APPENDIX – C

LABORATORY ANALYTICAL REPORTS

ADVANCED SITE RESTORATION, LLC
ENVIRONMENTAL SERVICES

Data Usability Summary Report

Project:	4566 Broadway
Sampling Contractor:	Advanced Site Restoration, LLC
Analytical Laboratory:	York Analytical Laboratories Inc.
Analytical Method:	Cartaret Protocol
Sample Delivery Group:	York Analytical Laboratories Inc.
COC No. / Sample IDs:	06100163, 06100503
Date Sampled:	10/5/2006, 10/16/2006
Parameter(s):	VOCs

SAMPLE ID	*DATA USABILITY QUALIFIERS*	*EXPLANATION FOR QUALIFIERS*
06100163-1,2,3,6, 06100503-7,8,9	06100163-1,2,3,6, 06100503-7,8,9	Sample collection jointly performed by Advanced Site Restoration LLC and Haley and Aldrich of New York. Minimal contamination of VOCs were detected at shallow depths, while greater concentrations were detected closer to groundwater interface as expected.

Summary:

Reviewed by:___Chris Tomasello___
Subject Matter Expert

Reviewed by:____Steve Muller_____
Project Manager

Date___07-05-07_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Report Date: 10/13/2006
Re: Client Project ID: Nagel & Broadway, NY, NY
York Project No.: 06100163

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 10/13/2006
Client Project ID: Nagel & Broadway, NY, NY
York Project No.: 06100163

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 10/05/06. The project was identifed as your project "Nagel & Broadway, NY, NY ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			HA-1 2-12'		HA-2 2-12'	
York Sample ID			06100163-01		06100163-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles-8260 list + MTBE	SW846-8260	ug/Kg	---	---	---	---
1,1,1,2-Tetrachloroethane			Not detected	130	Not detected	10
1,1,1-Trichloroethane			Not detected	130	Not detected	10
1,1,2,2-Tetrachloroethane			Not detected	130	Not detected	10
1,1,2-Trichloroethane			Not detected	130	Not detected	10
1,1-Dichloroethane			Not detected	130	Not detected	10
1,1-Dichloroethylene			Not detected	130	Not detected	10
1,1-Dichloropropylene			Not detected	130	Not detected	10
1,2,3-Trichlorobenzene			Not detected	130	Not detected	10
1,2,3-Trichloropropane			Not detected	130	Not detected	10
1,2,3-Trimethylbenzene			Not detected	130	Not detected	10
1,2,4-Trichlorobenzene			Not detected	130	Not detected	10
1,2,4-Trimethylbenzene			Not detected	130	Not detected	10
1,2-Dibromo-3-chloropropane			Not detected	130	Not detected	10
1,2-Dibromoethane			Not detected	130	Not detected	10
1,2-Dichlorobenzene			Not detected	130	Not detected	10
1,2-Dichloroethane			Not detected	130	Not detected	10

YORK

Client Sample ID			HA-1 2-12'		HA-2 2-12'	
York Sample ID			06100163-01		06100163-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
1,2-Dichloroethylene (Total)			Not detected	130	Not detected	10
1,2-Dichloropropane			Not detected	130	Not detected	10
1,3,5-Trimethylbenzene			Not detected	130	Not detected	10
1,3-Dichlorobenzene			Not detected	130	Not detected	10
1,3-Dichloropropane			Not detected	130	Not detected	10
1,4-Dichlorobenzene			Not detected	130	Not detected	10
2,2-Dichloropropane			Not detected	130	Not detected	10
2-Chlorotoluene			Not detected	130	Not detected	10
4-Chlorotoluene			Not detected	130	Not detected	10
Benzene			Not detected	130	Not detected	10
Bromobenzene			Not detected	130	Not detected	10
Bromochloromethane			Not detected	130	Not detected	10
Bromodichloromethane			Not detected	130	Not detected	10
Bromoform			Not detected	130	Not detected	10
Bromomethane			Not detected	130	Not detected	10
Carbon tetrachloride			Not detected	130	Not detected	10
Chlorobenzene			Not detected	130	Not detected	10
Chloroethane			Not detected	130	Not detected	10
Chloroform			Not detected	130	Not detected	10
Chloromethane			Not detected	130	Not detected	10
cis-1,3-Dichloropropylene			Not detected	130	Not detected	10
Dibromochloromethane			Not detected	130	Not detected	10
Dibromomethane			Not detected	130	Not detected	10
Dichlorodifluoromethane			Not detected	130	Not detected	10
Ethylbenzene			Not detected	130	Not detected	10
Hexachlorobutadiene			Not detected	130	Not detected	10
Isopropylbenzene			Not detected	130	Not detected	10
Methyl tert-butyl ether (MTBE)			Not detected	130	Not detected	10
Methylene chloride			Not detected	130	Not detected	10
Naphthalene			190	130	Not detected	10
n-Butylbenzene			Not detected	130	Not detected	10
n-Propylbenzene			Not detected	130	Not detected	10
o-Xylene			Not detected	130	Not detected	10
p- & m-Xylenes			Not detected	130	Not detected	10
p-Isopropyltoluene			Not detected	130	Not detected	10
sec-Butylbenzene			Not detected	130	Not detected	10
Styrene			Not detected	130	Not detected	10
tert-Butylbenzene			Not detected	130	Not detected	10
Tetrachloroethylene			Not detected	130	Not detected	10
Toluene			Not detected	130	Not detected	10
trans-1,3-Dichloropropylene			Not detected	130	Not detected	10
Trichloroethylene			Not detected	130	Not detected	10
Trichlorofluoromethane			Not detected	130	Not detected	10
Vinyl chloride			Not detected	130	Not detected	10
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	---	---	---	---
2-Methyl naphthalene			Not detected	330	Not detected	165
Acenaphthene			Not detected	330	Not detected	165
Acenaphthylene			Not detected	330	Not detected	165
Anthracene			Not detected	330	Not detected	165
Benzo[a]anthracene			Not detected	330	Not detected	165
Benzo[a]pyrene			Not detected	330	Not detected	165

YORK

Client Sample ID			HA-1 2-12'		HA-2 2-12'	
York Sample ID			06100163-01		06100163-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Benzo[b]fluoranthene			Not detected	330	Not detected	165
Benzo[g,h,i]perylene			Not detected	330	Not detected	165
Benzo[k]fluoranthene			Not detected	330	Not detected	165
Chrysene			Not detected	330	Not detected	165
Dibenz[a,h]anthracene			Not detected	330	Not detected	165
Fluoranthene			Not detected	330	Not detected	165
Fluorene			Not detected	330	Not detected	165
Indeno[1,2,3-cd]pyrene			Not detected	330	Not detected	165
Naphthalene			Not detected	330	Not detected	165
Phenanthrene			Not detected	330	Not detected	165
Pyrene			350	330	Not detected	165
PCB	SW846-3550B/8082	mg/Kg	---	---	---	---
PCB 1016			Not detected	0.017	Not detected	0.017
PCB 1221			Not detected	0.017	Not detected	0.017
PCB 1232			Not detected	0.017	Not detected	0.017
PCB 1242			Not detected	0.017	Not detected	0.017
PCB 1248			Not detected	0.017	Not detected	0.017
PCB 1254			Not detected	0.017	Not detected	0.017
PCB 1260			Not detected	0.017	Not detected	0.017
TCLP RCRA Metals	SW846-1311/6010	mg/L	---	---	---	---
TCLP Arsenic			Not detected	0.010	Not detected	0.010
TCLP Barium			1.24	0.010	1.42	0.010
TCLP Cadmium			Not detected	0.005	Not detected	0.005
TCLP Chromium			0.011	0.005	0.006	0.005
TCLP Lead			0.190	0.005	0.013	0.005
TCLP Selenium			Not detected	0.010	Not detected	0.010
TCLP Silver			Not detected	0.005	Not detected	0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	0.0002	Not detected	0.0002
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	0.25	Not detected	0.25
Ignitability	SW846-1030P	---	Does not ignite	---	Does not ignite	---
pH	EPA 150.1	units	9.55	---	7.88	---
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	15	Not detected	15
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	712	10.0	Not detected	10.0
Total Petroleum Hydrocarbons-GRO	8015B	mg/kg	150	25	Not detected	2.0

Client Sample ID			HA-3 2-12'		HA-6 0-6'	
York Sample ID			06100163-03		06100163-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles-8260 list + MTBE	SW846-8260	ug/Kg	---	---	---	---
1,1,1,2-Tetrachloroethane			Not detected	10	Not detected	10
1,1,1-Trichloroethane			Not detected	10	Not detected	10
1,1,2,2-Tetrachloroethane			Not detected	10	Not detected	10
1,1,2-Trichloroethane			Not detected	10	Not detected	10
1,1-Dichloroethane			Not detected	10	Not detected	10
1,1-Dichloroethylene			Not detected	10	Not detected	10
1,1-Dichloropropylene			Not detected	10	Not detected	10
1,2,3-Trichlorobenzene			Not detected	10	Not detected	10
1,2,3-Trichloropropane			Not detected	10	Not detected	10

YORK

Client Sample ID			HA-3 2-12'		HA-6 0-6'	
York Sample ID			06100163-03		06100163-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
1,2,3-Trimethylbenzene			Not detected	10	Not detected	10
1,2,4-Trichlorobenzene			Not detected	10	Not detected	10
1,2,4-Trimethylbenzene			Not detected	10	Not detected	10
1,2-Dibromo-3-chloropropane			Not detected	10	Not detected	10
1,2-Dibromoethane			Not detected	10	Not detected	10
1,2-Dichlorobenzene			Not detected	10	Not detected	10
1,2-Dichloroethane			Not detected	10	Not detected	10
1,2-Dichloroethylene (Total)			Not detected	10	Not detected	10
1,2-Dichloropropane			Not detected	10	Not detected	10
1,3,5-Trimethylbenzene			Not detected	10	Not detected	10
1,3-Dichlorobenzene			Not detected	10	Not detected	10
1,3-Dichloropropane			Not detected	10	Not detected	10
1,4-Dichlorobenzene			Not detected	10	Not detected	10
2,2-Dichloropropane			Not detected	10	Not detected	10
2-Chlorotoluene			Not detected	10	Not detected	10
4-Chlorotoluene			Not detected	10	Not detected	10
Benzene			Not detected	10	Not detected	10
Bromobenzene			Not detected	10	Not detected	10
Bromochloromethane			Not detected	10	Not detected	10
Bromodichloromethane			Not detected	10	Not detected	10
Bromoform			Not detected	10	Not detected	10
Bromomethane			Not detected	10	Not detected	10
Carbon tetrachloride			Not detected	10	Not detected	10
Chlorobenzene			Not detected	10	Not detected	10
Chloroethane			Not detected	10	Not detected	10
Chloroform			Not detected	10	Not detected	10
Chloromethane			Not detected	10	Not detected	10
cis-1,3-Dichloropropylene			Not detected	10	Not detected	10
Dibromochloromethane			Not detected	10	Not detected	10
Dibromomethane			Not detected	10	Not detected	10
Dichlorodifluoromethane			Not detected	10	Not detected	10
Ethylbenzene			Not detected	10	Not detected	10
Hexachlorobutadiene			Not detected	10	Not detected	10
Isopropylbenzene			Not detected	10	Not detected	10
Methyl tert-butyl ether (MTBE)			Not detected	10	Not detected	10
Methylene chloride			Not detected	10	Not detected	10
Naphthalene			Not detected	10	Not detected	10
n-Butylbenzene			Not detected	10	Not detected	10
n-Propylbenzene			Not detected	10	Not detected	10
o-Xylene			Not detected	10	Not detected	10
p- & m-Xylenes			Not detected	10	Not detected	10
p-Isopropyltoluene			Not detected	10	Not detected	10
sec-Butylbenzene			Not detected	10	Not detected	10
Styrene			Not detected	10	Not detected	10
tert-Butylbenzene			Not detected	10	Not detected	10
Tetrachloroethylene			10	10	Not detected	10
Toluene			Not detected	10	Not detected	10
trans-1,3-Dichloropropylene			Not detected	10	Not detected	10
Trichloroethylene			Not detected	10	Not detected	10
Trichlorofluoromethane			Not detected	10	Not detected	10
Vinyl chloride			Not detected	10	Not detected	10

