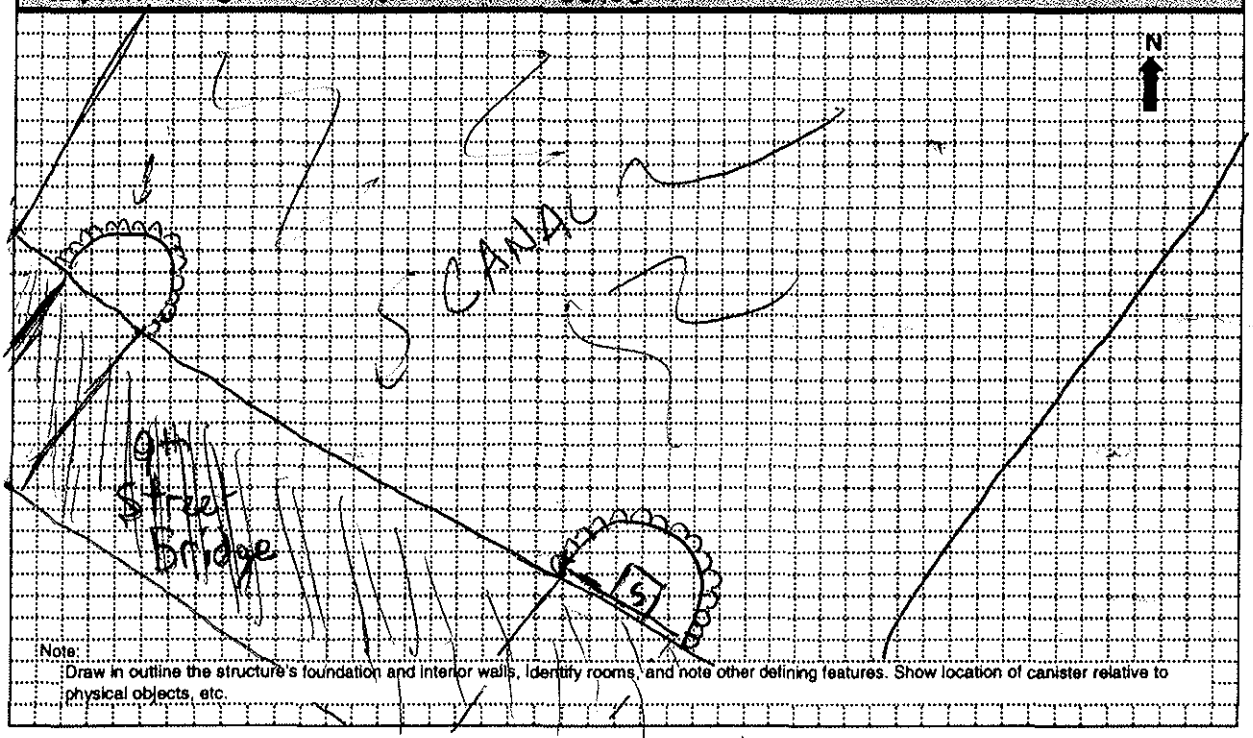
Project Name: Gowanus Canal Superfund Site Project #: 395863.03.03

By: MM Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
509	GC-AS509-C-1	4275	5002	0/-30+	24-hour	7/7/10 1521	7/8/10 1907	-5.5	24-hr.
509	GC-AS509-S-1	3766	3765	0/-30+	24hour	7/7/10 1522	7/8/10 1907	-4.0	24hour

Sample Location Diagram NOT TO SCALE



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - boat traffic

5 - sample location

MM

CH2M HILL *Applied Sciences Laboratory* Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

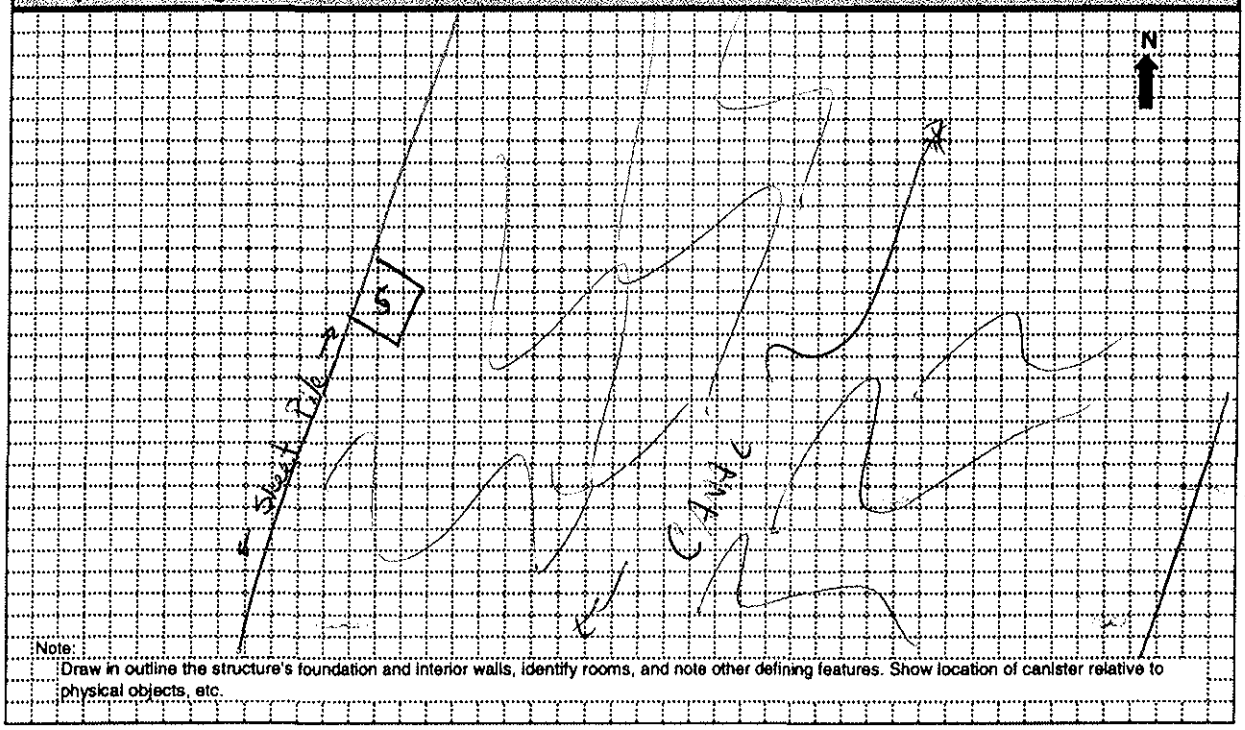
Project Name: Oswego Canal Super Fund Site Project #: 395863.03.03

By: MM Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
510	GC-AS510-C-1	4557	Not Recorded	-8/-30+	24-hour	7/7/10 1457	7/8/10 1918	-9.5	24-hour
510	GC-AS510-S-1	2847	Not Recorded	0/-30	24-hour	7/7/10 1457	7/8/10 1918	-6.0	24-hour

Sample Location Diagram



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): Possible Inflow - boat traffic

[S] - sample location

MM

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Cowanus Canal Superfund site

Project #: 395863.03.03

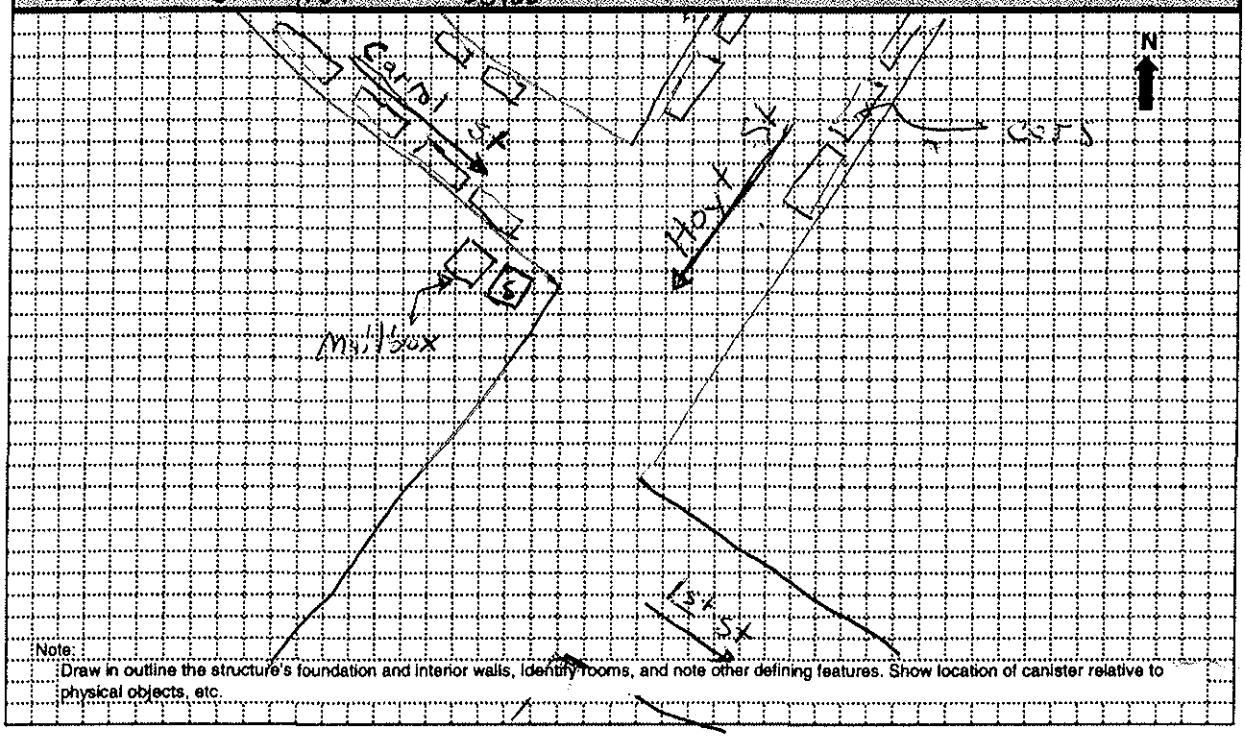
By: MM

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
S11	GC-AS501-S-1	6750	7279808	0/-30+	24-hour	7/7/10 1430	7/8/10 2151	-6	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - vehicle/pedestrian traffic

[5] - sample location

MM

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Cowanus Canal SuperFund Site