YORK

Client Sample ID			HA-3 2-12'		HA-6 0-6'	
York Sample ID			06100163-03		06100163-04	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	---	---	---	---
2-Methyl naphthalene			Not detected	330	Not detected	330
Acenaphthene			Not detected	330	Not detected	330
Acenaphthylene			Not detected	330	Not detected	330
Anthracene			Not detected	330	Not detected	330
Benzo[a]anthracene			Not detected	330	Not detected	330
Benzo[a]pyrene			Not detected	330	Not detected	330
Benzo[b]fluoranthene			Not detected	330	Not detected	330
Benzo[g,h,i]perylene			Not detected	330	Not detected	330
Benzo[k]fluoranthene			Not detected	330	Not detected	330
Chrysene			Not detected	330	Not detected	330
Dibenz[a,h]anthracene			Not detected	330	Not detected	330
Fluoranthene			460	330	Not detected	330
Fluorene			Not detected	330	Not detected	330
Indeno[1,2,3-cd]pyrene			Not detected	330	Not detected	330
Naphthalene			Not detected	330	Not detected	330
Phenanthrene			Not detected	330	Not detected	330
Pyrene			470	330	Not detected	330
PCB	SW846-3550B/8082	mg/Kg	---	---	---	---
PCB 1016			Not detected	0.017	Not detected	0.017
PCB 1221			Not detected	0.017	Not detected	0.017
PCB 1232			Not detected	0.017	Not detected	0.017
PCB 1242			Not detected	0.017	Not detected	0.017
PCB 1248			Not detected	0.017	Not detected	0.017
PCB 1254			Not detected	0.017	Not detected	0.017
PCB 1260			Not detected	0.017	Not detected	0.017
TCLP RCRA Metals	SW846-1311/6010	mg/L	---	---	---	---
TCLP Arsenic			Not detected	0.010	Not detected	0.010
TCLP Barium			1.31	0.010	1.41	0.010
TCLP Cadmium			0.034	0.005	Not detected	0.005
TCLP Chromium			0.012	0.005	Not detected	0.005
TCLP Lead			0.781	0.005	0.054	0.005
TCLP Selenium			Not detected	0.010	Not detected	0.010
TCLP Silver			Not detected	0.005	Not detected	0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	0.0002	Not detected	0.0002
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	0.25	Not detected	0.25
Ignitability	SW846-1030P	---	Does not ignite	---	Does not ignite	---
pH	EPA 150.1	units	9.81	---	8.45	---
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	15	Not detected	15
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	70.1	10.0	Not detected	10.0
Total Petroleum Hydrocarbons-GRO	8015B	mg/kg	Not detected	2.0	Not detected	2.0

Client Sample ID			HA-6 6-12'	
York Sample ID			06100163-05	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
Volatiles-8260 list + MTBE	SW846-8260	ug/Kg	---	---
1,1,1,2-Tetrachloroethane			Not detected	10
1,1,1-Trichloroethane			Not detected	10

YORK

Client Sample ID			HA-6 6-12'	
York Sample ID			06100163-05	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
1,1,2,2-Tetrachloroethane			Not detected	10
1,1,2-Trichloroethane			Not detected	10
1,1-Dichloroethane			Not detected	10
1,1-Dichloroethylene			Not detected	10
1,1-Dichloropropylene			Not detected	10
1,2,3-Trichlorobenzene			Not detected	10
1,2,3-Trichloropropane			Not detected	10
1,2,3-Trimethylbenzene			Not detected	10
1,2,4-Trichlorobenzene			Not detected	10
1,2,4-Trimethylbenzene			46	10
1,2-Dibromo-3-chloropropane			Not detected	10
1,2-Dibromoethane			Not detected	10
1,2-Dichlorobenzene			Not detected	10
1,2-Dichloroethane			Not detected	10
1,2-Dichloroethylene (Total)			Not detected	10
1,2-Dichloropropane			Not detected	10
1,3,5-Trimethylbenzene			12	10
1,3-Dichlorobenzene			Not detected	10
1,3-Dichloropropane			Not detected	10
1,4-Dichlorobenzene			Not detected	10
2,2-Dichloropropane			Not detected	10
2-Chlorotoluene			Not detected	10
4-Chlorotoluene			Not detected	10
Benzene			Not detected	10
Bromobenzene			Not detected	10
Bromochloromethane			Not detected	10
Bromodichloromethane			Not detected	10
Bromoform			Not detected	10
Bromomethane			Not detected	10
Carbon tetrachloride			Not detected	10
Chlorobenzene			Not detected	10
Chloroethane			Not detected	10
Chloroform			Not detected	10
Chloromethane			Not detected	10
cis-1,3-Dichloropropylene			Not detected	10
Dibromochloromethane			Not detected	10
Dibromomethane			Not detected	10
Dichlorodifluoromethane			Not detected	10
Ethylbenzene			Not detected	10
Hexachlorobutadiene			Not detected	10
Isopropylbenzene			Not detected	10
Methyl tert-butyl ether (MTBE)			Not detected	10
Methylene chloride			Not detected	10
Naphthalene			42	10
n-Butylbenzene			19	10
n-Propylbenzene			10	10
o-Xylene			Not detected	10
p- & m-Xylenes			Not detected	10
p-Isopropyltoluene			Not detected	10
sec-Butylbenzene			Not detected	10
Styrene			Not detected	10

YORK

Client Sample ID			HA-6 6-12'	
York Sample ID			06100163-05	
Matrix			SOIL	
Parameter	**Method**	**Units**	**Results**	**MDL**
tert-Butylbenzene			Not detected	10
Tetrachloroethylene			Not detected	10
Toluene			Not detected	10
trans-1,3-Dichloropropylene			Not detected	10
Trichloroethylene			Not detected	10
Trichlorofluoromethane			Not detected	10
Vinyl chloride			Not detected	10
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	---	---
2-Methyl naphthalene			Not detected	165
Acenaphthene			Not detected	165
Acenaphthylene			Not detected	165
Anthracene			Not detected	165
Benzo[a]anthracene			Not detected	165
Benzo[a]pyrene			Not detected	165
Benzo[b]fluoranthene			Not detected	165
Benzo[g,h,i]perylene			Not detected	165
Benzo[k]fluoranthene			Not detected	165
Chrysene			Not detected	165
Dibenz[a,h]anthracene			Not detected	165
Fluoranthene			Not detected	165
Fluorene			Not detected	165
Indeno[1,2,3-cd]pyrene			Not detected	165
Naphthalene			Not detected	165
Phenanthrene			Not detected	165
Pyrene			Not detected	165
PCB	SW846-3550B/8082	mg/Kg	---	---
PCB 1016			Not detected	0.017
PCB 1221			Not detected	0.017
PCB 1232			Not detected	0.017
PCB 1242			Not detected	0.017
PCB 1248			Not detected	0.017
PCB 1254			Not detected	0.017
PCB 1260			Not detected	0.017
TCLP RCRA Metals	SW846-1311/6010	mg/L	---	---
TCLP Arsenic			Not detected	0.010
TCLP Barium			1.19	0.010
TCLP Cadmium			Not detected	0.005
TCLP Chromium			0.009	0.005
TCLP Lead			1.04	0.005
TCLP Selenium			Not detected	0.010
TCLP Silver			Not detected	0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	0.0002
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	0.25
Ignitability	SW846-1030P	---	Does not ignite	---
pH	EPA 150.1	units	9.77	---
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	15
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	62.6	10.0
Total Petroleum Hydrocarbons-GRO	8015B	mg/kg	3.0	2.0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 10/13/2006
Client Project ID: Nagel & Broadway, NY, NY
York Project No.: 06100163

Notes for York Project No. 06100163

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: for Robert Q. Bradley
Managing Director

Date: 10/13/2006

YORK

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page 1 of 1

Q0100163

Company Name	Report To:	Invoice To:	Project ID/No.
ADVANCED SITE RESTORATION N.Y. N.Y.	STEVE. M	ASR	NAGEL & BROADWAY N.Y. N.Y.

Samples Collected By (Signature)

Anthony Adesso
Name (Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
	HA-1 2-12'	10-3-06		X			CATTELET PROTOCOL	1 8oz 1 4oz
	HA-2 2-12'	10-3-06		X			" "	1 8oz
	HA-3 2-12'	10-2-06		X			" "	1 8oz 1 4oz
	HA-6 0-6'	10-4-06		X			" "	1 8oz 1 4oz
	HA-6 6-12'	10-4-06		X			" "	1 8oz

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	10/5 Date/Time	Sample Received by	10/5/06 1000 Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	10/5 3PM Date/Time

Comments/Special Instructions

4 deg C

Turn-Around Time

Standard ____RUSH(define)_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Report Date: 10/23/2006
Re: Client Project ID: Nagel & B'way, NY
York Project No.: 06100503

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 10/23/2006
Client Project ID: Nagel & B'way, NY
York Project No.: 06100503

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 10/16/06. The project was identifed as your project "Nagel & B'way, NY ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			Ha-7 2-12'		Ha-8 2-12'	
York Sample ID			06100503-01		06100503-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles-8260 list + MTBE	SW846-8260	ug/Kg	---	---	---	---
1,1,1,2-Tetrachloroethane			Not detected	10	Not detected	2500
1,1,1-Trichloroethane			Not detected	10	Not detected	2500
1,1,2,2-Tetrachloroethane			Not detected	10	Not detected	2500
1,1,2-Trichloroethane			Not detected	10	Not detected	2500
1,1-Dichloroethane			Not detected	10	Not detected	2500
1,1-Dichloroethylene			Not detected	10	Not detected	2500
1,1-Dichloropropylene			Not detected	10	Not detected	2500
1,2,3-Trichlorobenzene			Not detected	10	Not detected	2500
1,2,3-Trichloropropane			Not detected	10	Not detected	2500
1,2,3-Trimethylbenzene			Not detected	10	Not detected	2500
1,2,4-Trichlorobenzene			Not detected	10	Not detected	2500
1,2,4-Trimethylbenzene			Not detected	10	Not detected	2500
1,2-Dibromo-3-chloropropane			Not detected	10	Not detected	2500
1,2-Dibromoethane			Not detected	10	Not detected	2500
1,2-Dichlorobenzene			Not detected	10	Not detected	2500
1,2-Dichloroethane			Not detected	10	Not detected	2500

YORK

Client Sample ID			Ha-7 2-12'		Ha-8 2-12'	
York Sample ID			06100503-01		06100503-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
1,2-Dichloroethylene (Total)			Not detected	10	Not detected	2500
1,2-Dichloropropane			Not detected	10	Not detected	2500
1,3,5-Trimethylbenzene			Not detected	10	Not detected	2500
1,3-Dichlorobenzene			Not detected	10	Not detected	2500
1,3-Dichloropropane			Not detected	10	Not detected	2500
1,4-Dichlorobenzene			Not detected	10	Not detected	2500
2,2-Dichloropropane			Not detected	10	Not detected	2500
2-Chlorotoluene			Not detected	10	Not detected	2500
4-Chlorotoluene			Not detected	10	Not detected	2500
Benzene			Not detected	10	Not detected	2500
Bromobenzene			Not detected	10	Not detected	2500
Bromochloromethane			Not detected	10	Not detected	2500
Bromodichloromethane			Not detected	10	Not detected	2500
Bromoform			Not detected	10	Not detected	2500
Bromomethane			Not detected	10	Not detected	2500
Carbon tetrachloride			Not detected	10	Not detected	2500
Chlorobenzene			Not detected	10	Not detected	2500
Chloroethane			Not detected	10	Not detected	2500
Chloroform			Not detected	10	Not detected	2500
Chloromethane			Not detected	10	Not detected	2500
cis-1,3-Dichloropropylene			Not detected	10	Not detected	2500
Dibromochloromethane			Not detected	10	Not detected	2500
Dibromomethane			Not detected	10	Not detected	2500
Dichlorodifluoromethane			Not detected	10	Not detected	2500
Ethylbenzene			Not detected	10	Not detected	2500
Hexachlorobutadiene			Not detected	10	Not detected	2500
Isopropylbenzene			Not detected	10	Not detected	2500
Methyl tert-butyl ether (MTBE)			Not detected	10	2600	2500
Methylene chloride			Not detected	10	Not detected	2500
Naphthalene			Not detected	10	Not detected	2500
n-Butylbenzene			Not detected	10	Not detected	2500
n-Propylbenzene			Not detected	10	6800	2500
o-Xylene			Not detected	10	11000	2500
p- & m-Xylenes			Not detected	10	Not detected	2500
p-Isopropyltoluene			Not detected	10	Not detected	2500
sec-Butylbenzene			Not detected	10	Not detected	2500
Styrene			Not detected	10	2700	2500
tert-Butylbenzene			Not detected	10	Not detected	2500
Tetrachloroethylene			Not detected	10	Not detected	2500
Toluene			Not detected	10	Not detected	2500
trans-1,3-Dichloropropylene			Not detected	10	Not detected	2500
Trichloroethylene			Not detected	10	Not detected	2500
Trichlorofluoromethane			Not detected	10	Not detected	2500
Vinyl chloride			Not detected	10	Not detected	2500
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	---	---	---	---
2-Methyl naphthalene			Not detected	1240	610	165
Acenaphthene			Not detected	1240	Not detected	165
Acenaphthylene			Not detected	1240	Not detected	165
Anthracene			2100	1240	Not detected	165
Benzo[a]anthracene			3800	1240	320	165
Benzo[a]pyrene			3200	1240	350	165

YORK

Client Sample ID			Ha-7 2-12'		Ha-8 2-12'	
York Sample ID			06100503-01		06100503-02	
Matrix			SOIL		SOIL	
Parameter	Method	Units	Results	MDL	Results	MDL
Benzo[b]fluoranthene			2600	1240	400	165
Benzo[g,h,i]perylene			1400	1240	Not detected	165
Benzo[k]fluoranthene			3300	1240	320	165
Chrysene			3900	1240	390	165
Dibenz[a,h]anthracene			Not detected	1240	Not detected	165
Fluoranthene			7600	1240	710	165
Fluorene			Not detected	1240	Not detected	165
Indeno[1,2,3-cd]pyrene			1500	1240	Not detected	165
Naphthalene			Not detected	1240	340	165
Phenanthrene			7200	1240	710	165
Pyrene			6400	1240	670	165
PCB	SW846-3550B/8082	mg/Kg	---	---	---	---
PCB 1016			Not detected	0.017	Not detected	0.017
PCB 1221			Not detected	0.017	Not detected	0.017
PCB 1232			Not detected	0.017	Not detected	0.017
PCB 1242			Not detected	0.017	Not detected	0.017
PCB 1248			Not detected	0.017	Not detected	0.017
PCB 1254			Not detected	0.017	Not detected	0.017
PCB 1260			Not detected	0.017	Not detected	0.017
TCLP RCRA Metals	SW846-1311/6010	mg/L	---	---	---	---
TCLP Arsenic			Not detected	0.010	0.014	0.010
TCLP Barium			1.45	0.010	1.59	0.010
TCLP Cadmium			Not detected	0.005	Not detected	0.005
TCLP Chromium			0.006	0.005	0.005	0.005
TCLP Lead			0.373	0.005	0.401	0.005
TCLP Selenium			Not detected	0.010	Not detected	0.010
TCLP Silver			Not detected	0.005	Not detected	0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	0.0002	Not detected	0.0002
Ignitability	SW846-1030P	---	Does not ignite	---	Does not ignite	---
pH	EPA 150.1	units	8.95	---	8.52	---
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	0.25	Not detected	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	15	Not detected	15
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	35.8	10.0	25.3	10.0
Total Petroleum Hydrocarbons-GRO	8015B	mg/kg	13	2.0	1700	500

Client Sample ID			Ha-9 2-12'	
York Sample ID			06100503-03	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
Volatiles-8260 list + MTBE	SW846-8260	ug/Kg	---	---
1,1,1,2-Tetrachloroethane			Not detected	10
1,1,1-Trichloroethane			Not detected	10
1,1,2,2-Tetrachloroethane			Not detected	10
1,1,2-Trichloroethane			Not detected	10
1,1-Dichloroethane			Not detected	10
1,1-Dichloroethylene			Not detected	10
1,1-Dichloropropylene			Not detected	10
1,2,3-Trichlorobenzene			Not detected	10
1,2,3-Trichloropropane			Not detected	10

YORK

Client Sample ID			Ha-9 2-12'	
York Sample ID			06100503-03	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
1,2,3-Trimethylbenzene			Not detected	10
1,2,4-Trichlorobenzene			Not detected	10
1,2,4-Trimethylbenzene			88	10
1,2-Dibromo-3-chloropropane			Not detected	10
1,2-Dibromoethane			Not detected	10
1,2-Dichlorobenzene			Not detected	10
1,2-Dichloroethane			Not detected	10
1,2-Dichloroethylene (Total)			Not detected	10
1,2-Dichloropropane			Not detected	10
1,3,5-Trimethylbenzene			33	10
1,3-Dichlorobenzene			Not detected	10
1,3-Dichloropropane			Not detected	10
1,4-Dichlorobenzene			Not detected	10
2,2-Dichloropropane			Not detected	10
2-Chlorotoluene			Not detected	10
4-Chlorotoluene			Not detected	10
Benzene			Not detected	10
Bromobenzene			Not detected	10
Bromochloromethane			Not detected	10
Bromodichloromethane			Not detected	10
Bromoform			Not detected	10
Bromomethane			Not detected	10
Carbon tetrachloride			Not detected	10
Chlorobenzene			Not detected	10
Chloroethane			Not detected	10
Chloroform			Not detected	10
Chloromethane			Not detected	10
cis-1,3-Dichloropropylene			Not detected	10
Dibromochloromethane			Not detected	10
Dibromomethane			Not detected	10
Dichlorodifluoromethane			Not detected	10
Ethylbenzene			Not detected	10
Hexachlorobutadiene			Not detected	10
Isopropylbenzene			Not detected	10
Methyl tert-butyl ether (MTBE)			Not detected	10
Methylene chloride			Not detected	10
Naphthalene			23	10
n-Butylbenzene			11	10
n-Propylbenzene			Not detected	10
o-Xylene			15	10
p- & m-Xylenes			33	10
p-Isopropyltoluene			Not detected	10
sec-Butylbenzene			Not detected	10
Styrene			Not detected	10
tert-Butylbenzene			Not detected	10
Tetrachloroethylene			Not detected	10
Toluene			Not detected	10
trans-1,3-Dichloropropylene			Not detected	10
Trichloroethylene			Not detected	10
Trichlorofluoromethane			Not detected	10
Vinyl chloride			Not detected	10

YORK

Client Sample ID			Ha-9 2-12'	
York Sample ID			06100503-03	
Matrix			SOIL	
Parameter	Method	Units	Results	MDL
Polynuclear Aromatic Hydroc.(BN)	SW846-8270	ug/kG	---	---
2-Methyl naphthalene			Not detected	165
Acenaphthene			Not detected	165
Acenaphthylene			Not detected	165
Anthracene			Not detected	165
Benzo[a]anthracene			Not detected	165
Benzo[a]pyrene			Not detected	165
Benzo[b]fluoranthene			Not detected	165
Benzo[g,h,i]perylene			Not detected	165
Benzo[k]fluoranthene			Not detected	165
Chrysene			Not detected	165
Dibenz[a,h]anthracene			Not detected	165
Fluoranthene			Not detected	165
Fluorene			Not detected	165
Indeno[1,2,3-cd]pyrene			Not detected	165
Naphthalene			Not detected	165
Phenanthrene			Not detected	165
Pyrene			Not detected	165
PCB	SW846-3550B/8082	mg/Kg	---	---
PCB 1016			Not detected	0.017
PCB 1221			Not detected	0.017
PCB 1232			Not detected	0.017
PCB 1242			Not detected	0.017
PCB 1248			Not detected	0.017
PCB 1254			Not detected	0.017
PCB 1260			Not detected	0.017
TCLP RCRA Metals	SW846-1311/6010	mg/L	---	---
TCLP Arsenic			Not detected	0.010
TCLP Barium			1.25	0.010
TCLP Cadmium			Not detected	0.005
TCLP Chromium			0.008	0.005
TCLP Lead			0.606	0.005
TCLP Selenium			Not detected	0.010
TCLP Silver			Not detected	0.005
TCLP Mercury	SW846-1311/7470	mg/L	Not detected	0.0002
Ignitability	SW846-1030P	---	Does not ignite	---
pH	EPA 150.1	units	8.99	---
Reactivity-Cyanide	SW846 Ch. 7.3.3	mg/kg	Not detected	0.25
Reactivity-Sulfide	SW846 Ch. 7.3.4	mg/kg	Not detected	15
Total Petroleum Hydrocarbons-DRO	SW846-8015B	mg/kg	Not detected	10.0
Total Petroleum Hydrocarbons-GRO	8015B	mg/kg	3	2.0

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 10/23/2006
Client Project ID: Nagel & B'way, NY
York Project No.: 06100503

Notes for York Project No. 06100503

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: for Robert Q. Bradley
Managing Director

Date: 10/23/2006

YORK

YORK
ANALYTICAL LABORATORIES, INC.

120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page 1 of 1

0610005903

Company Name	Report To:	Invoice To:	Project ID/No.	
ASR 62 William NY. NY. 10005	Steve	ASR	Madison & B'way NY. NY.	Samples Collected By (Signature)
				Anthony Adesso Name (Printed)

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
	Ha-7 2-12'	10-12-06		X			Category Protocol	1 8oz 1 4oz
	Ha-7 2-12'	10-12-06		X				
	Ha-8 2-12'	10-12-06		X				
	Ha-8 2-12'	10-12-06		X				
	Ha-9 2-12'	10-13-06		X				
	Ha-9-2½'	10-13-06		X				

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	10-16-06 Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time
Sample Received by	10/16/06 Date/Time		
Sample Received in LAB by	10/16 Date/Time		

Comments/Special Instructions

4.2°

Turn-Around Time

____Standard ____RUSH(define)_____

ADVANCED SITE RESTORATION, LLC
ENVIRONMENTAL SERVICES

Data Usability Summary Report

Project:	4566 Broadway
Sampling Contractor:	Advanced Site Restoration, LLC
Analytical Laboratory:	York Analytical Laboratories Inc.
Analytical Method:	EPA 8260 Stars EPA 8270 Stars
Sample Delivery Group:	York Analytical Laboratories Inc.
COC No. / Sample IDs:	06110437
Date Sampled:	11/14/06
Parameter(s):	VOCs

SAMPLE ID	*DATA USABILITY QUALIFIERS*	*EXPLANATION FOR QUALIFIERS*
06110437-1, 2, 3	06110437-1, 2, 3	The three (3) groundwater sampling results match the associated soil results from the month prior.

Summary:

Reviewed by:____Chris Tomasello___
Subject Matter Expert

Reviewed by:____Steve Muller_____
Project Manager

Date___07-05-07_____

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Report Date: 11/21/2006
Re: Client Project ID: Nagel & Broadway, NYC
York Project No.: 06110437

CT License No. PH-0723 New York License No. 10854

nelac nelap

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 11/21/2006
Client Project ID: Nagel & Broadway, NYC
York Project No.: 06110437

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 11/14/06. The project was identified as your project "Nagel & Broadway, NYC".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables.