Project #: 395863.03.03

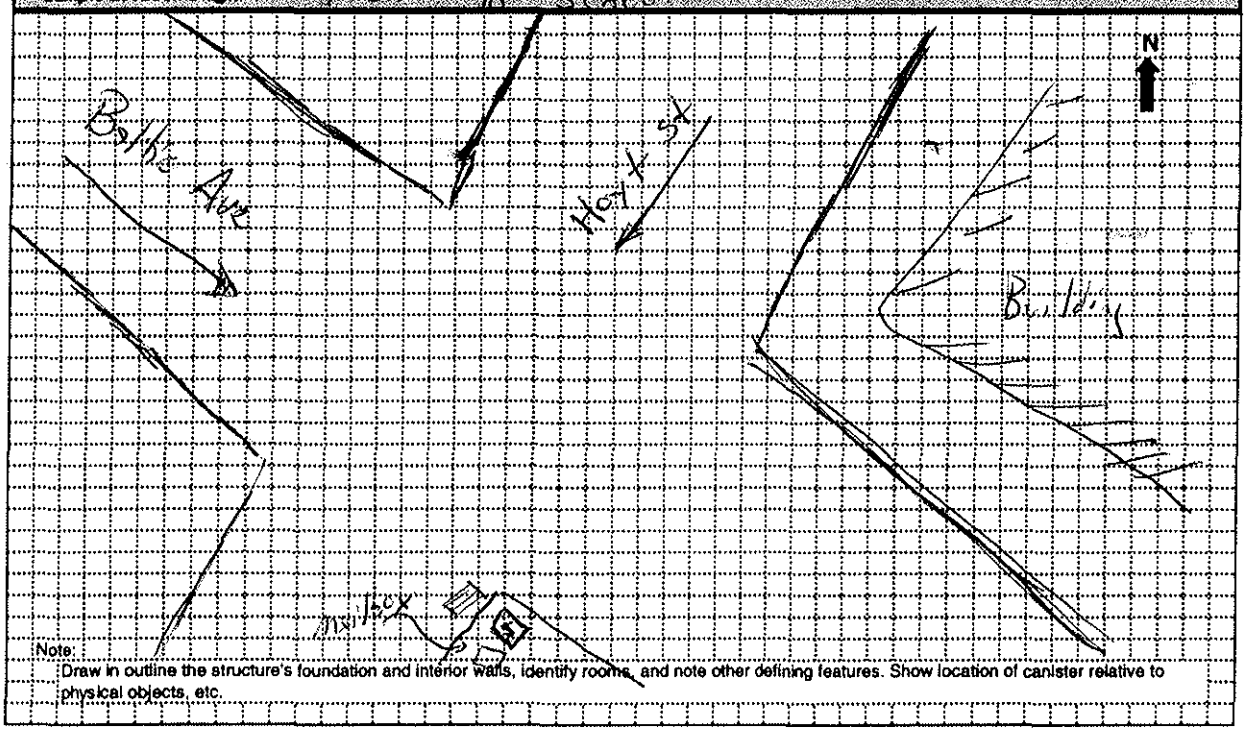
By: MM

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
512	SC-A5512-S-1	2708	2994	0/-30	24-hour	7/7/10 1613	7/8/10 1853	-5.0	24-hour

Sample Location Diagram NOT TO SCALE



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): Possible influence - vehicle/pedestrian traffic - sewer directly underneath 1/2 in front

[S] - sample location

MM

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Jowaus Canal SuperFund Site

Project #: 3958

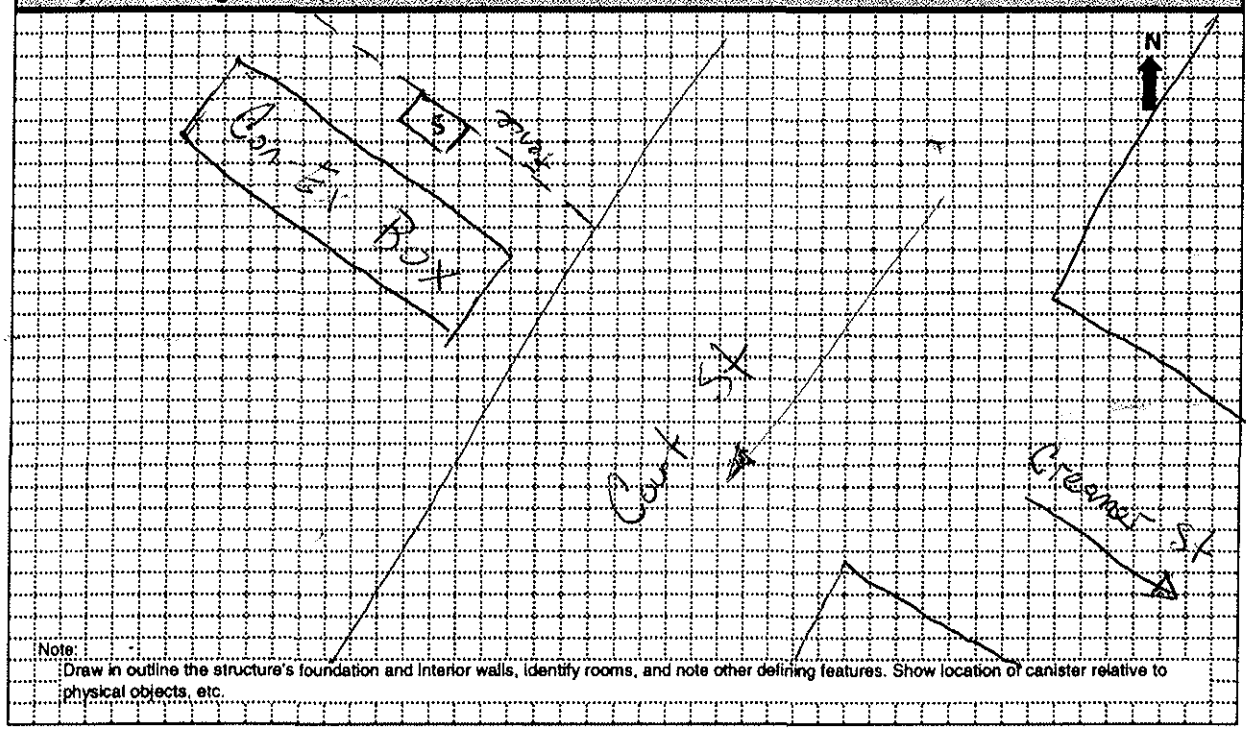
By: MM

Date: 7/7/10 - 7/8/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
513	GC-A5513-S-1	2583	4046	0/-30	24-hour	7/7/10 1950	7/8/10 2141	-6	24-hour

Sample Location Diagram



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence - pedestrian traffic

[S] - sample location

MM

Low Flow Air Sampling Form

Field Technician: Michael Murphy
Date: 7/7/10

Temp (C) — Barometric Pressure — see attachment

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End	
510	S-1	12819	SKC	1513	1435	—	24-hour	5.001	✓					chm070610-27
	C-1	13453	SKC	1513	1538	—	24-hour	4.996	✓					chm070610-19
						Total Time:	24-hour							
509	S-1	12822	SKC	1530	1548	—	24-hour	4.9951	✓					chm 070610-17
	C-1	08770	SKC	1531	1550	—	24 hour	5.0033	✓					chm 070610-4
						Total Time:	24 hour							
508	S-1	13806	SKC	1544	1600	—	24-hour	5.0013	✓					chm 070610-23
	C-1	07749	SKC	1544	1602	—	24-hour	4.9982	✓					chm070610-7
						Total Time:	24-hour							
507	S-1	13542	SKC	1622	1624	—	24-hour	4.9946	✓					chm070610-9
	C-1	03012	SKC	1622	1624	—	24-hour	5.006	✓					chm070610-28
						Total Time:	24-hour							
506	S-1	13541	SKC	1601	1601	—	24-hour	5.001	✓					chm070610-13
	C-1	12801	SKC	1602	1601	—	24-hour	5.0013	✓					chm070610-24
						Total Time:	24-hour							

DR

Low Flow Air Sampling Form

Field Technician: John G. Mathis (HDR)
Date: 7-7-10

Temp (C) — Barometric Pressure — see attachment

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Temp (C) Start	Temp (C) End	Barometric Pressure Start	Barometric Pressure End	
504	GC-AS 504-S-1	13441	SKC	1608	1622	1454	24-hour	5.0086	✓					CHM070610-11
						Total Time:	24-hour							
504	Dup-01	13000	SKC	1608	1622	1454	24-hour	4.9972	✓					CHM070610-15 Street level @ 504
						Total Time:	24-hour							
505	GC-AS 505-C-01	13355	SKC	1658	1703		24-hour	5.016						CHM070610-12
						Total Time:	24-hour							
505	GC-AS 505-S-01	08459	SKC	1658	1705		24-hour	5.001						must hit "mode" to start pump CHM070610-18
						Total Time:	24-hour							
505	Dup-02	13793	SKC	1658	1707			5.016						CHM070610-16
						Total Time:	~Approx 19 hour							

Dup-01: Blind Duplicate of "Street" level sample @ Station 504

Dup-02: Blind Duplicate of "Canal" level sample @ station 505

DK

* This battery pack was replaced in morning, with the new battery pack it ran for 82 minutes & then shut down due to "Flow Fault" Total minutes run was 1025 + 82 = 1107 minutes

Low Flow Air Sampling Form

Field Technician: John G., Matthew M.
Date: 07-09-10

Temp (C) — Barometric Pressure — * see attachment

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Temp (C) Start	Temp (C) End	Barometric Pressure Start	Barometric Pressure End	
502	GC-AS 502-C-1	10390	SKC	1509	1511	1442 (min)	24-hour	5.0012	✓					CHM070610-1
							Total Time:							
502	GC-AS 502-S-1	13418	SKC	1510	1511	1441 (min)	24-hour	4.996	✓					CHM070610-14
							Total Time:							
503	GC-AS 503-C-1	13444	SKC	1539	1539	1440	24-hour	5.0048	✓					CHM070610-2
							Total Time:							
503	GC-AS 503-S-1	08377	SKC	1538	1538	1440	24-hour	4.9942	✓					CHM070610-22
							Total Time:		-					
504	GC-AS 504-C-1	10387	SKC	1608	1622	1454	24-hour	5.0007	✓					CHM070610-26
							Total Time:							

*End of puf tube cracked on 502 canal - used zip tie to secure cable

DR

Low Flow Air Sampling Form

Field Technician: James Balas
Date: 7-7-10

Temp (C) Barometric Pressure

see attachment.