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			ASR-1		ASR-2	
York Sample ID			06110437-01		06110437-02	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
Volatiles-STARS List	SW846-8260	ug/L	---	---	---	---
1,2,4-Trimethylbenzene			100	5	Not detected	5
1,3,5-Trimethylbenzene			15	5	Not detected	5
Benzene			140	1	Not detected	1
Ethylbenzene			200	5	Not detected	5
Isopropylbenzene			55	5	Not detected	5
Methyl-tert-butyl ether			44	5	Not detected	5
Naphthalene			54	5	Not detected	5
n-Butylbenzene			26	5	Not detected	5
n-Propylbenzene			92	5	Not detected	5
o-Xylene			12	5	Not detected	5
p- & m- Xylenes			31	5	Not detected	5
p-Isopropyltoluene			Not detected	5	Not detected	5
sec-Butylbenzene			11	5	Not detected	5
tert-Butylbenzene			Not detected	5	Not detected	5
Toluene			Not detected	5	Not detected	5

YORK

Client Sample ID			ASR-1		ASR-2	
York Sample ID			06110437-01		06110437-02	
Matrix			WATER		WATER	
Parameter	Method	Units	Results	MDL	Results	MDL
STARS- Target Semi-Volatiles	SW846-8270	ug/L	---	---	---	---
Acenaphthene			Not detected	5.2	Not detected	5.2
Anthracene			Not detected	5.2	Not detected	5.2
Benzo[a]anthracene			Not detected	5.2	Not detected	5.2
Benzo[a]pyrene			Not detected	5.2	Not detected	5.2
Benzo[b]fluoranthene			Not detected	5.2	Not detected	5.2
Benzo[g,h,i]perylene			Not detected	5.2	Not detected	5.2
Benzo[k]fluoranthene			Not detected	5.2	Not detected	5.2
Chrysene			Not detected	5.2	Not detected	5.2
Dibenz[a,h]anthracene			Not detected	5.2	Not detected	5.2
Fluoranthene			Not detected	5.2	Not detected	5.2
Fluorene			Not detected	5.2	Not detected	5.2
Indeno[1,2,3-cd]pyrene			Not detected	5.2	Not detected	5.2
Naphthalene			21	5.2	Not detected	5.2
Phenanthrene			Not detected	5.2	Not detected	5.2
Pyrene			Not detected	5.2	Not detected	5.2

Client Sample ID			ASR-3	
York Sample ID			06110437-03	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
Volatiles-STARS List	SW846-8260	ug/L	---	---
1,2,4-Trimethylbenzene			Not detected	5
1,3,5-Trimethylbenzene			Not detected	5
Benzene			Not detected	1
Ethylbenzene			Not detected	5
Isopropylbenzene			Not detected	5
Methyl-tert-butyl ether			Not detected	5
Naphthalene			Not detected	5
n-Butylbenzene			Not detected	5
n-Propylbenzene			Not detected	5
o-Xylene			Not detected	5
p- & m- Xylenes			Not detected	5
p-Isopropyltoluene			Not detected	5
sec-Butylbenzene			Not detected	5
tert-Butylbenzene			Not detected	5
Toluene			Not detected	5

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

YORK

Report Date: 11/21/2006
Client Project ID: Nagel & Broadway, NYC
York Project No.: 06110437

Notes for York Project No. 06110437

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: Robert Q. Bradley
Managing Director

Date: 11/21/2006

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

Page ___

06110437

Company Name	Report To:	Invoice To:	Project ID/No.	Samples Collected By (Signature) / Name (Printed)
Advanced Site Restoration NY, NY	Steve M	ASR	Nagel & Broadway NYC	[signature] / Anthony Arcese

Sample No.	Location/ID	Date Sampled	Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
			Sample Matrix					
	ASR-1 (HA-6)	11/14	X				8260 STARS 8270 STARS	1 Amber 2 VOS
	ASR-2 (HA-2)		X				11 11	1 Amber 2 VOS
	ASR-3 (HA-1)		X				8260 STARS	2 VOS

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Sample Relinquished by	Date/Time	Sample Received by	Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by [signature] 11/14	Date/Time 11/14/04 3:20

Comments/Special Instructions

4.3

Turn-Around Time

____Standard ____RUSH(define)________

YORK
ANALYTICAL LABORATORIES, INC.

Technical Report

prepared for

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Report Date: 12/1/2006
Re: Client Project ID: 45-66 Broadway Ave
York Project No.: 06110713

CT License No. PH-0723 New York License No. 10854

120 RESEARCH DRIVE STRATFORD, CT 06615 (203) 325-1371 FAX (203) 357-0166

Report Date: 12/1/2006
Client Project ID: 45-66 Broadway Ave
York Project No.: 06110713

Advanced Site Restoration
62 William St.
New York, NY 10005
Attention: Steve Muller

Purpose and Results

This report contains the analytical data for the sample(s) identified on the attached chain-of-custody received in our laboratory on 11/27/06. The project was identifed as your project "45-66 Broadway Ave ".

The analyses were conducted utilizing appropriate EPA, Standard Methods, and ASTM methods as detailed in the data summary tables .

All samples were received in proper condition meeting the NELAC acceptance requirements for environmental samples except those indicated under the Notes section of this report.

All the analyses met the method and laboratory standard operating procedure requirements except as indicated under the Notes section of this report, or as indicated by any data flags, the meaning of which is explained in the attachment to this report, if applicable.

The results of the analyses, which are all reported on an as-received basis unless otherwise noted, are summarized in the following table(s).

Analysis Results

Client Sample ID			HA-1	
York Sample ID			06110713-01	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
Volatiles-STARS List	SW846-8260	ug/L	---	---
1,2,4-Trimethylbenzene			86	5
1,3,5-Trimethylbenzene			23	5
Benzene			Not detected	1
Ethylbenzene			11	5
Isopropylbenzene			Not detected	5
Methyl-tert-butyl ether			Not detected	5
Naphthalene			26	5
n-Butylbenzene			7	5
n-Propylbenzene			10	5
o-Xylene			29	5
p- & m- Xylenes			54	5
p-Isopropyltoluene			Not detected	5
sec-Butylbenzene			Not detected	5
tert-Butylbenzene			Not detected	5
Toluene			7	5

YORK

Client Sample ID			HA-1	
York Sample ID			06110713-01	
Matrix			WATER	
Parameter	Method	Units	Results	MDL
STARS- Target Semi-Volatiles	SW846-8270	ug/L	---	---
Acenaphthene			Not detected	6.2
Anthracene			Not detected	6.2
Benzo[a]anthracene			Not detected	6.2
Benzo[a]pyrene			Not detected	6.2
Benzo[b]fluoranthene			Not detected	6.2
Benzo[g,h,i]perylene			Not detected	6.2
Benzo[k]fluoranthene			Not detected	6.2
Chrysene			Not detected	6.2
Dibenz[a,h]anthracene			Not detected	6.2
Fluoranthene			Not detected	6.2
Fluorene			Not detected	6.2
Indeno[1,2,3-cd]pyrene			Not detected	6.2
Naphthalene			Not detected	6.2
Phenanthrene			Not detected	6.2
Pyrene			Not detected	6.2

Units Key: For Waters/Liquids: mg/L = ppm ; ug/L = ppb For Soils/Solids: mg/kg = ppm ; ug/kg = ppb

Notes for York Project No. 06110713

1. The MDL (Minimum Detectable Limit) reported is adjusted for any dilution necessary due to the levels of target and/or non-target analytes and matrix interference. This MDL is the REPORTING LIMIT and is based upon the lowest standard utilized for calibration where applicable.
2. Samples are retained for a period of thirty days after submittal of report, unless other arrangements are made.
3. York's liability for the above data is limited to the dollar value paid to York for the referenced project.
4. This report shall not be reproduced without the written approval of York Analytical Laboratories, Inc.
5. All samples were received in proper condition for analysis with proper documentation.
6. All analyses conducted met method or Laboratory SOP requirements.
7. It is noted that no analyses reported herein were subcontracted to another laboratory.

Approved By: Robert Q. Bradley
Managing Director

Date: 12/1/2006

YORK

YORK
ANALYTICAL LABORATORIES, INC.
120 RESEARCH DRIVE STRATFORD, CT 06615
(203) 325-1371 FAX (203) 357-0166

Field Chain-of-Custody Record

06110713

Company Name	Report To:	Invoice To:	Project ID/No.	
A.S.R.	Steve Muller	A.S.R	45-66 Broadway Ave	Jason Maldonado (Samples Collected By (Signature))
				Jason Maldonado (Name (Printed))

Sample No.	Location/ID	Date Sampled	Sample Matrix: Water	Soil	Air	OTHER	ANALYSES REQUESTED	Container Description(s)
	HA-1	11/22/06	✓				EPA-8260-8270 stars	40mL(2) 32oz(1)

Chain-of-Custody Record

Bottles Relinquished from Lab by	Date/Time	Jason Maldonado (Sample Relinquished by)	11/22/06 (Date/Time)	Sample Received by	Date/Time
Bottles Received in Field by	Date/Time	Sample Relinquished by	Date/Time	Sample Received in LAB by	11/27 2:30P Date/Time

Comments/Special Instructions

4.2°C

Turn-Around Time

___Standard ___RUSH(define)_____

APPENDIX – D

HEALTH & SAFETY PLAN

ADVANCED SITE RESTORATION, LLC
ENVIRONMENTAL SERVICES

DATE July 6, 2007

SITE LOCATION: 4566 Broadway, New York, 10040

POTENTIAL HAZARDS:

CHEMICAL HAZARDS:

Gasoline (see MSDS sheets attached). Former gasoline underground storage tanks are the known source of contamination at the subject site. Gasoline related constituents such as the BTEX compounds have been detected in the soil and the groundwater at the subject site.

Nitric Acid. (see MSDS sheets attached). For the purpose of preserving samples, the laboratory who provides the sample jars typically puts a solution of diluted preservative in them in the form of nitric acid. To insure that this solution does not come in contact with the field personnel, rubber gloves will be required at all times.

PHYSICAL HAZARDS:

Slips, trips, falls, heavy equipment, excavation hazards, heat and cold exposure, noise, vibration.

Topography: Generally flat to the north, and sloped to higher elevations to the west, south, and east.

Weather Conditions:

ONSITE ORGANIZATION AND COORDINATION:

The following personnel are designated to carry out the stated job functions on site.

PROJECT TEAM LEADER:	Christopher Tomasello
SITE SAFETY OFFICER:	Christopher Tomasello
SECURITY OFFICER:	Richard Levato
RECORDKEEPER:	Steven Muller
FIELD TEAM LEADER:	Steven Muller

FIELD TEAM MEMBERS:

STATE AGENCY REPS:	Mr. Sadique Ahmed, NYSDEC (518)-402-9775
LOCAL AGENCY REPS:	
CONTRACTOR (S):	To be assigned

All personnel arriving or departing the site should log in and out with the Record keeper. All activities on site must be cleared through the Project Team Leader.

ONSITE CONTROL

Richard Levato has been designated to coordinate access control and security on site. A safe perimeter has been established at the property line.

No unauthorized person should be within this area.

Control boundaries have been established, and the Exclusion Zone, Contamination Reduction Zone, and Support Zone have been identified and designated as follows:

SITE OPERATIONS:

The work shall be divided into work zones to be determined. The Exclusion Zone area shall be the immediate area of the drill rig radiating out 10 feet from the back of the drill rig. Contamination reduction zone shall be an additional 20 feet in diameter. Support zones shall be the area beyond that. All zones to be fully delineated with caution tape and Traffic cones.

HAZARD EVALUATION:

The following substance(s) are contaminants that have been confirmed to be present on site, via the sampling and testing of soil and groundwater. The primary hazards of each are identified.

SUBSTANCES AND PRIMARY HAZARDS:

GASOLINE

Symptoms Following Exposure: Irritation of mucous membranes and stimulation followed by depression of central nervous system. Breathing of

vapor may also cause dizziness, headache, and un-coordination or, in more severe cases, anesthesia, coma, and respiratory arrest. If liquid enters lungs, it will cause severe irritation, coughing, gagging, pulmonary edema, and, later, signs of bronchopneumonia and pneumonitis. Swallowing may cause irregular heartbeat. Contains carcinogens-avoid direct skin exposure.

NITRIC ACID

Symptoms Following Exposure: Vapors irritate eyes and respiratory tract; lung injury may not become apparent for several hours following exposure. Liquid may cause severe burns to eyes and skin.

MSDS Sheets are attached on the following pages.

The following additional hazards are expected on site:

Slippery working surfaces- from weather conditions
Tripping-from equipment and work area inconsistencies
Electrical-from underground utilities and overhead wires
Heavy Equipment- from support vehicles and the drill rig

Material Safety Data Sheets for the involved substance(s) are available on site and will be retained at the command post and be available for medical and site personnel upon request, and are attached at the rear of the document for review and use.

PERSONAL PROTECTIVE EQUIPMENT:

Based on evaluation of potential hazards, the following levels of personal protection have been designated for the applicable work areas or tasks:

Job Function: Sampling/Monitoring/Drilling/ Well Installation

Level of Protection: Level D. Work uniform, steel tip boots, hard hat, safety glasses, work cloths, work gloves or rubber (latex) gloves as needed, hearing protection. A Class B fire extinguisher must be present in the exclusion zone.

Air-purifying respirators are not required for these outlined tasks.

NO CHANGES TO THE SPECIFIED LEVELS OF PROTECTION SHALL BE MADE WITHOUT THE APPROVAL OF THE SITE SAFETY OFFICER AND THE PROJECT TEAM LEADER.

ON SITE WORK PLANS:

Work party(s) consisting of persons will perform the following tasks:

Field Team Leader	Steven Muller
Work Party #1	Anthony Adesso
Rescue Team	New York City Fire Department
Decontamination Team	NA-self decontamination is appropriate

The work party(s) must be briefed on the contents of this plan, and any revisions to the existing plan, at a safety meeting to be held prior to the start of each shift.

COMMUNICATION PROCEDURES:

Verbal communication, followed by Nextel radios, and cell phones shall be designated as the methods of communication for personnel in the Exclusion Zone.

"Red Alert" is the emergency signal to indicate that all personnel should leave the Exclusion Zone.

The following standard hand signals will be used **in high noise areas, or in cases of communications failure**:

Hand gripping throat	can't breathe
Grip partner's wrist or both hands around waist	Leave area immediately
Hands on top of head	Need assistance
Thumbs up	OK, I am all right, I understand
Thumbs down	No, negative

DECONTAMINATION PROCEDURES:

Personnel and equipment leaving the Exclusion Zone shall be thoroughly decontaminated or disposed of properly. The standard level D decontamination protocol shall be used.

A wash and rinse decontamination station shall be constructed on the site for any items to be removed or reused. This station shall consist of 5 gallon buckets,

and brushes and shall be located in the contamination reduction zone, just out side of the Exclusion Zone. Decontamination reagents will be a mild alkaline detergent and water. All used disposable sampling items and PPE shall be placed in the appropriate containers for disposal. Decontamination water must be properly disposed of.

EMERGENCY MEDICAL CARE:

The only major hospital in the Washington Heights and Inwood communities is the Columbia-Presbyterian Medical Center. The center is bounded by 165th Street, 168th Street, Broadway and Riverside Drive. The main entrance to Columbia-Presbyterian Medical Center is at 622 West 168th Street between Broadway and Fort Washington Avenue. The telephone number is (212) 305-2500. A map with the route to the hospital is attached.

The directions to the Columbia-Presbyterian Medical Center from the subject site is as follows:

1. Start out going SOUTH on BROADWAY / US-9 toward BENNETT AVE. Continue to follow BROADWAY for 1.3 miles.
2. Turn right onto W. 168th Street, for 0.1 miles.
3. End at 622 West 168th Street.

FIRST-AID EQUIPMENT IS AVAILABLE AT THE DECONTAMINATION AREA:

First-aid kit
Emergency Eyewash Station
Sodium Bicarbonate Solution

EMERGENCY MEDICAL INFORMATION FOR SUBSTANCE PRESENT:

Substance Exposure Symptoms First-Aid Instructions

GASOLINE

Symptoms Following Exposure: Irritation of mucous membranes and stimulation followed by depression of central nervous system. Breathing of vapor may also cause dizziness, headache, and uncoordination or, in more severe cases, anesthesia, coma, and respiratory arrest. If liquid enters lungs, it will cause severe irritation, coughing, gagging, pulmonary edema, and, later, signs of bronchopneumonia and pneumonitis. Swallowing may cause irregular heartbeat. Contains carcinogens-avoid direct skin exposure.

Treatment of Exposure: INHALATION: maintain respiration and administer oxygen; enforce bed rest if liquid is in lungs. INGESTION: do NOT induce

vomiting; stomach should be lavaged (by doctor) if appreciable quantity is swallowed. EYES: wash with copious quantity of water. SKIN: wipe off and wash with soap and water.

NITRIC ACID

Symptoms Following Exposure: Vapors irritate eyes and respiratory tract; lung injury may not become apparent for several hours following exposure. Liquid may cause severe burns to eyes and skin.

Treatment of Exposure: INHALATION: remove to fresh air, administer artificial respiration if required. INGESTION: drink large volumes of water; do NOT induce vomiting. SKIN OR EYES: flush with water for at least 15 min.

LIST OF EMERGENCY PHONE NUMBERS:

Agency/Facility	Phone #
Police	911
Fire	911
Hospital (Columbia Presbyterian)	(212) 305-2500.
EMS	911

EMERGENCY PROCEDURES:

Onsite personnel will use the following standard emergency procedures. The Site Safety Officer shall be notified of any onsite emergencies and be responsible for ensuring that the appropriate procedures are followed.

PERSONNEL INJURY IN THE EXCLUSION ZONE:

Upon notification of an injury in the Exclusion Zone, the designated emergency signal "RED ALERT" shall be sounded. The rescue team will be initiated by calling "911". The Site Safety Officer and the Project Team Leader should evaluate the nature of the injury, and the affected person should be decontaminated to the extent possible prior to movement off of the site. Contact should be made for an ambulance and with the designated medical facility. No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms are determined.

PERSONNEL INJURY IN THE SUPPORT ZONE:

Upon notification of injury in the Support Zone, the Project Team Leader and Site Safety Officer will assess the nature of the injury. If the cause of the injury or loss of the injured person does not affect the performance of site personnel, operations may continue. The appropriate first aid measures, and necessary follow-up as stated above, will be initiated. Activities on site will stop until the added risk is removed or minimized.

FIRE/EXPLOSION:

Upon notification of a fire or explosion on site, the designated emergency signal shall be sounded and all site personnel assembled at the decontamination line. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

PERSONAL PROTECTIVE EQUIPMENT FAILURE:

If any site worker experiences a failure or altercation of protective equipment that affects the protection factors, that person and his/her buddy shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

OTHER EQUIPMENT FAILURE:

If any other equipment on site fails to operate properly, the Project Team Leader and the Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations on site. If the failure affects the safety of personnel or prevents completion of the Work Plan tasks, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions taken.

In all situations, when an onsite emergency results in evacuation of the Exclusion Zone, personnel shall not reenter until:

The conditions resulting in the emergency have been corrected.
The hazards have been reassessed.
The Site Safety Plan has been reviewed.
Site personnel have been briefed on any changes in the Site Safety Plan.

PERSONAL MONITORING:

The following personal monitoring will be in effect on site:

No personnel monitoring is expected to be required.

MEDICAL MONITORING:

All site personnel will have completed and annual physical prior to entering the contamination reduction zone and the exclusion zone. No additional medical monitoring is anticipated.

All site personnel have read the above plan and are familiar with its provisions.

Site Safety Officer X_____

Project Team Leader X_____

Other Site Personnel

Name/Date	Affiliation
X_____	X_____
X_____	X_____
X_____	X_____
X_____	X_____
X_____	X_____
X_____	X_____
X_____	X_____

GASOLINES: AUTOMOTIVE (<4.23G LEAD/GAL)

GAT

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
Motor spirit
Petrol

Watery liquid | Colorless to pale brown or pink | Gasoline odor

Floats on water. | Flammable, irritating vapor is produced.

Evacuate.
Keep people away.
Wear chemical protective suit with self-contained breathing apparatus.
Shut off ignition sources and call fire department.
Stay upwind and use water spray to "knock down" vapor.
Notify local health and pollution control agencies.
Protect water intakes.

Fire

FLAMMABLE.
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Extinguish with dry chemical, foam, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

VAPOR
Irritating to eyes, nose and throat.
If inhaled, will cause dizziness, headache, difficult breathing or loss of consciousness.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

LIQUID
Irritating to skin and eyes.
If swallowed, will cause nausea or vomiting.
Remove contaminated clothing and shoes.
Flush affected areas with plenty of water.
IF IN EYES, hold eyelids open and flush with plenty of water.
IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
DO NOT INDUCE VOMITING.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
Fouling to shoreline.
May be dangerous if it enters water intakes.
Notify local health and wildlife officials.
Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Contain
CoHection Systems: Skim
Chemical and Physical Treatment: Burn
Salvage waterfowl

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Protective goggles, gloves.
3.2 Symptoms Following Exposure: Irritation of mucous membranes and stimulation followed by depression of central nervous system. Breathing of vapor may also cause dizziness, headache, and incoordination or, in more severe cases, anesthesia, coma, and respiratory arrest. If liquid enters lungs, it will cause severe irritation, coughing, gagging, pulmonary edema, and, later, signs of bronchopneumonia and pneumonitis. Swallowing may cause irregular heartbeat.
3.3 Treatment of Exposure: INHALATION: maintain respiration and administer oxygen; enforce bed rest if liquid is in lungs. INGESTION: do NOT induce vomiting; stomach should be lavaged (by doctor) if appreciable quantity is swallowed. EYES: wash with copious quantity of water. SKIN: wipe off and wash with soap and water.
3.4 TLV-TWA: 300 ppm
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: 500 ppm
3.7 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg.
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: None
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
3.11 Liquid or Solid Characteristics: Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
3.12 Odor Threshold: 0.25 ppm
3.13 IDLH Value: Not listed.
3.14 OSHA PEL-TWA: Not listed.
3.15 OSHA PEL-STEL: Not listed.
3.16 OSHA PEL-Ceiling: Not listed.
3.17 EPA AEGL: Not listed

4. FIRE HAZARDS

4.1 Flash Point: −36°F C.C.
4.2 Flammable Limits in Air: 1.4%-7.4%
4.3 Fire Extinguishing Agents: Foam, carbon dioxide, dry chemica
4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective
4.5 Special Hazards of Combustion Products: None
4.6 Behavior in Fire: Vapor is heavier than air and may travel considerable distance to a source of ignition and flash back.
4.7 Auto Ignition Temperature: 853°
4.8 Electrical Hazards: Class I, Group D
4.9 Burning Rate: 4 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: Not pertinent
4.12 Flame Temperature: Currently not availabl
4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent
4.14 Minimum Oxygen Concentration for Combustion (MOCC): N_2 diluent: 12.0%; CO_2 diluent: 14.5-15.0%

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: No reaction
5.2 Reactivity with Common Materials: No reaction
5.3 Stability During Transport: Stable
5.4 Neutralizing Agents for Acids and Caustics: Not pertinent
5.5 Polymerization: Not pertinent
5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

6.1 Aquatic Toxicity:
90 ppm/24 hr/juvenile American shad/TL_w/fresh water
91 mg/1/24 hr/juvenile American shad/TL_w/salt water
6.2 Waterfowl Toxicity: Currently not available
6.3 Biological Oxygen Demand (BOD): 5 days
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile:
Bioaccumulation: +
Damage to living resources: 3
Human Oral hazard: 2
Human Contact hazard: II
Reduction of amenities: XX

7. SHIPPING INFORMATION

7.1 Grades of Purity: Various octane ratings; military specifications
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester) or pressure-vacuum
7.5 IMO Pollution Category: Currently not available
7.6 Ship Type: Currently not available
7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

8.1 49 CFR Category: Flammable liquid
8.2 49 CFR Class: 3
8.3 49 CFR Package Group: II
8.4 Marine Pollutant: Yes
8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue)	1
Flammability (Red)	3
Instability (Yellow)	0

8.6 EPA Reportable Quantity: Not listed.
8.7 EPA Pollution Category: Not listed.
8.8 RCRA Waste Number: Not listed
8.9 EPA FWPCA List: Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Physical State at 15° C and 1 atm: Liquid
9.2 Molecular Weight: Not pertinent
9.3 Boiling Point at 1 atm: 140–390°F = 60–199°C = 333–472°K
9.4 Freezing Point: Not pertinent
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 0.7321 at 20°C (liquid)
9.8 Liquid Surface Tension: 19-23 dynes/cm = 0.019–0.023 N/m at 20°C
9.9 Liquid Water Interfacial Tension: 49-51 dynes/cm = 0.049–0.051 N/m at 20°C
9.10 Vapor (Gas) Specific Gravity: 3.4
9.11 Ratio of Specific Heats of Vapor (Gas): (est.) 1.054
9.12 Latent Heat of Vaporization: 130–150 Btu/lb = 71–81 cal/g = 3.0 – 3.4 X 10^5 J/kg
9.13 Heat of Combustion: −18,720 Btu/lb = −10,400 cal/g = 435.1 X 10^5 J/kg
9.14 Heat of Decomposition: Not pertinent
9.15 Heat of Solution: Not pertinent
9.16 Heat of Polymerization: Not pertinent
9.17 Heat of Fusion: Currently not available
9.18 Limiting Value: Currently not available
9.19 Reid Vapor Pressure: 7.4 psia

NOTES

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 33;
Miscelaneous Hydrocarbon Mixtures
2.2 Formula: (Mixture of hydrocarbons)
2.3 IMO/UN Designation: 3.1/1203
2.4 DOT ID No.: 1203
2.5 CAS Registry No.: Currently not available
2.6 NAERG Guide No.: 128
2.7 Standard Industrial Trade Classification:
33411

GASOLINES: AUTOMOTIVE (<4.23G LEAD/GAL)

GAT

9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
45	46.270	10	0.459	40	0.909	46	0.521
50	46.130	15	0.462	50	0.900	48	0.514
55	46.080	20	0.464	60	0.891	50	0.507
60	45.850	25	0.467	70	0.883	52	0.500
65	45.710	30	0.470	80	0.874	54	0.494
70	45.560	35	0.472	90	0.865	56	0.487
75	45.400	40	0.475	100	0.856	58	0.481
80	45.240	45	0.478	110	0.847	60	0.475
85	45.080	50	0.480	120	0.838	62	0.469
90	44.910	55	0.483	130	0.829	64	0.463
95	44.760	60	0.486	140	0.821	66	0.457
100	44.570	65	0.488	150	0.812	68	0.451
105	44.390	70	0.491	160	0.803	70	0.446
110	44.210	75	0.494	170	0.794	72	0.440
115	44.030	80	0.496	180	0.785	74	0.435
		85	0.499	190	0.776	76	0.430
		90	0.502			78	0.424
		95	0.504			80	0.419
		100	0.507			82	0.414
		105	0.510			84	0.410
						86	0.405
						88	0.400
						90	0.396
						92	0.391
						94	0.387
						96	0.382

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	INSOLUBLE		CURRENTLY NOT AVAILABLE		NOT PERTINENT		CURRENTLY NOT AVAILABLE

NITRIC ACID

NAC

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Watery liquid Colorless to light brown Choking odor Sinks and mixes with water. Harmful vapor is produced.