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End	
GC-AS514	-S-1	13565	SKC	1430	1549	—	24-hour	5.006	✓					
							24-hour							
						Total Time:	24-hour							
GC-AS512	-S-1	13450	SKC	1613	1558	—	24-hour	5.0007	✓					CHM070610-4
						Total Time:	24-hour							
GC-AS501	-S-1	13854	SKC	1720	←	1806 1436	24-hour	5.0007	✓					CHM070610-21
						Total Time:	24-hour							
GC-AS501	-C-1	03016	SKC	1734	←	1806	24-hour	4.9972						CHM070610-6
						Total Time:	24-hour							
GC-AS513	-S-1	07748	SKC	1950	←	1517	24-hour	5.0089						CHM070610-10
						Total Time:	24-hour							

DR

Tisch Environmental Inc.
PUF Sampler Calibration

SITE

Location: Gowanus
Sampler: TE-PUF
Date: 7-Jul-10
Tech: M. Murphy

CONDITIONS

Sea Level Pressure (in Hg):	29.95	Corrected Pressure (mm Hg):	761
Temperature (deg F):	88	Temperature (deg K):	304
Seasonal SL Press. (in Hg):	30.00	Corrected Seasonal (mm Hg):	762
Seasonal Temp. (deg F):	90	Seasonal Temp. (deg K):	305

CALIBRATION ORIFICE

Make:	Thermo	Qstd Slope:	9.58590
Model:		Qstd Intercept:	-0.03182
Serial#:		Date Certified:	2005

CALIBRATION

Plate or Test #	H2O (in)	Qstd (m3/min)	FLOW (magn)	FLOW (corrected)	LINEAR REGRESSION	
1	7.20	0.281	70.0	8.29	Slope =	32.3926
2	6.60	0.269	60.0	7.67	Intercept =	-0.9040
3	5.30	0.241	50.0	7.00	Corr. coeff.=	0.9948
4	4.60	0.225	40.0	6.26		
5	3.40	0.194	30.0	5.42	# of Observations	5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

Qstd = standard flow rate
Flow (magn)= reading off of magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)

m = sampler slope
b = sampler intercept
(magn)= magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

Tisch Environmental Inc.
PUF Sampler Calibration

SITE

Location: Gowanus
Sampler: TE-PUF
Date: 7-Jul-10
Tech: M. Murphy

CONDITIONS

Sea Level Pressure (in Hg):	29.95	Corrected Pressure (mm Hg):	761
Temperature (deg F):	88	Temperature (deg K):	304
Seasonal SL Press. (in Hg):	30.00	Corrected Seasonal (mm Hg):	762
Seasonal Temp. (deg F):	90	Seasonal Temp. (deg K):	305

CALIBRATION ORIFICE

Make:	Thermo	Qstd Slope:	9.58590
Model:		Qstd Intercept:	-0.03182
Serial#:		Date Certified:	2005

CALIBRATION

Plate or Test #	H2O (in)	Qstd (m3/min)	FLOW (magn)	FLOW (corrected)	LINEAR REGRESSION	
1	6.90	0.275	70.0	8.29	Slope =	37.4830
2	6.10	0.258	60.0	7.67	Intercept =	-1.9853
3	5.20	0.239	50.0	7.00	Corr. coeff.=	0.9936
4	4.20	0.215	40.0	6.26		
5	3.70	0.202	30.0	5.42	# of Observations	5

Calculations

Qstd = 1/m[Sqrt(H2O(Pa/Pstd)(Tstd/Ta))-b]
Flow (corrected)=Sqrt((magn)(Pa/Pstd)(Tstd/Ta))

Qstd = standard flow rate
Flow (magn)= reading off of magnehelic gauge
Flow (corrected)= corrected flow rate
m = calibrator Qstd slope
b = calibrator Qstd intercept
Ta = actual temperature during calibration (deg K)
Pa = actual pressure during calibration (mm Hg)
Tstd = 298 deg K
Pstd = 760 mm Hg
For subsequent calculation of sampler flow:
1/m([Sqrt(magn)(Pav/760)(298/Tav)]-b)

m = sampler slope
b = sampler intercept
(magn)= magnehelic reading
Tav = daily average temperature
Pav = daily average pressure

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal

Project #: 395863.03.03

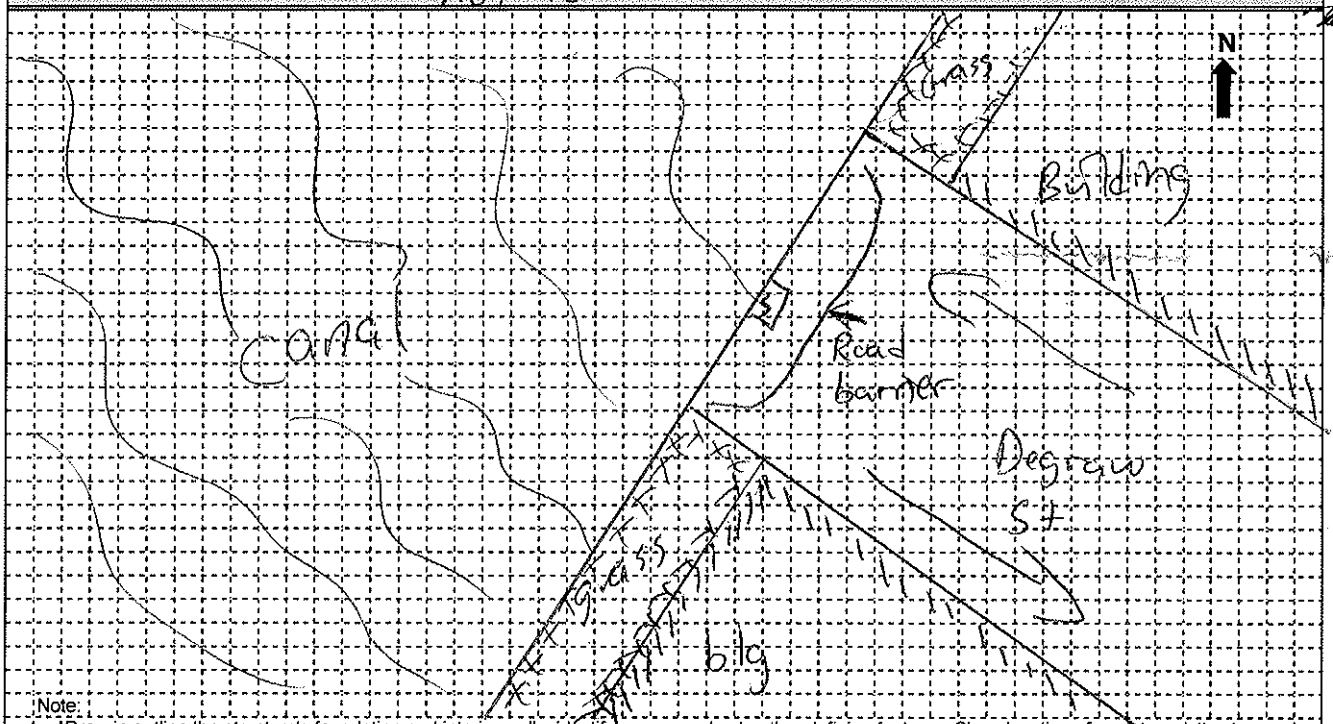
By: JBL RC

Date: 7/28/10 - 7/29/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	7/28/10 Start Date & Time	7/29/10 End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
SG1	GC-AS501-S	3138	4031	+5/-26	—	1202	1041	0	—
SG1	GC-AS501-C	3391	3450	-1/>-30	—	1202	1200	-9	—
						7/28/10	7/29/10		

Sample Location Diagram not to scale



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): possible influence of vehicles

[5] - road barrier

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

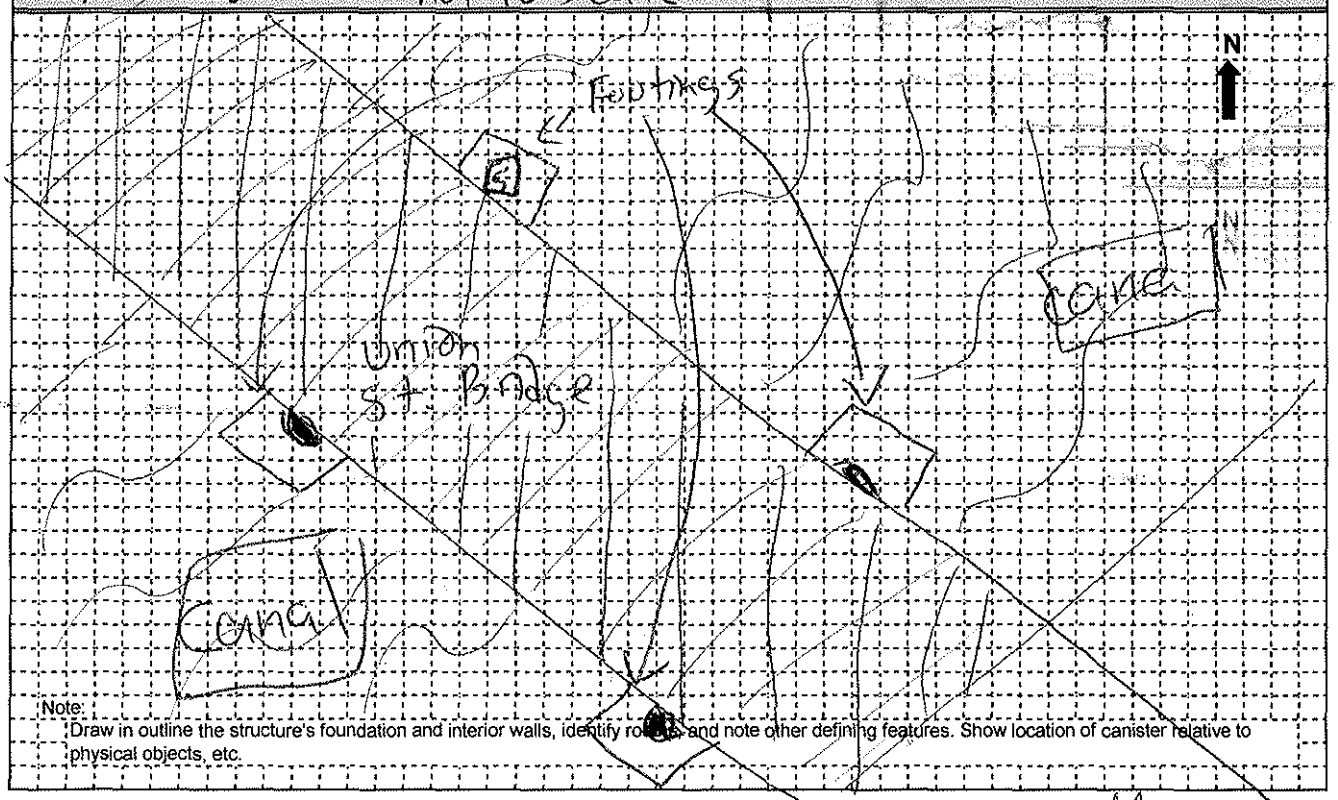
Project Name: Gowanus Canal Project #: 395863

By: JMA / KLD Date: 7/28 - 7/29

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
SD2C	GC-AS602-5	2634	3069	0/28.5	—	7/28/10 0951	7/29/10 1058	6	—
SD2S	GC-AS602-5	2973	4037	-1/30+	—	7/28/10 0951	7/29/10 1146	7	—
						7/28	7/29		

Sample Location Diagram NOT to scale



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances): boat + street traffic