Evacuate.
Keep people away. AVOID CONTACT WITH LIQUID AND VAPOR.
Avoid inhalation.
Wear chemical protective suit with self-contained breathing apparatus.
Notify local health and pollution control agencies.
Protect water intakes.

Fire	Not flammable. May cause fire on contact with combustibles. Flammable gas may be formed on contact with metals. Poisonous gases are produced when heated. Wear chemical protective suit with self-contained breathing apparatus. Cool exposed containers with water.
Exposure	CALL FOR MEDICAL AID. VAPOR Will burn eyes, nose and throat. If inhaled, will cause difficult breathing or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. LIQUID Will burn skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. DO NOT INDUCE VOMITING.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Dilute and disperse
Stop discharge
Chemical and Physical Treatment:
Neutralize

2. CHEMICAL DESIGNATIONS

- **2.1 CG Compatibility Group:** 3; Nitric acid
- **2.2 Formula:** HNO_3-H_2O
- **2.3 IMO/UN Designation:** 8.0/2031
- **2.4 DOT ID No.:** 2031
- **2.5 CAS Registry No.:** 7697-37-2
- **2.6 NAERG Guide No.:** 157
- **2.7 Standard Industrial Trade Classification:** 52233

3. HEALTH HAZARDS

- **3.1 Personal Protective Equipment:** Air mask; rubber acid suit, hood, boots and gloves; chemical goggles; safety shower and eye bath.
- **3.2 Symptoms Following Exposure:** Vapors irritate eyes and respiratory tract; lung injury may not become apparent for several hours following exposure. Liquid may cause severe burns to eyes and skin.
- **3.3 Treatment of Exposure:** INHALATION: remove to fresh air, administer artificial respiration if required. INGESTION: drink large volumes of water; do NOT induce vomiting. SKIN OR EYES: flush with water for at least 15 min.
- **3.4 TLV-TWA:** 2 ppm
- **3.5 TLV-STEL:** Not listed.
- **3.6 TLV-Ceiling:** 4 ppm
- **3.7 Toxicity by Ingestion:** Grade 3; LD_{50} = 50 to 500 mg/kg
- **3.8 Toxicity by Inhalation:** Currently not available.
- **3.9 Chronic Toxicity:** None
- **3.10 Vapor (Gas) Irritant Characteristics:** 58-68%: Vapor is moderately irritating such that personnel will not usually tolerate moderate or high vapor concentrations. 95%: Vapors cause severe irritation of eye and throat and can cause eye and lung injury. They cannot be tolerated even at low concentrations.
- **3.11 Liquid or Solid Characteristics:** Severe skin irritant. Causes second and third-degree burns on short contact and is very injurious to the eyes.
- **3.12 Odor Threshold:** Currently not available
- **3.13 IDLH Value:** 25 ppm
- **3.14 OSHA PEL-TWA:** 2 ppm
- **3.15 OSHA PEL-STEL:** Not listed.
- **3.16 OSHA PEL-Ceiling:** Not listed.
- **3.17 EPA AEGL:** Not listed

4. FIRE HAZARDS

- **4.1 Flash Point:** Not flammable
- **4.2 Flammable Limits in Air:** Not flammable
- **4.3 Fire Extinguishing Agents:** Use water on adjacent fires.
- **4.4 Fire Extinguishing Agents Not to Be Used:** Not pertinent
- **4.5 Special Hazards of Combustion Products:** May give off poisonous oxides of nitrogen and acid fumes when heated in fires.
- **4.6 Behavior in Fire:** Decomposes and gives off poisonous oxides of nitrogen.
- **4.7 Auto Ignition Temperature:** Not flammable
- **4.8 Electrical Hazards:** Not pertinent
- **4.9 Burning Rate:** Not pertinent
- **4.10 Adiabatic Flame Temperature:** Currently not available
- **4.11 Stoichometric Air to Fuel Ratio:** Not pertinent.
- **4.12 Flame Temperature:** Currently not available
- **4.13 Combustion Molar Ratio (Reactant to Product):** Not pertinent.
- **4.14 Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- **5.1 Reactivity with Water:** May heat up on mixing, but explosion or formation of steam unlikely.
- **5.2 Reactivity with Common Materials:** Very corrosive to wood, paper, cloth and most metals. Toxic red oxides of nitrogen are formed.
- **5.3 Stability During Transport:** When heated may give off toxic red oxides of nitrogen.
- **5.4 Neutralizing Agents for Acids and Caustics:** Flush with water
- **5.5 Polymerization:** Not pertinent
- **5.6 Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- **6.1 Aquatic Toxicity:** 72 ppm/96 hr/mosquito fish/TL_m/fresh water
330-1000 ppm/48 hr/cockle/LC_{50}/salt water
- **6.2 Waterfowl Toxicity:** Currently not available
- **6.3 Biological Oxygen Demand (BOD):** None
- **6.4 Food Chain Concentration Potential:** None
- **6.5 GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 2
Human Oral hazard: 2
Human Contact hazard: II
Reduction of amenities: X

7. SHIPPING INFORMATION

- **7.1 Grades of Purity:** Various grades: 52-98%
- **7.2 Storage Temperature:** Ambient
- **7.3 Inert Atmosphere:** No requirement
- **7.4 Venting:** Open or pressure-vacuum
- **7.5 IMO Pollution Category:** C
- **7.6 Ship Type:** 2
- **7.7 Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- **8.1 49 CFR Category:** Corrosive material
- **8.2 49 CFR Class:** 8
- **8.3 49 CFR Package Group:** I
- **8.4 Marine Pollutant:** No
- **8.5 NFPA Hazard Classification:**

Category	Classification
Health Hazard (Blue)	3
Flammability (Red)	0
Instability (Yellow)	0
Special (White)	OX

- **8.6 EPA Reportable Quantity:** 1000 pounds
- **8.7 EPA Pollution Category:** C
- **8.8 RCRA Waste Number:** Not listed
- **8.9 EPA FWPCA List:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- **9.1 Physical State at 15° C and 1 atm:** Liquid
- **9.2 Molecular Weight:** Not pertinent
- **9.3 Boiling Point at 1 atm:** 192.0°F = 88.9°C = 362.1°K
- **9.4 Freezing Point:** -50°F = -45.6°C = 227.6°K
- **9.5 Critical Temperature:** Not pertinent
- **9.6 Critical Pressure:** Not pertinent
- **9.7 Specific Gravity:** 1.49 at 20°C (liquid)
- **9.8 Liquid Surface Tension:** Not pertinent
- **9.9 Liquid Water Interfacial Tension:** Not pertinent
- **9.10 Vapor (Gas) Specific Gravity:** Not pertinent
- **9.11 Ratio of Specific Heats of Vapor (Gas):** (est.) 1.248
- **9.12 Latent Heat of Vaporization:** 214 Btu/lb = 119 cal/g = 4.98 X 10^5 J/kg
- **9.13 Heat of Combustion:** Not pertinent
- **9.14 Heat of Decomposition:** Not pertinent
- **9.15 Heat of Solution:** -205 Btu/lb = -114 cal/g = -4.76 X 10^5 J/kg
- **9.16 Heat of Polymerization:** Not pertinent
- **9.17 Heat of Fusion:** Currently not available
- **9.18 Limiting Value:** Currently not available
- **9.19 Reid Vapor Pressure:** 1.9 psia

NOTES

NITRIC ACID

NAC

9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
35	95.139	51	0.470		NOT PERTINENT		NOT PERTINENT
40	94.830	52	0.471				
45	94.520	53	0.472				
50	94.209	54	0.472				
55	93.910	55	0.473				
60	93.599	56	0.473				
65	93.290	57	0.474				
70	92.990	58	0.474				
75	92.679	59	0.475				
80	92.370	60	0.475				
85	92.070	61	0.476				
90	91.759	62	0.477				
95	91.450	63	0.477				
		64	0.478				
		65	0.478				
		66	0.479				
		67	0.479				
		68	0.480				
		69	0.480				
		70	0.481				
		71	0.482				
		72	0.482				
		73	0.483				
		74	0.483				
		75	0.484				
		76	0.484				

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	MISCIBLE	80	1.291	80	0.01404	0	0.206
		85	1.489	85	0.01605	10	0.209
		90	1.713	90	0.01829	20	0.213
		95	1.964	95	0.02078	30	0.216
		100	2.246	100	0.02355	40	0.219
		105	2.560	105	0.02662	50	0.223
		110	2.912	110	0.03000	60	0.226
		115	3.303	115	0.03374	70	0.229
		120	3.737	120	0.03784	80	0.232
		125	4.218	125	0.04235	90	0.236
		130	4.750	130	0.04728	100	0.239
		135	5.336	135	0.05267	110	0.242
		140	5.981	140	0.05855	120	0.246
		145	6.690	145	0.06494	130	0.249
		150	7.467	150	0.07189	140	0.252
		155	8.317	155	0.07943	150	0.255
		160	9.246	160	0.08758	160	0.259
		165	10.260	165	0.09640	170	0.262
		170	11.360	170	0.10590	180	0.265
		175	12.560	175	0.11610	190	0.269
		180	13.860	180	0.12720	200	0.272
						210	0.275
						220	0.278
						230	0.282
						240	0.285
						250	0.288

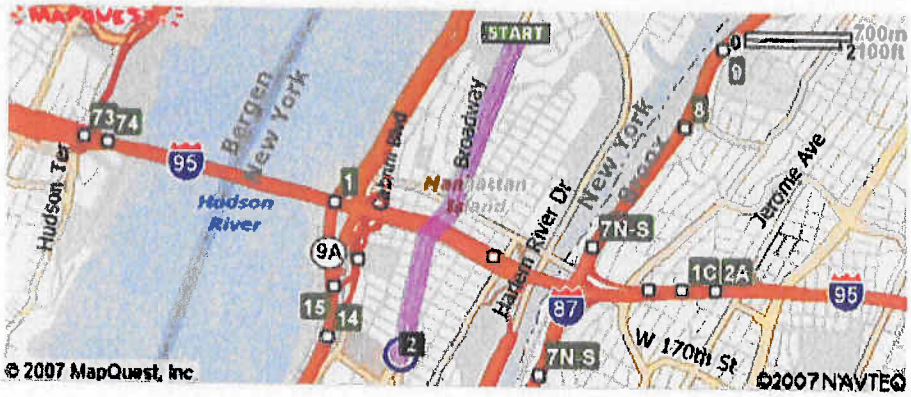
ADVANCED SITE RESTORATION, LLC
ENVIRONMENTAL SERVICES

Driving Directions

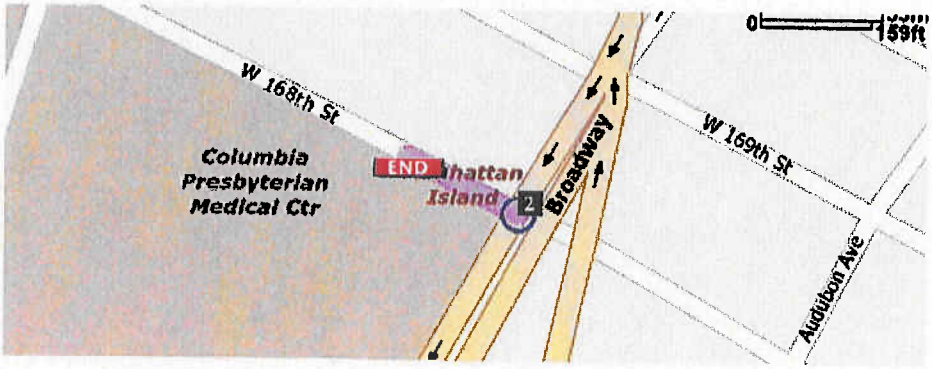
4566 Broadway, New York, NY to Columbia Presbyterian Med

Columbia Presbyterian Med Ctr: 212-305-7997
622 W 168th St, New York, NY 10032, US
Total Est. Distance: 1.43 miles

Start out going SOUTH on BROADWAY/ US-9 toward BENNETT AVE.
1.3 miles. Continue to follow BROADWAY.



Turn Right on to W168th Street <.1 mile



APPENDIX – E

NYSDEC GENERIC
LIST OF AGREEMENTS
DRAFT

GENERIC LIST OF AGREEMENTS

Draft

REMEDIAL INVESTIGATION WORK PLANS

&

REMEDIAL INVESTIGATION REPORTS

The following entries provide a list of agreements that have been made to modify and finalize Remedial Investigation Work Plans and Remedial Investigation Reports for prior projects managed by NYSDEC Division of Environmental Remediation in Region 2. The purpose of this list is to provide information about project elements that are commonly or routinely requested in NYSDEC comments on Remedial Investigation Work Plans and Remedial Investigation Reports. By presenting this list in advance of submission of these reports, Applicants, Volunteers, and Responsible Parties may incorporate these agreements into their plans and reports and considerably shorten the review time for NYSDEC and streamline the process for approval of those documents. To achieve this benefit, each of the agreements should be directly and affirmatively addressed in the Remedial Investigation Work Plans and Remedial Investigation Reports. Submission of a separate checklist to show where these issues are addressed in documents is recommended. This list has been made in a generic format for use in a broad range of future projects. Consequently, this agreement list does not include all possible NYSDEC comments and is not intended to be a substitute for the agency review and comment process or for the application of DER-10 (Tech Guide).

Remedial Investigation: General

1. The guidance for Remedial Investigation Work Plans and Remedial Investigations is provided in NYSDEC Division of Environmental Remediation DER-10 Guide (Tech Guide). Remedial investigations should be in substantial compliance with this document.

2. All documents and reports submitted in fulfillment of consent orders and agreements made with NYSDEC will be submitted in both hard copy and in digital format on CD. Digital submittals will include PDF format files for all documents. Data in tabular format will also be submitted in active source files format (such as Excel) to enable direct evaluation by Department staff.

3. All digital and hard copy submittals will be addressed to assigned Project Managers for both the Department of Environmental Conservation and the Department of Health.

4. A digital site map will be submitted to the Department and will show site structures, environmental monitoring apparatus and sampling points (wells,

borings, test pits), and a recent aerial photo of the site and immediate surrounding area.

5. A surveyed site map showing the metes and bounds for the subject site as described in the governing agreement with New York State will be submitted. The map should include pertinent roadways and onsite structures. Both hard copy and digital form of this map will be submitted.

6. Metes and bounds description of the site will include a global positioning system coordinate for the starting point for the description.

7. A topographic map of the site of sufficient scale to assess on-site and local off-site physical conditions will be provided in the Remedial Investigation Work Plan and the Remedial Investigation Report.

8. Photographs will be taken of all remedial investigation activities and submitted to NYSDEC in digital form on a CD(s). Photos should illustrate all remedial investigation elements and should be of acceptable quality. Representative photos of the site prior to any remedial actions should be provided. Representative photos should be provided of contaminant sources and source areas and structures. Photos will be submitted to NYSDEC on CD and will be sent to NYSDEC's Project Manager (2 copies) and to NYSDOH Project Manager (1 copy). CDs should have a label and a general file inventory structure that separates photos into directories and sub-directories according to logical lines. A photo log keyed to photo file ID numbers should be prepared to provide explanation for all representative photos.

9. The Applicant, Volunteer, Responsible Party and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work and the structural integrity of excavations, and for the integrity and safety of structures that may be affected by those excavations (such as buildings, foundations and bridge footings).

10. NYSDEC Project Identification Numbers will appear on the cover and face page of all reports.

11. A glossary will be provided to provide an explanation of all acronyms used in each report.

12. An Emergency Contact Sheet will be provided to NYSDEC's Project Manager. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.

13. All project reports must be submitted in digital form. For older projects that have passed through earlier stages of remedial investigation, the approved documents

must be scanned and submitted in digital form to the Project Manager for NYSDEC.

14. A separate tabular list of all local, regional and national governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work must be submitted in the Remedial Investigation Report and should include a citation of the law, statute, or code to be complied with, the originating agency, and a contact name and contact phone number.

15. A comprehensive project schedule for Remedial Investigation will be submitted in the Remedial Investigation Work Plan.

16. An itemized summary of projected costs for the proposed remedial investigation will be submitted as an appendix to the Remedial Investigation Work Plan. Actual final costs will be reported as an appendix to the Remedial Investigation.

17. If surface waters are on-site of near the site and impact of contaminant releases are possible, an off-site Fish and Wildlife Impact Assessment will be performed and reported. Sampling necessary to complete this assessment will be performed.

18. Hazardous wastes and other contaminated media generated during the remedial investigation phase will be stored, transported, and disposed in full compliance with applicable local, state and federal regulations.

Areas of Concern

19. A site map will be submitted that shows all of the Areas of Concern (AOC) that have been identified for the project. Map will be to scale. Available maps of drainage systems will be summarized and will include interpretation of piping lines that have environmental significance.

20. All Areas of Concern (AOC) will be investigated and results will be presented in the Remedial Investigation Report. Each AOC will be assessed for the need for remedial action in the Remedial Action Work Plan.

21. Site maps (or portions thereof) will be submitted that provide comprehensive plume analysis showing the concentrations of critical chemicals in groundwater (isopleth maps) that pertain to specific Areas of Concern. The plume analysis should include relevant chemical parameters (i.e. benzene, tetrachloroethylene, etc.) and indices (i.e. total VOC's). The hydrogeologic strata represented in the map (i.e. fill, upper glacial aquifer, etc.) will be identified.

22. A plan will be submitted for definition of groundwater plumes with special attention to delineation of the areas of greatest concentration of critical contaminants and the limits of the plume in the down-gradient direction (generally defined as the attainment of groundwater standards). In latter stages of the project, sampling of down-gradient wells will be required to assess the success

of remedial measures (Remedial Performance Monitoring) to be taken during the Remedial Action or Interim Remedial Action and subsequent remedial phases.

23. A site map showing the defined Areas of Concern with an overlay of the site development plan will be submitted. The latter will be linked with the description in the text of the report of the proposed end usage of the property and buildings and will be coordinated with NYSDOH.

24. A plan for identification of subterranean piping and fuel conveyance systems will be submitted. An analysis of the piping system and its environmental ramifications will be provided with summary maps of the piping systems.

25. Data submitted in a Remedial Investigation or Remedial Investigation Work Plan that are part of prior investigations for which work plans and subsequent reports have not already been reviewed and approved by the Department, and for which site characterization is to be based and/or decisions regarding remedial actions are to be based, must be evaluated for use within a Data Usability Site Report (DUSR). A conclusion must be drawn regarding the suitability of the data with respect to sampling and chemical analytical procedures and quality assurance and quality control, for the intended use.

26. A table of data that reports measurement of non-aqueous phase liquid (NAPL) thickness in monitor wells will be presented. The table should also identify locations where there was evidence of NAPL in borings and the approximate thickness based on boring log observations. Tables should also show where free product was **not** identified. Graphical depictions (maps, etc.) should be provided to show the distribution of NAPL onsite.

27. The design of monitor wells will be assessed to determine their capacity for detecting free product (i.e. appropriate screen interval relative to the water table (LNAPL) or the top of underlying confining beds (DNAPL)).

Record Search

28. A composite of all Sanborn maps will be submitted that includes a summary presentation of all historical structures and features of environmental significance. The assessment of Areas of Concern will consider all of these structures of environmental significance shown on this map. This map will be delivered on an enlarged sheet. Where a site is very large, and the product map complex, multiple sheets must be provided. All past usages of the property that are relevant to the identification of Areas of Concern should be shown including, but not limited to, buildings and other structures, rail lines, transportation conduits, loading, unloading and storage areas, tanks, and drainage channels and structures (dry wells, pits, culverts, pipes, etc.).

29. Each Area of Concern will be investigated through direct field assessment including, but not limited to, sampling, test pitting, and soil boring.

30. All Sanborn maps for the site must be submitted in the Remedial Investigation Work Plan and must be presented at a sufficient scale to be legible.

Land Usage

31. A map that shows the land usage in the area surrounding the site will be submitted. The map must be in compliance with guidance in DER-10. The map should include sensitive land uses from a human health perspective (schools, day care, etc.) and sensitive environmental receptors (surface waters, etc.). A map should also include the proximity to the nearest water source.

Sampling Plan

32. A table of proposed samples will be submitted in the Remedial Investigation Work Plan showing all samples that will be collected during site investigations. Samples shown in the table will be cross-referenced with site maps that show sampling locations. All samples that were collected should be similarly reported in the Remedial Investigation Report.

33. Analytical methods for all chemical analyses for all media must be summarized in an Analytical Summary Table to be presented in the Remedial Investigation Work Plan and the Remedial Investigation Report. This table must include, at a minimum; matrix type; number of samples per matrix; number of field and trip blanks; analytical parameters tested for each media; associated analytical test methods; number of MS/MSD samples; holding times and preservation methods; sample container type; description of sample methods; and sample storage methods.

Chemical Data and Information

34. All data from prior investigations will be summarized, evaluated, and reported in the Remedial Investigation.

35. A site map showing the location of NAPL with postings of data will be submitted. The maps will also include an indication of areas where free product was not located based on reliable monitor well and other data. As necessary, maps of individual Areas of Concern will be provided showing existing sample locations and results for groundwater and soil, all observed thicknesses of free product in wells, all observed thicknesses of product-saturated soil/fill in boring logs, and proposed sample locations to complete definition of free product in groundwater/soil.

36. Tables of chemical data for soil, groundwater and other environmental media will be submitted to provide summaries of all sampling. Appropriate standards, criteria and guidance values (i.e. Class GA Groundwater Standards, TAGM 4046, etc.) should be included for comparison. All data must be reported in the Remedial Investigation Report including data from earlier phases of study.

37. A table summarizing exceedences of applicable standards, criteria, and guidance for groundwater, soil, surface water and other environmental media will be submitted.

38. Table summarizing exceedences of proposed site-specific soil action levels (SSSALs) will be submitted.

39. A table of chemical data for computed index parameters (i.e. total cPAH, B(a)P equivalents, total SVOC's, total VOC's, etc.) will be submitted. This data can be included as part of other tables.

40. Large-dimension site maps (sheets) showing posted data for all exceedences of standards, criteria and guidance values for groundwater, soil, surface water and sediment will be submitted.

41. Maps of individual VOC Areas of Concern will be submitted showing existing sample locations and results for groundwater and soil. Proposed supplemental sample locations required to complete definition of Areas of Concern in groundwater/soil and design of remedy should be shown.

Groundwater Monitor Wells and Hydrogeology

42. Groundwater equipotential maps containing current data from on-site monitor wells will be submitted. Maps must be presented for discrete water-bearing zones and must not mix equipotentials for different water-bearing zones. If multiple water-bearing zones are encountered, separate maps will be provided for each zone. Average data for hydraulic head measurements taken from different hydrostratigraphic horizons (depths) at the same location or data from different measurement events will not be used to create equipotential maps. Average data is acceptable where a detailed tidal fluctuation analysis has been performed during a single measurement event according to a prescribed plan.

43. A table of data for all water level measurements taken at wells on-site will be submitted. The table should include date and time of measurement, and the time of the most recent high and low tide for tidally-influenced environments.

44. For sites in tidally influenced environments, groundwater flow will be determined and mapped, at a minimum, using averaged head values from monitor wells calculated from non-time-weighted data that has been obtained regularly across complete tidal cycles. A separate map will also be submitted that shows the tidal variability in groundwater head (delta) in monitor wells. Methods of analysis will be discussed. Analyses are not limited to this approach.