5 - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Bonnus Canal

Project #: 395826.03

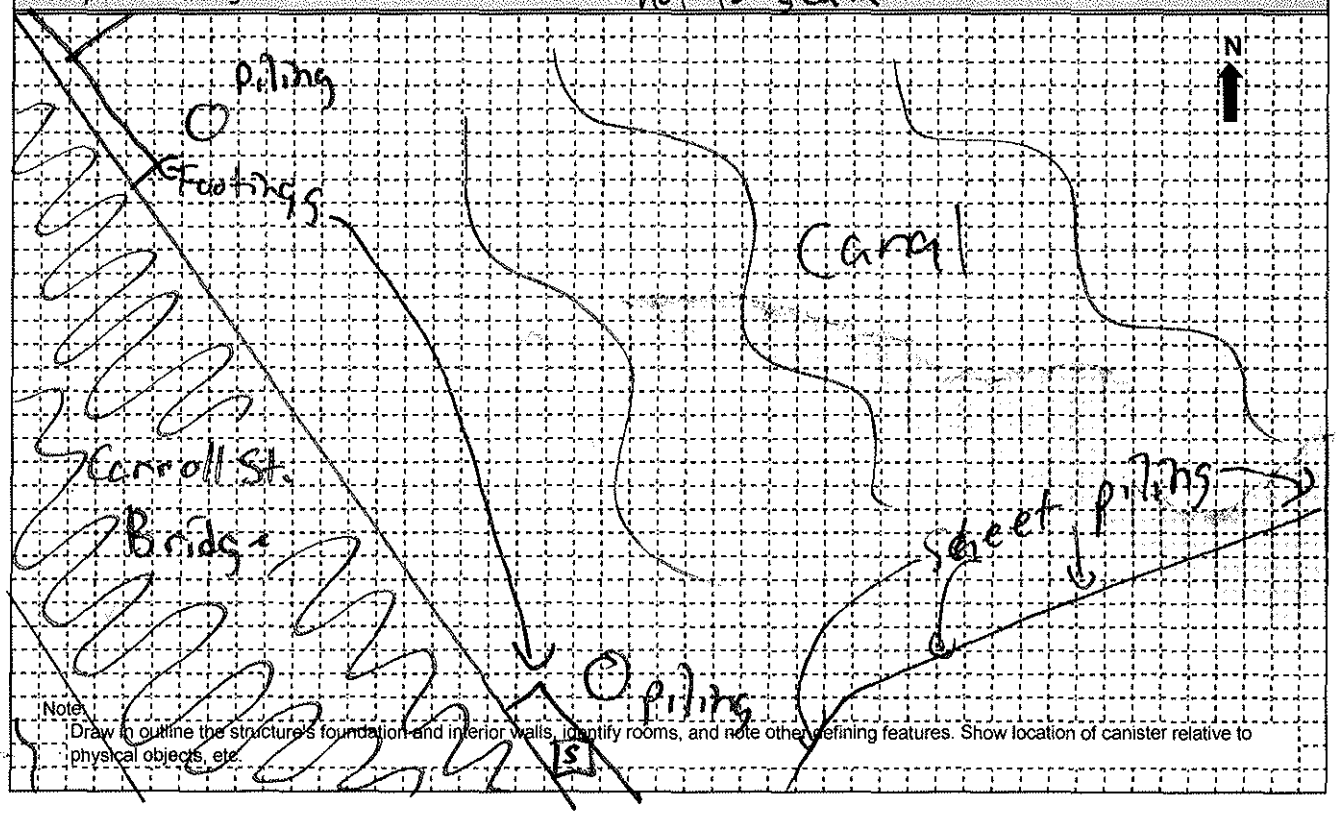
By: JMG / KWD

Date: 7/28 - 7/29

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
503 C	GC-AS503-C-2	3171	4490	30+	—	7/28/10 0925	7/29/10 1152	8	—
503 S	GC-AS503-S-2	2946	3954	30+	—	7/28/10 0925	7/29/10 1107	6	—

Sample Location Diagram



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[5] - sample location

(B2)

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

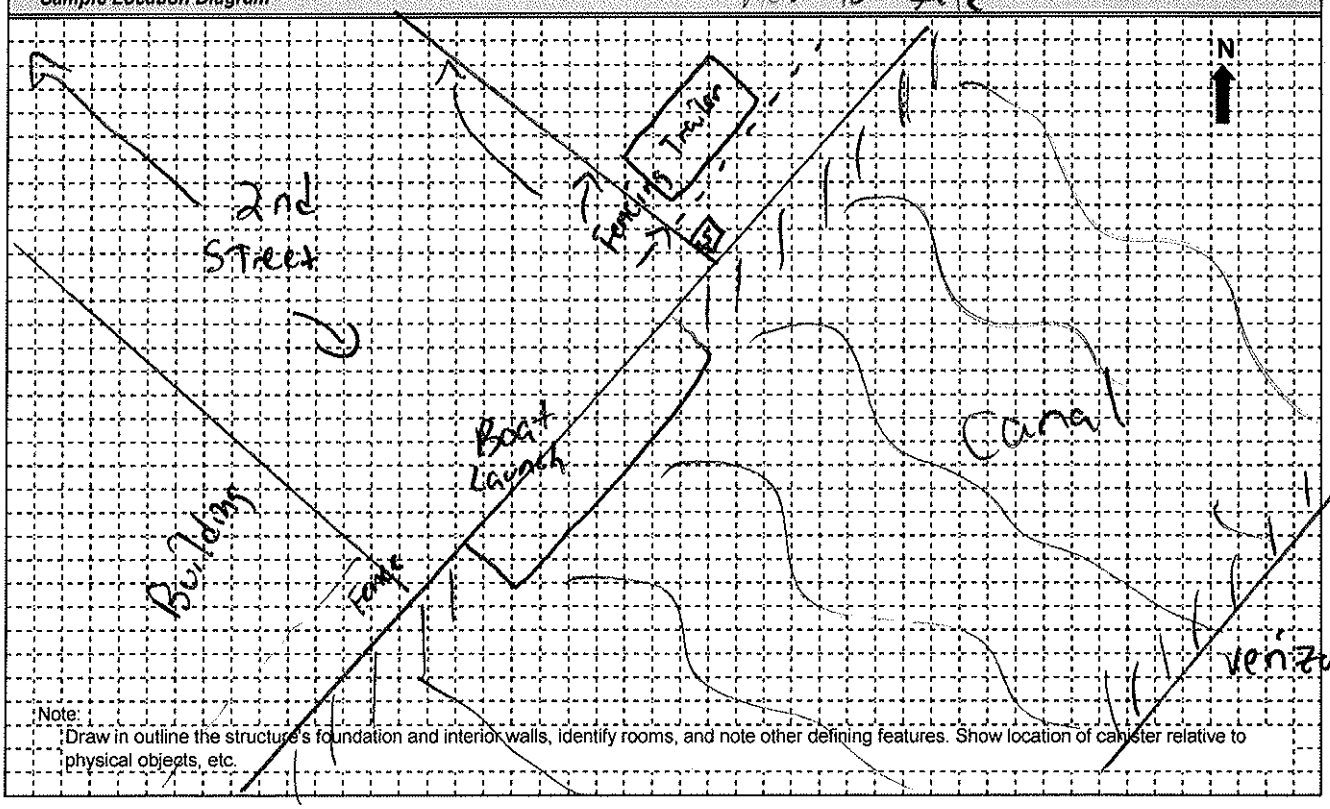
Project Name: Gowanus Canal — Project #: 395823

By: M+M Dan H — Date: 7/28 - 7/29

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
SG4-C	GC-AGS04-C-2	2641	3766	30(+)	—	7/28 0950	7/29 1113	8	— NF
SG4-S	GC-AGS04-S-2	3792	4938	30.0	—	7/28 0950	7/29 1113	6	

Sample Location Diagram



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[5] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Project #: 395863

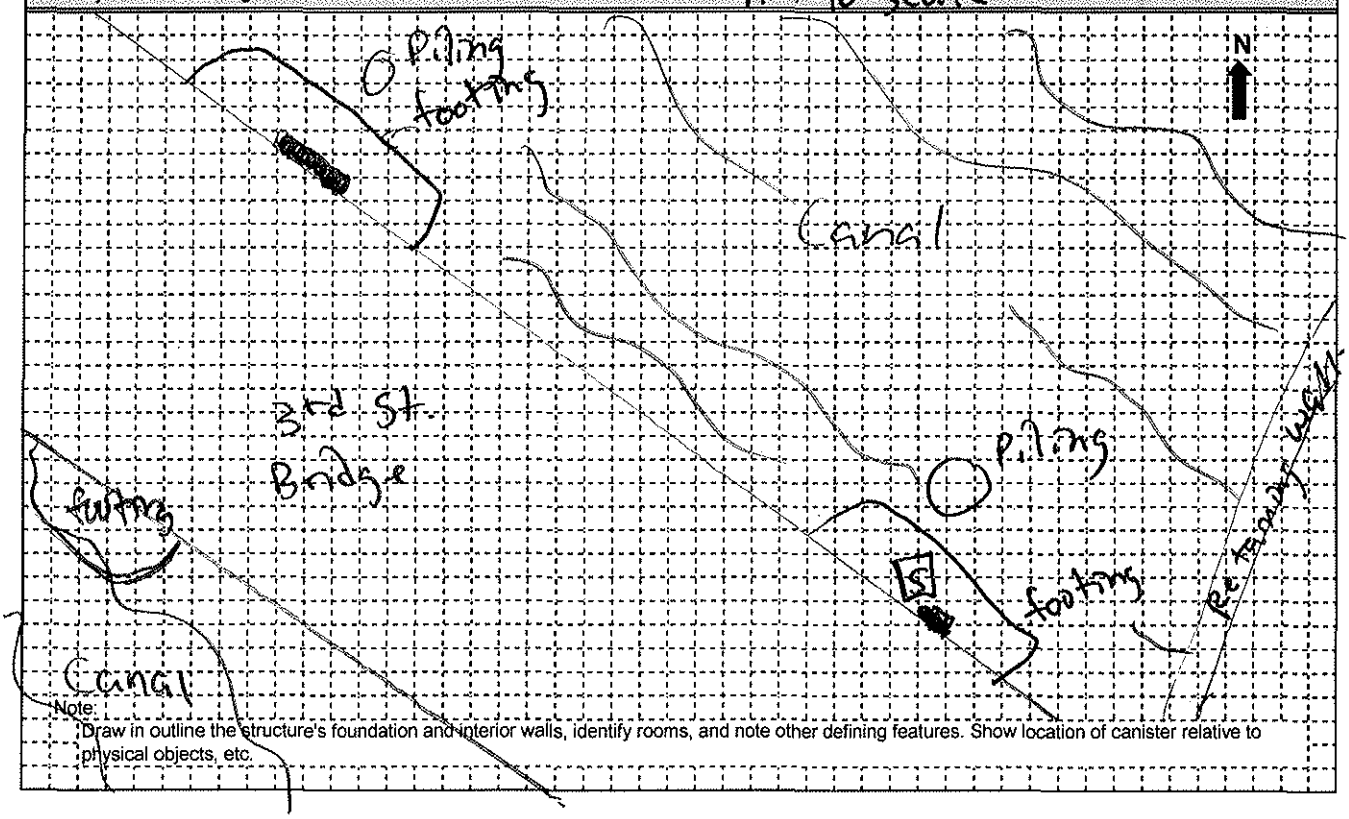
By: JB MA/KD Date: 7/28/10 - 7/29/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
505C-DUP (KD 7/27/10) → (KD 7/28/10)	D-072810-3	3324	4931	0/30+	—	7/28/10 1033	7/29/10 1403	13	—
505S	GC-MS505-S-3	3085	2756	0/30	—	7/28/10 1033	7/29/10 1122	7	—
						7/28/10	7/28/10		
505C (KD)	GC-MS505-C-2	3454	4054	0/29.5	—	7/28/10 1033	7/29/10 1402	5	—

Sample Location Diagram

not to scale



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

5 – sampling location

(JB)

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal Project #: 395863

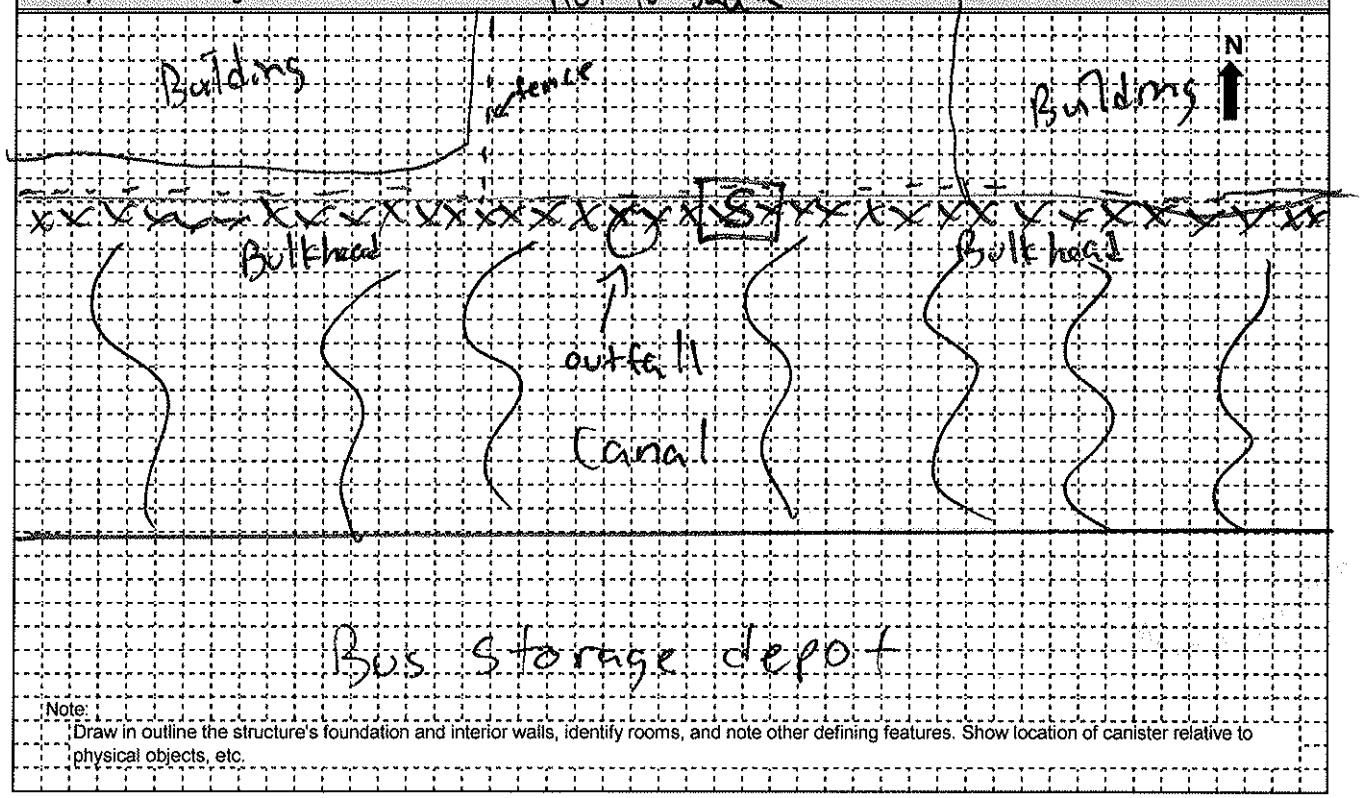
By: ~~JRB~~ JVG/KLD Date: 7/28/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
SD6 C	GC-AS506-C-2	3262	3739	+1/27.5		7/28/10 1123	7/29/10 1353	10 (WV UNDER)	
SD6 S	GC-AS506-S-2	3624	3989	-2/30		7/28/10 1123	7/29/10 1135	7	
						7/28/10	7/29/10		
SD6-S Dup	~~GC-T~~ D-072820100 AY	3531	3022	0/30		1123	7/29/10 1135	7	

No AIHA (not AIHA lab)

Sample Location Diagram



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[S] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

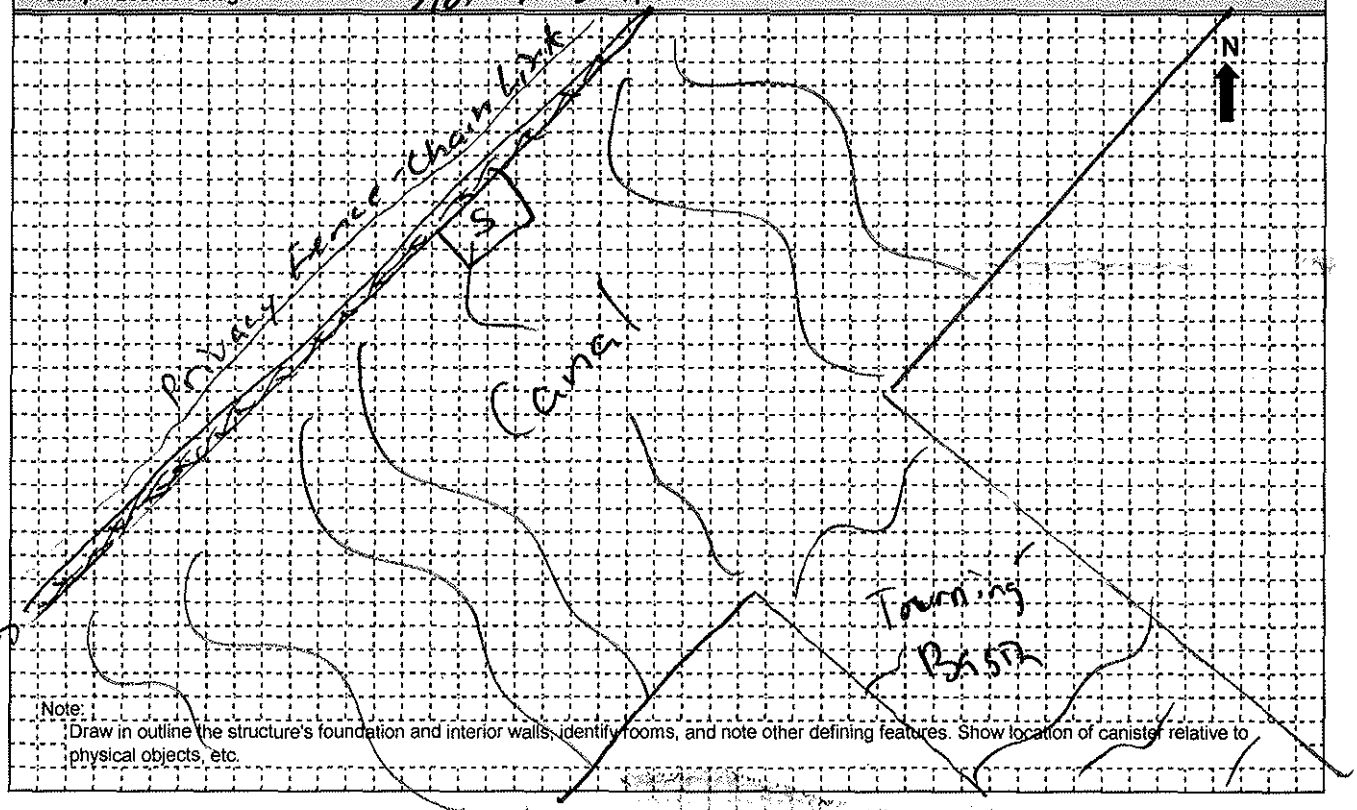
Project Name: Gowanus Canal — Project #: 395863

By: SB JMA/KD — Date: 7/28/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
507 S	GC-A5507-S-2	2602	3107	-2/30"	—	7/28/10 1001	7/29/10 1337	7	—
507 C	GC-A5507-C-2	3620	4750	-1/30"	—	7/10/28 1204	7/29/10 1337	9	—
					7/28/10-7/29/10				
507 Field Blank	FB-072910-01	4271	4731	0	—	7/28 1204	7/29 1338	0	—

Sample Location Diagram not to scale



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[S] - sample location

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

Project Name: Gowanus Canal

Project #: 395863

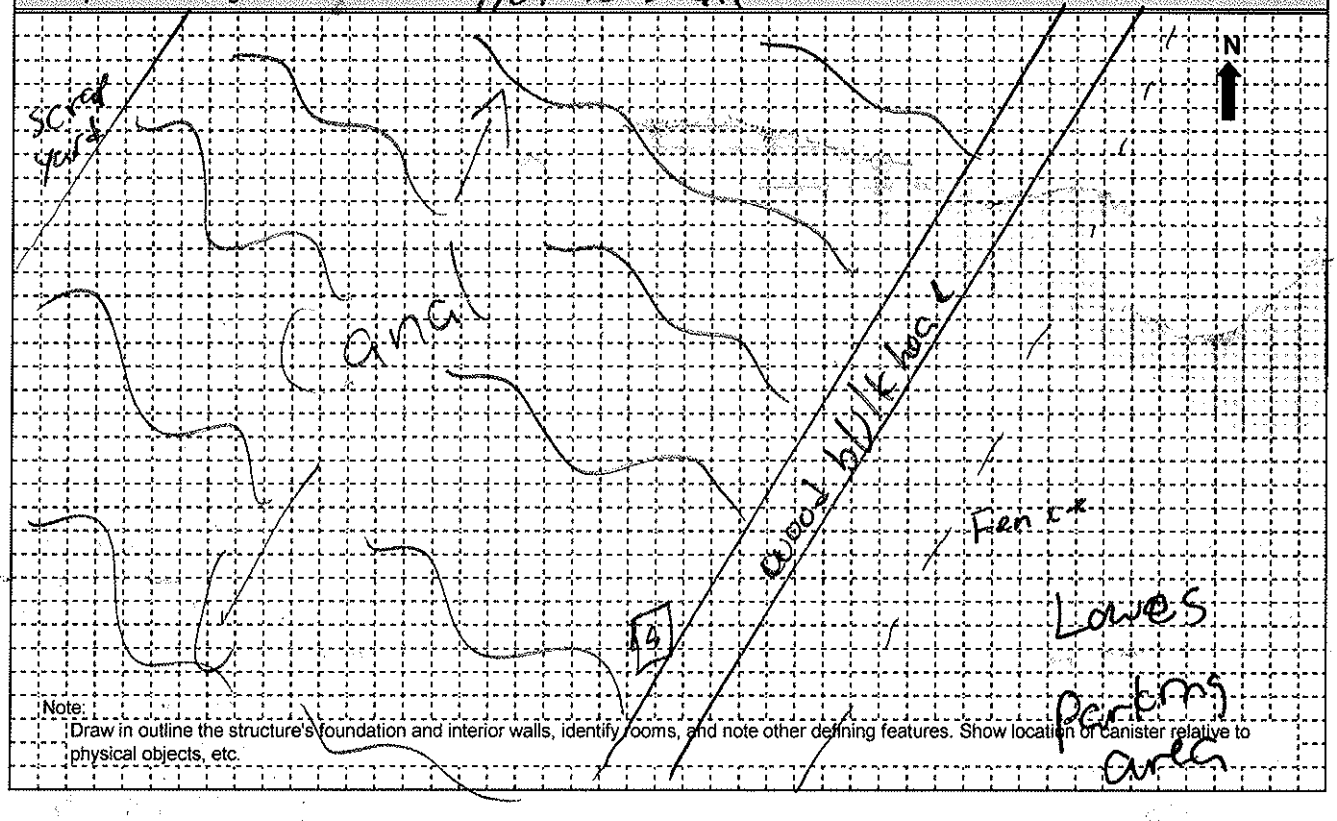
By: Matt M. Don H.

Date: 7/28 - 7/29

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
508-C	GC-AS508-C-3	2701	3747	30	—	7/28 1051	7/29 1250	8.0	—
508-S	GC-AS508-S-3	3550	4764	30	—	7/28 1051	7/29 1130	6.0	—

Sample Location Diagram



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[S] - sample location

CH2M HILL *Applied Sciences Laboratory* Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister)

Project Information

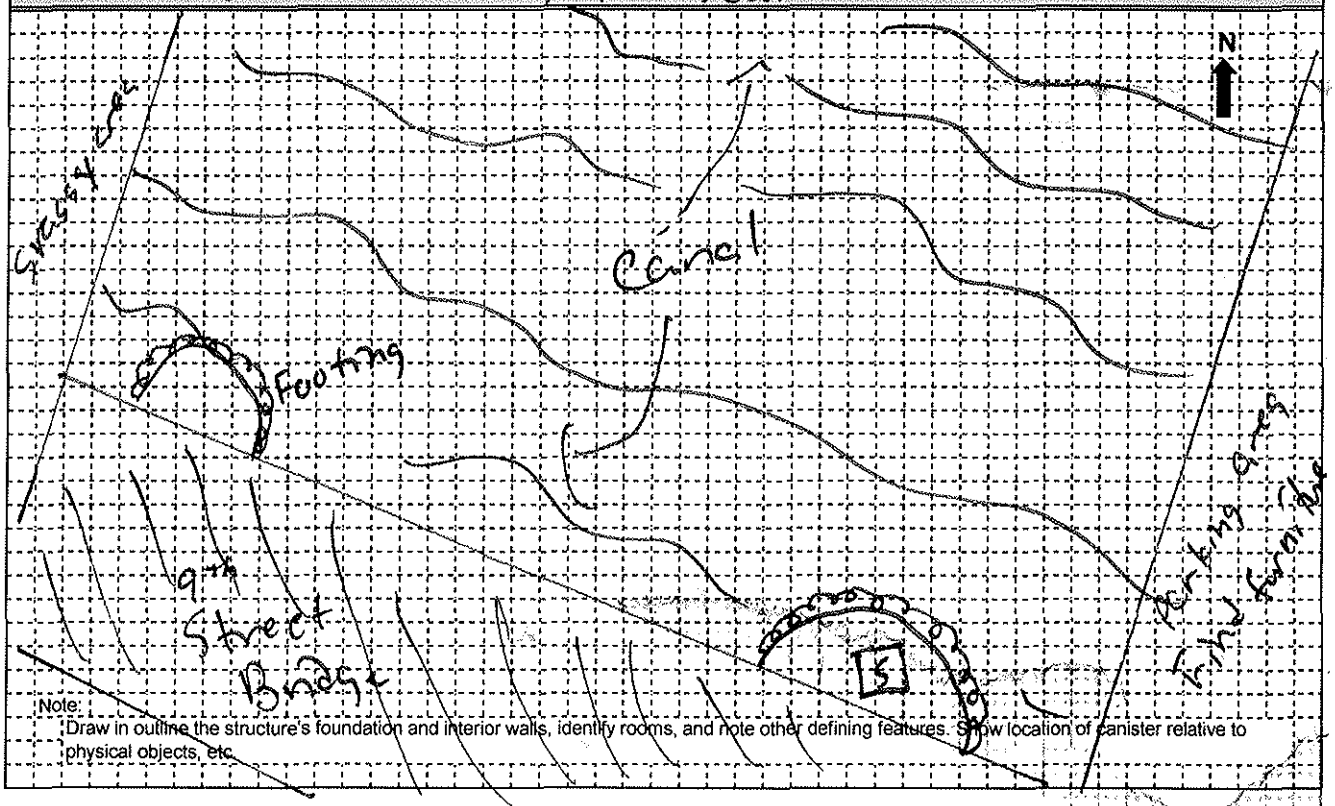
Project Name: Gowanus Canal Project #: 395563

By: Matt M. Dan Date: 7/28-7/29

Sampling Data Log

Sample Location	Field ID (M3)	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)
509-C	~~GC-115504-1-2~~	3317	3742	-2/30	—	7/28/1124	7/29/1304	8.0	—
509-S	GC-115509-S-2	3530	3767	0/30	—	7/28/1124	7/29/1138	7.0	—
						7/28/10	-7/29/10		

Sample Location Diagram not to scale



Note: Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[5] - sample location

(B3)

CH2M HILL *Applied Sciences Laboratory*

Sheet 1 of 1

Ambient Air, Outdoor Air & Crawl Space Air Sampling Log (Summa Canister) (NF = No Filter)

Project Information

Project Name: Gowanus Canal

Project #: 395863

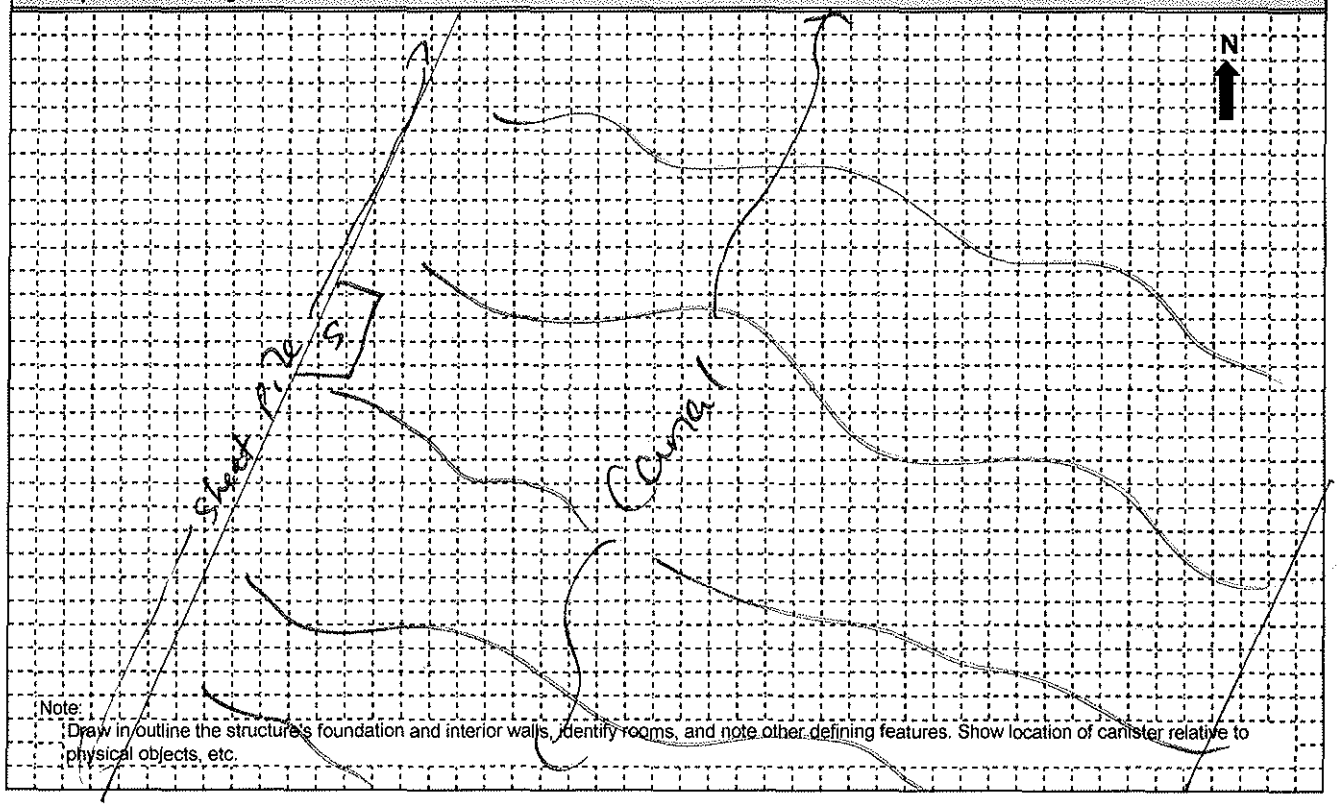
By: MatM. DanH

Date: 7/28/10 - 7/29/10

Sampling Data Log

Sample Location	Field ID	Canister ID	Flow Controller ID	Initial Canister Pressure ("Hg)	Initial Flow Controller Rate (ml/min)	Start Date & Time	End Data & Time	Final Pressure ("Hg)	Final Flow Controller Rate (ml/min)	
S10 - S	GC-AS510-S-2	3814	4045	-1/30(+)	—	7/28/1202	7/29/1215	8.0	—	
S10 - C	GC-AS510-C-2 (NM)	~~3576~~	2840	-1/30(+)	—	7/28/1202	7/29/1428	10.5	—	NF
		3569				7/28/10	7/29/10			

Sample Location Diagram



Note:
Draw in outline the structure's foundation and interior walls, identify rooms, and note other defining features. Show location of canister relative to physical objects, etc.

Other Observations and Comments (note any unique circumstances):

[5] - sampling location

Street level - 3138 (can #)
Canal level - 3391 (can #)

Low Flow Air Sampling Form

Field Technician: J. Balas, R. Clemmon
Date: 7/28/10

Temp (C) Barometric Pressure

PAH Sampler #	LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End
					7/28/10	7/29/10	1019			~4.8				
(S) CHM072210-B4	501	GC-AS	13541 (S)	SKC	1202	1202	NA	24hr	5.00	~~5.00~~	~~Excel~~		excel	table
(G) CHM072210-A9		SOLS / GC-AS	13494 (C)	SKC	1202	1202	1443	24hr	4.99	4.84				
		501-C												
							Total Time:							
							Total Time:							
							Total Time:							
							Total Time:							
							Total Time:							

(13)

Low Flow Air Sampling Form

Field Technician: JMG / KLD
Date: 7/28/10 - 7/29/10

Temp (C) | Barometric Pressure

Tube #	LOCATION	SAMPLE	PUMP # (Pim S/N)	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End
CHM072210 - 42	503S		13793	SKCPCXR8	0927	0959	1454		5.0	5.5+				
CHM072210 - 45	503C		13433	SKCPCXR8	0927	0959	1454		*	5.5+				
							Total Time:							
- 30	502S		13806	SAW	0952	1011	1460		4.99	5.5+				
- 31	~~502C~~		10387	SAW	0952	1011	1460		4.99	5.5+				
	(*) 502C						**Total Time:**							
- 38	505S		12801	SAW	1035	1035	1442		4.99	5.5+				
- 39	505C		12819	SAW	1035	1035	1442		5.00	5.5+				
- 53	505C Dup		13865	SAW	1035	1035	1442		5.00	5.5+				
							Total Time:							
- 52	506S		13000	SAW	1125	1129	1445		5.00	5.2				
- 43	506C		12822	SAW	1125	1129	1445		5.01	5.2				
							Total Time:							
- 48	507S		13543	SAW	1206		1457		5.00	5.5+				
- 35	507C		10743	SAW	1206		97 *		5.01	blowing				
							Total Time:							

* Flow - Start was not on Post-it see excel spread sheet

* Pump checked @ ~~1125~~ on 7/29, not running, battery replaced @ 1042. Pump appeared to do nothing, but was running when picked up @ 1206.

Low Flow Air Sampling Form

Field Technician: Matt M. Don. H.
Date: 7/28/10

Temp (C) | Barometric Pressure

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End
			PAH # 55 - (M3)								*See excel table		
504-S		10390	CHM07231O-55	0951	0952		1443	5.001		0648			
						Total Time:							
			PAH # 32 - (M3)										
504-C		08458	CHM07231O-32	0951	1300*	28 min	28	5.01		0645			
		07770	"	1323	0958		0857	5.00					
						Total Time:							
			PAH #										
504-SD		13418	CHM07231O-29	0951	0956		1157	5.00					
						Total Time:							
			PAH #										
508-S		08377	CHM07231O-56	1052	1124		1473	5.01					
						Total Time:							
			PAH #										
508-C		13355	CHM07231O-41	1052	1124		1473	5.0					
						Total Time:							

* See Back for Comment

Battery issue

Battery issue

1056 attempted to pull PAH pump but had to move due to traffic

(OB)

504C : When we checked 504C @ ~1300 we noticed that the 504C pump was running but it only showed 18 min run time (the other 2 in the cage were @ ~190 min)
I hit "Hold" button & it stopped, I hit "Start" & it ran for ~2 min before it stopped again (it was not showing Lo Batt or any problems ... possibly a "set-up configuration
Contacted CH2M & decided to replace pump
CH2M brought new pump (07770).
The Initial pump ran for 28 min before we switched it out

Low Flow Air Sampling Form

Field Technician: Matt M, Don H.
Date: 7/28/10

Temp (C) | Barometric Pressure

LOCATION	SAMPLE	PUMP #	PUMP TYPE	START TIME	END TIME	TOTALIZER READING	RUN TIME	FLOW START (Lpm)	FLOW END (Lpm)	Start	End	Start	End
			PAH B						X see excel table				
509-S		13547	CHM077310-54	1125	1140		1454	5.01		0633			
						Total Time:							
			PAH B										
509-C		03016	CHM077310-46	1125	1140		1454	5.0					
						Total Time:							
			PAH B										
510-C		13441	CHM077310-47	1202	1203		1441	4.99					
						Total Time:							
			PAH B										
510-S		13450	CHM077310-44	1202	1203		1441	4.99		0657			
						Total Time:							
						Total Time:							

(B)

Appendix D
Field Documentation

D-08 – Air Sampling Field Forms

USEPA Air Sampling Field Summary Tables

Page Intentionally Left Blank

Appendix D-8
VOC Sampling Summary - Round 1
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Canister ID	Flow Controller ID	Initial Pressure (PSI) [1]	Final Pressure (PSI)	Start Date	Start Time	End Date	End Time
GC-AS501-S-1	2907	2839	-28	-10	7/7/2010	1720	7/9/2010	914
GC-AS501-C-1	2798	4999	-20	-5	7/7/2010	1734	7/8/2010	1927
GC-AS502-S-1	2537	3938	-29.5	-4	7/7/2010	1512	7/8/2010	1731
GC-AS502-C-1	3090	3055	-29.5	-3.5	7/7/2010	1510	7/8/2010	1742
GC-AS503-S-1	3431	3130	-29.5	-4	7/7/2010	1540	7/8/2010	1804
GC-AS503-C-1	2754	4764	> -30	-4.5	7/7/2010	1540	7/8/2010	1841
GC-AS504-S-1	3927	3993	-29	-6.5	7/7/2010	1610	7/8/2010	1909
GC-AS504-C-1	2854	4768	-30	-5	7/7/2010	1610	7/8/2010	1811
GC-AS505-S-1	4434	4748	> -30	-8	7/7/2010	1706	7/8/2010	1935
GC-AS505-C-1	3533	3959	-29	-6	7/7/2010	1706	7/8/2010	1822
GC-AS506-S-1	4927	3954	> -30	-4	7/7/2010	1555	7/8/2010	1815
GC-AS506-C-1	2693	4747	> -30	-7	7/7/2010	1555	7/8/2010	1824
GC-AS507-S-1	3370	4520	> -30	-4.5	7/7/2010	1614	7/8/2010	1920
GC-AS507-C-1	2689	3934	-27	-4	7/7/2010	1614	7/8/2010	1647
GC-AS508-S-1	2745	3767	-30	-5	7/7/2010	1543	7/8/2010	1925
GC-AS508-C-1	2911	2962	-30	-5	7/7/2010	1543	7/8/2010	1452
GC-AS509-S-1	3766	3765	> -30	-4	7/7/2010	1522	7/8/2010	1907
GC-AS509-C-1	4275	5002	> -30	-5.5	7/7/2010	1521	7/8/2010	1907
GC-AS510-S-1	2847	NA	-30	-6	7/7/2010	1457	7/8/2010	1918
GC-AS510-C-1	4557	NA	> -30	-9.5	7/7/2010	1457	7/8/2010	1918
GC-AS511-S-1	6750	SN: 7279808	> -30	-6	7/7/2010	1430	7/8/2010	2151
GC-AS512-S-1	2708	2994	-30	-5	7/7/2010	1613	7/8/2010	1853
GC-AS513-S-1	2583	4046	-30	-6	7/7/2010	1950	7/8/2010	1241
D-07082010-01	3164	4537	> -30	-5.5	7/7/2010	1706	7/8/2010	1821
D-07082010-02	3351	3026	> -30	-7	7/7/2010	1555	7/8/2010	1823
FB-07082010-01	4142	3183	0	0	7/7/2010	1615	7/8/2010	1920

[1] - Initial pressure recorded immediately after opening air canister
PSI = Pounds per Square Inch

Appendix D-8
VOC Sampling Summary - Round 2
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Canister ID	Flow Controller ID	Initial Pressure (PSI) [1]	Final Pressure (PSI)	Start Date	Start Time	End Date	End Time
GC-AS501-S-2	3138	4031	-20	0	7/28/2010	1202	7/29/2010	1041
GC-AS501-C-2	3138	4031	> -30	-9	7/28/2010	1202	7/29/2010	1200
GC-AS502-S-2	2973	4037	> -30	-7	7/28/2010	951	7/29/2010	1146
GC-AS502-C-2	2634	3069	-28.5	-6	7/28/2010	951	7/29/2010	1058
GC-AS503-S-2	2946	3954	> -30	-6	7/28/2010	925	7/29/2010	1107
GC-AS503-C-2	3271	4490	> -30	-8	7/28/2010	925	7/29/2010	1152
GC-AS504-S-2	3792	4938	-30	-6	7/28/2010	950	7/29/2010	1113
GC-AS504-C-2	2641	3766	> -30	-8	7/28/2010	950	7/29/2010	1113
GC-AS505-S-2	3085	2756	-30	-7	7/28/2010	1033	7/29/2010	1122
GC-AS505-C-2	3654	4054	-29.5	-5	7/28/2010	1033	7/29/2010	1403
GC-AS506-S-2	3624	3989	-30	-7	7/28/2010	1123	7/29/2010	1135
GC-AS506-C-2	3262	3739	27.5	-10	7/28/2010	1123	7/29/2010	1353
GC-AS507-S-2	2602	3107	> -30	-7	7/28/2010	1204	7/29/2010	1337
GC-AS507-C-2	3620	4750	> -30	-9	7/28/2010	1204	7/29/2010	1337
GC-AS508-S-2	3550	4764	> -30	-6	7/28/2010	1051	7/29/2010	1132
GC-AS508-C-2	2701	3747	> -30	-8	7/28/2010	1051	7/29/2010	1256
GC-AS509-S-2	3530	3767	> -30	-7	7/28/2010	1124	7/29/2010	1138
GC-AS509-C-2	3317	3742	> -30	-8	7/28/2010	1124	7/29/2010	1304
GC-AS510-S-2	3014	4045	> -30	-8	7/28/2010	1202	7/29/2010	1215
GC-AS510-C-2	3569	2840	> -30	-10.5	7/28/2010	1202	7/29/2010	1420
D-07292010-01	3324	4931	> -30	-13	7/28/2010	1033	7/29/2010	1403
D-07082010-02	3531	3022	-30	-7	7/28/2010	1123	7/29/2010	1135
FB-07292010-01	4271	4731	0	0	7/28/2010	1204	7/29/2010	1338

Notes:

[1] - Initial pressure recorded immediately after opening air canister

PSI = Pounds per Square Inch

Appendix D-8
PAH Sampling Summary - Round 1
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Start Date	Start Time	End Date	End Time	Average Flow Rate (Liters per minute)	Total Length of Sampling Period (minutes)	Total Approximate Volume of Air Pumped through Tube (Liters)
GC-AS501-S-1	7/7/2010	1720	7/8/2010	1806	5.0007	1486	7431.0
GC-AS501-C-1	7/7/2010	1734	7/8/2010	1806	4.9972	1472	7355.9
GC-AS502-S-1	7/7/2010	1510	7/8/2010	1511	4.996	1441	7199.2
GC-AS502-C-1	7/7/2010	1509	7/8/2010	1511	5.0012	1442	7211.7
GC-AS503-S-1	7/7/2010	1538	7/8/2010	1538	4.992	1440	7188.5
GC-AS503-C-1	7/7/2010	1539	7/8/2010	1539	5.0048	1440	7206.9
GC-AS504-S-1	7/7/2010	1608	7/8/2010	1622	5.0007	1454	7271.0
GC-AS504-C-1	7/7/2010	1608	7/8/2010	1622	5.0026	1454	7273.8
GC-AS505-S-1	7/7/2010	1658	7/8/2010	1705	5.001	1447	7236.4
GC-AS505-C-1	7/7/2010	1658	7/8/2010	1703	5.016	1445	7248.1
GC-AS506-S-1	7/7/2010	1601	7/8/2010	1601	5.001	1440	7201.4
GC-AS506-C-1	7/7/2010	1602	7/8/2010	1601	5.0013	1439	7196.9
GC-AS507-S-1	7/7/2010	1622	7/8/2010	1624	4.9946	1442	7202.2
GC-AS507-C-1	7/7/2010	1622	7/8/2010	1624	5.006	1442	7218.7
GC-AS508-S-1	7/7/2010	1544	7/8/2010	1600	5.0013	1456	7281.9
GC-AS508-C-1	7/7/2010	1544	7/8/2010	1602	4.9992	1458	7288.8
GC-AS509-S-1	7/7/2010	1530	7/8/2010	1548	4.9951	1458	7282.9
GC-AS509-C-1	7/7/2010	1531	7/8/2010	1550	5.0033	1459	7299.8
GC-AS510-S-1	7/7/2010	1513	7/8/2010	1435	5.001	1402	7011.4
GC-AS510-C-1	7/7/2010	1513	7/8/2010	1538	4.996	1465	7319.1
GC-AS511-S-1	7/7/2010	1430	7/8/2010	1547	5.006	1517	7594.1
GC-AS512-S-1	7/7/2010	1613	7/8/2010	1558	5.0007	1425	7126.0
GC-AS513-S-1	7/7/2010	1950	7/8/2010	1517	5.0089	1233	6176.0
D-07082010-01	7/7/2010	1608	7/8/2010	1622	5.000	1454	7270.0
D-07082010-02	7/7/2010	1658	7/8/2010	1123	5.000	1059	5295.0
FB-07082010-01	7/7/2010	1630	7/8/2010	1630	0	1440	0.0

Appendix D-8
PAH Sampling Summary - Round 1
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Test America ID	Temp Start (F)	Barometric Pressure Start (Inches)	Temp End (F)	Barometric Pressure End (Inches)	Comments
GC-AS501-S-1	CHM070610-21	89	29.953	83	29.969	
GC-AS501-C-1	CHM070610-6	89	29.953	83	29.969	
GC-AS502-S-1	CHM070610-14	92	29.956	87	29.988	
GC-AS502-C-1	CHM070610-1	92	29.956	87	29.988	
GC-AS503-S-1	CHM070610-22	92	29.956	86	29.989	
GC-AS503-C-1	CHM070610-2	92	29.956	86	29.989	
GC-AS504-S-1	CHM070610-20	90	29.955	84	29.986	
GC-AS504-C-1	CHM070610-11	90	29.955	84	29.986	
GC-AS505-S-1	CHM070610-18	89	29.954	83	29.974	
GC-AS505-C-1	CHM070610-12	89	29.954	83	29.974	
GC-AS506-S-1	CHM070610-13	91	29.955	85	29.986	
GC-AS506-C-1	CHM070610-24	91	29.955	85	29.986	
GC-AS507-S-1	-	90	29.955	84	29.986	
GC-AS507-C-1	CHM070610-28	90	29.955	84	29.986	
GC-AS508-S-1	CHM070610-23	93	29.956	85	29.986	
GC-AS508-C-1	CHM070610-7	93	29.956	85	29.986	
GC-AS509-S-1	CHM070610-17	92	29.956	86	29.989	
GC-AS509-C-1	-	92	29.956	86	29.989	
GC-AS510-S-1	CHM070610-27	92	29.956	86	29.987	
GC-AS510-C-1	CHM070610-19	92	29.956	86	29.989	
GC-AS511-S-1	-	97	29.953	86	29.989	
GC-AS512-S-1	CHM070610-4	90.5	29.955	85	29.986	
GC-AS513-S-1	CHM070610-10	85	29.955	87	29.988	*pump stopped sometime between 1517 and 1930. End time noted as 1517 which was the last known time when the pump was running.
D-07082010-01	-	90.5	29.855	84	29.986	
D-07082010-02	-	89	29.954	84	29.986	*total time pump ran = 18.45 hours
FB-07082010-01	-	88.3	29.952	84	29.986	

Appendix D-8
PAH Sampling Summary - Round 2
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Start Date	Start Time	End Date	End Time	Average Flow Rate (Liters per minute)	Total Length of Sampling Period (minutes)	Total Approximate Volume of Air Pumped through Tube (Liters)
GC-AS501-S-2	7/28/2010	12:02	7/29/2010	12:02	4.90	1440	7056.0
GC-AS501-C-2	7/28/2010	12:02	7/29/2010	12:02	4.92	1440	7077.6
GC-AS502-S-2	7/28/2010	9:52	7/29/2010	9:39	4.87	1454	7081.0
GC-AS502-C-2	7/28/2010	9:52	7/29/2010	9:39	4.86	1454	7059.2
GC-AS503-S-2	7/28/2010	9:27	7/29/2010	9:39	4.86	1454	7059.2
GC-AS503-C-2	7/28/2010	9:27	7/29/2010	9:39	4.85	1454	7044.6
GC-AS504-S-2	7/28/2010	9:51	7/29/2010	9:52	4.81	1454	6986.5
GC-AS504-C-2	7/28/2010	9:51	7/29/2010	9:52	4.90	885	4336.5
GC-AS505-S-2	7/28/2010	10:35	7/29/2010	10:35	4.90	1442	7058.6
GC-AS505-C-2	7/28/2010	10:35	7/29/2010	10:35	4.91	1442	7080.2
GC-AS506-S-2	7/28/2010	11:25	7/29/2010	11:29	4.90	1445	7080.5
GC-AS506-C-2	7/28/2010	11:25	7/29/2010	11:29	4.87	1445	7037.2
GC-AS507-S-2	7/28/2010	12:06	7/29/2010	12:21	4.93	1457	7175.7
GC-AS507-C-2	7/28/2010	12:06	7/29/2010	12:06	5.01	97 ?	NA
GC-AS508-S-2	7/28/2010	10:52	7/29/2010	11:24	4.86	1472	7146.6
GC-AS508-C-2	7/28/2010	10:52	7/29/2010	11:24	4.83	1472	7102.4
GC-AS509-S-2	7/28/2010	11:25	7/29/2010	11:40	4.89	1455	7107.7
GC-AS509-C-2	7/28/2010	11:25	7/29/2010	11:40	4.86	1455	7064.0
GC-AS510-S-1	7/28/2010	12:02	7/29/2010	12:03	4.89	1441	7046.5
GC-AS510-C-1	7/28/2010	12:02	7/29/2010	12:03	4.86	1441	7003.3
D-07292010-01	7/28/2010	10:35	7/29/2010	10:35	4.87	1442	7022.5
D-07292010-02	7/28/2010	9:51	7/29/2010	9:56	4.88	1157	5646.2
FB-07292010-01	7/28/2010	12:00	7/29/2010	12:00	NA	1440	NA

Appendix D-8
PAH Sampling Summary - Round 2
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Test America ID	Temp Start (F)	Barometric Pressure Start (Inches)	Temp End (F)	Barometric Pressure End (Inches)	Comments
GC-AS501-S-2	CHM072210-34	87	29.971	85	29.811	
GC-AS501-C-2	CHM072210-49	87	29.971	85	29.811	*pump display screen malfunctioning
GC-AS502-S-2	CHM072210-30	84	29.984	78	29.817	
GC-AS502-C-2	CHM072210-31	84	29.984	78	29.817	
GC-AS503-S-2	CHM072210-42	82	29.987	78	29.82	
GC-AS503-C-2	CHM072210-45	82	29.987	78	29.82	
GC-AS504-S-2	CHM072210-55	84	29.984	78	29.82	
GC-AS504-C-2	CHM072210-32	84	29.984	78	29.82	battery issue
GC-AS505-S-2	CHM072210-38	86	29.973	83	29.878	
GC-AS505-C-2	CHM072210-39	86	29.973	83	29.878	
GC-AS506-S-2	CHM072210-52	85	29.973	83	29.816	
GC-AS506-C-2	CHM072210-43	85	29.973	83	29.816	
GC-AS507-S-2	CHM072210-48	87	29.971	86	29.807	
GC-AS507-C-2	CHM072210-35	87	29.971	85	29.811	Pump appeared to running sporadically. Run time unknown.
GC-AS508-S-2	CHM072210-56	85	29.975	83	29.816	Attempted to pull PAH pump earlier but had to move boat due to boat traffic
GC-AS508-C-2	CHM072210-41	85	29.975	83	29.816	
GC-AS509-S-2	CHM072210-54	85	29.973	85	29.811	
GC-AS509-C-2	CHM072210-46	85	29.973	85	29.811	
GC-AS510-S-1	CHM072210-44	87	29.971	85	29.811	
GC-AS510-C-1	CHM072210-47	87	29.971	85	29.811	
D-07292010-01	CHM072210-53	86	29.973	83	29.817	
D-07292010-02	CHM072210-29	84	29.984	78	29.818	
FB-07292010-01	CHM072210-	87	29.971	NA	NA	

Appendix D-8
PCB Sampling Summary - Round 1
Gowanus Canal Remedial Investigation
Brooklyn, NY

Sample Location	Start Date	Start Time	End Date	End Time	Flow Rate (Liters per minute)	Total Length of Sampling Period (min)	Total Volume of Air Pumped through Tube (Liters)
GC-AS506-S-1	7/7/2010	1935	7/8/2010	1935	250	1440	360000
D-07082010-03	7/7/2010	1935	7/8/2010	1938	250	1443	360750
FB-07082010-02	7/7/2010	1930	7/8/2010	1930	0	1443	0

Sample Location	Temp Start (F)	Barometric Pressure Start (Inches)	Temp End (F)	Barometric Pressure End (Inches)	Comments
GC-AS506-S-1	85	29.955	79	29.969	
D-07082010-03	85	29.955	79	29.969	
FB-07082010-02	85	29.955	79	29.969	

Page Intentionally Left Blank