45. Methods for collection of groundwater head data in tidal environments can include hand measurements taken synoptically at regular intervals throughout complete tidal cycles or use of automated data recording devices using pressure transducers or equivalent data collection methods.

46. A table of data on the construction details for monitor wells that have been built on-site will be submitted. This will include screen elevations, date of construction, geologic interval screened, and current status (i.e. available for sampling, destroyed, intact, needs development, etc.).

47. Coordinates in GPS will be provided for all groundwater monitor wells, soil borings and test pits performed for site characterization. These features will also be surveyed.

48. For sites with known contaminants that have physical properties that suggest deep transport in groundwater column (i.e. compounds with a specific gravity greater than water), or where such contaminants are suspected, a plan for investigation must include well placement at the base of the water column screening the top of the uppermost confining bed, and at least one appropriately placed well at depth below the uppermost confining bed.

49. For all sites, at least one well should be placed at depth to establish vertical flow conditions and hydrogeologic conditions.

Stratigraphy

50. Representative geologic cross sections will be submitted that show the occurrence of geologic strata within the entire stratigraphic section capable of being impacted by contaminants beneath the site. These sections must clearly define the hydrostratigraphic significance of unconsolidated layers (water-yielding aquifers such as fill, sands and gravel; aquicludes such as clay; aquitards such as silt or till; etc.) and fractured and competent bedrock. These maps should also be used as base maps for other presentations that show monitor well placement, soil sample collection points and analytical results, and hydraulic head.

Monitor Well Construction and Sampling

51. In environments containing historic fill, a narrower monitor well slot size and finer-grained and commensurate sand pack will be considered to minimize the inward migration of fines from the formation into the well.

52. Wells will be developed aggressively to remove fines from the formation, sand pack and well trap. Quiescent well purging and low-flow sampling methods will be used to minimize suspension and mobilization of fines in the well and formation during sampling.

53. Wells will be constructed with a minimum two-foot blind pipe sediment trap at its base. A cap will be placed over the base of the trap.

Historic Fill and Urban Soils

54. Historic Fill maps will be submitted that show the location and thickness of historic fill (as distinguished from redistributed natural soils) on-site.

Representative geologic cross-sections will be provided to illustrate the occurrence of historic fill.

55. Tables will be submitted that summarize a subset of chemical parameters and computed parameters for on-site soil and historical fill. Multiple tables should be presented with analytes (i.e. Pb, Hg, etc.) in individual columns and discrete sample results in rows. One table should be presented for each of several indicator parameters for the site that shows the ordered ranking of that analyte (from highest concentration in observed samples to lowest in observed samples) with the corresponding results for other analytes. These tables enable tabular assessment of correlation of analytes with other analytes. The analytes that should be included are, at a minimum, trace and minor metals (i.e. Pb, Hg, Cd, Cr, As, Zn, Ni, Cu, Se, Th, Be) and organic compounds found to be abundant at the site (Benzene, PCE, TCE, etc.) and summary parameters (total cPAH, total VOC's, total SVOC's, B(a)P equivalents). A separate assessment should be provided for historical fill if this material can be distinguished from other areas of concern.

56. A soil gas monitoring plan will be required to determine the presence of methane derived from sites with historic fill or other organic-rich fill material.

Soil Gas

57. Soil gas investigation is required at all sites that contain VOC's and historic fill. Soil gas data and interpretation from surveys performed at the site must be presented in the Remedial Investigation Report.

Geophysical Study

58. Geophysical surveys will be required on most sites. Where buildings are to be demolished in late stages and after remedial investigations are substantially complete, a plan should be developed for geophysical surveys to be performed over the remainder of the site after the buildings and other interferences have been removed.

59. Geophysical pilot studies should be considered to assess the most effective method for use at the site. Gradiometer magnetometry should be considered to enable distinction of the magnitude and depth of metallic objects in the subsurface.

Human Health Assessment

60. An off-site Qualitative Human Health Exposure Assessment will be performed and reported. Sampling necessary to complete this assessment will be performed. Analysis will include current and future exposure assessment scenarios.

61. A site map showing the defined Areas of Concern with an overlay of the site development plan will be submitted. The latter will be linked with the description of the proposed end usage of the property and buildings in the text of the report and will be coordinated with NYSDOH.

62. A site map and plan will be submitted that shows the design detail and location for each of the proposed final surfaces contemplated for the site. This should include, at a minimum, building structure areas, concrete/asphalt areas, and soil cover on open areas.

Reporting

63. Daily Reports will be provided to the Project Manager for NYSDEC and NYSDOH during all periods of major investigative activity on remedial projects. These reports will include daily activities. A map with an alpha-numeric grid will be submitted and used for identification of work areas. These reports will include a summary of substantive findings and other pertinent information including all complaints received from the public.

Odor Control Plan

64. An odor control plan will be submitted that is capable of controlling emissions of nuisance odors off-site, and on-site, where there are residents or tenants on the property. Specific odor control methods to be used on a routine basis will be defined in the Remedial Investigation Work Plan. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints. Implementation of all odor controls, including the halt of work, will be the responsibility of the applicant.

65. The means to be considered for minimization of odors during remedial actions include, but are not limited to, limiting the area of open excavations; shrouding open excavations with tarps; use of foams to cover exposed odorous soils; use of chemical odorants in spray or misting systems; and containment of excavation areas through the use of tents and equivalent containment structures.

Health & Safety Plan

66. The Health and Safety Plan (HASP) will be submitted as a separate, standalone document independent from all project plans.

67. The Applicant, Volunteer, Responsible Party and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan. This plan must cover both the remedial work and construction work and will be submitted separately from all other investigation and remediation documents prepared under applicable agreements with New York State. This document must be submitted to the State for review. This document is the full responsibility of the above referenced parties.

68. The Site Safety Coordinator will be identified. A resume will be provided.

69. Details of the Community Air Monitoring Plan (CAMP) will be defined and will be coordinated with the NYSDOH.

70. Exceedences observed in the CAMP will be reported in the daily report to the NYSDEC Project Manager.

71. The HASP will include affirmative statements to indicate procedures to be followed and not non-committal statements about general requirements for such work.

72. HAZWOPER training will be provided as required for remedial investigation activities as appropriate.

Citizen Participation

73. Fact Sheets are the property of New York State. The applicant will be requested to assist in their preparation (such as the development of draft Fact Sheets) and their distribution. However, only Fact Sheets approved by NYSDEC will be issued under any state-managed project. No changes will be made to approved Fact Sheets authorized for release by NYSDEC without the express consent of the Department in writing. No other unapproved information, such as brochures and flyers, will be included with the Fact Sheet mailing.

74. All draft Fact Sheets will be provided to the Department in a WordPerfect file and in the format used by Region 2.

75. A certification of mailing will be sent by the Applicant to the NYSDEC Project Manager following distribution of all Fact Sheets and notices, providing certification that the Fact Sheets were mailed, when they were mailed, a copy of the Fact Sheet, and a list of recipients.

Remedial Investigation Report

76. A Final Remedial Investigation Report will be submitted that transmits the results of all site investigation data and information, including all of the data obtained during preliminary and supplemental investigations, and thorough evaluation of that data.

77. All primary contaminant sources (including but not limited to tanks and hotspots) identified during site characterization, remedial investigation, and remedial action will be surveyed by a surveyor licensed to practice in the State of New York and will be reported in the Remedial Investigation Report. The location of these sources will also be reported in the Final Remedial Report.

78. The Remedial Investigation Report will include a conceptual site model that explains the occurrence of contaminant sources and their fate and transport at the

site in the context of the local site stratigraphy and hydrogeology. The conceptual model will utilize both plan and cross-sectional views of the site.

APPENDIX – F

CROSS REFERENCE TABLE-
GENERIC LIST OF AGREEMENTS

Appendix F – Cross Reference Table –General List of Agreements

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
Remedial Investigation: General			
1. The guidance for Remedial Investigation Work Plans and Remedial Investigations is provided in NYSDEC Division of Environmental Remediation DER-10 Guide (Tech Guide). Remedial investigations should be in substantial compliance with this document.	X		X
2. All documents and reports submitted in fulfillment of consent orders and agreements made with NYSDEC will be submitted in both hard copy and in digital format on CD. Digital submittals will include PDF format files for all documents. Data in tabular format will also be submitted in active source files format (such as Excel) to enable direct evaluation by Department staff.			X
3. All digital and hard copy submittals will be addressed to assigned Project Managers for both the Department of Environmental Conservation and the Department of Health.	DEC and DOH Project Managers received documents		X
4. A digital site map will be submitted to the Department and will show site structures, environmental monitoring apparatus and sampling points (wells, borings, test pits), and a recent aerial photo of the site and immediate surrounding area.			X
5 A surveyed site map showing the metes and bounds for the subject site as described in the governing agreement with New York State will be submitted. The map should include pertinent roadways and onsite structures. Both hard copy and digital form of this map will be submitted.			X
6 A topographic map of the site of sufficient scale to assess on-site and local off-site conditions will be provided in the Remedial Investigation Work Plan and the Remedial Investigation Report.	Figure 1		X
7. Metes and hounds description of the site will include a global positioning system coordinate for the starting point for the description.			X

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
8. Photographs will be taken of all remedial investigation activities and submitted to NYSDEC in digital form on a CD(s). Photos should illustrate all remedial investigation elements and should be of acceptable quality. Representative photos of the site prior to any remedial actions should be provided. Representative photos should be provided of contaminant sources and source areas and structures. Photos will be submitted to NYSDEC on CD and will be sent to NYSDEC's Project Manager (2 copies) and to NYSDOH Project Manager (1 copy). CDs should have a label and a general file inventory structure that separates photos into directories and sub-directories according to logical lines. A photo log keyed to photo file ID numbers should be prepared to provide explanation for all representative photos,	N/A		X
9. The Applicant, Volunteer, Responsible Party and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the safe performance of all invasive work and the structural integrity of excavations, and structures that may be affected by those excavations (such as building foundations and bridge footings).	Addressed by site Construction Engineer		
10, Project numbers will appear on the cover and face page of all reports.	Cover		X
11, A glossary will be provided to provide an explanation of all acronyms used in each report.	Appendix F		X
12. An emergency contact sheet will be provided to NYSDEC's project manager. That document will define the specific project contacts for use by NYSDEC and NYSDOH in the case of a day or night emergency.	Included as a section of the HASP		N/A
13, All project reports must be submitted in digital form. For older projects that have passed through earlier stages of remedial investigation, the approved documents must be scanned and submitted in digital form to the project manager for NYSDEC			X
14. A separate list of all local, regional and national governmental permits, certificates or other approvals or authorizations required to perform the remedial and development work must be submitted in the RAWP and should include a citation of the law, statute or code to be complied with, the originating agency, and a- contact name and contact phone number.	N/A	N/A	N/A
15. A comprehensive project schedule for Remedial Investigation will be submitted in the Work Plan.	Section 8		N/A
16. An itemized summary of projected costs for the proposed remedial activity will be submitted as an appendix to the Remedial Investigation Report, Final costs will be reported as an appendix to the Remedial Investigation.	N/A	N/A	X

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
17. If surface waters are on-site of near the site and impact of contaminant releases are possible, an off-site Fish and Wildlife Impact Assessment will be performed and reported. Sampling necessary to complete this assessment will be performed.	NA		
18. Hazardous wastes and other contaminated media generated during the remedial investigation phase will be stored, transported, and disposed in full compliance with applicable local, state and federal regulations.			X
19. A site map will be submitted that shows all of the Areas of Concern (AOC) that have been identified for the project. Map will be to scale. Available maps of drainage systems will be summarized and will include interpretation of piping lines that have environmental significance.			X
20. All Areas of Concern (AOC) will be investigated and results will be presented in the Remedial Investigation Report. Each AOC will be assessed for the need for remedial action in the Remedial Action Work Plan.1	X		
21. Site maps (or portions thereof) will be submitted that provide comprehensive plume analysis showing the concentrations of critical chemicals in groundwater (isopleth maps) that pertain to specific Areas of Concern. The plume analysis should include relevant chemical parameters (i.e. benzene, tetrachloroethylene, etc.) and indices (i.e. total VOC's). The hydrogeologic strata represented in the map (i.e. fill, upper glacial aquifer, etc.) will be identified.	X		
22. A plan will be submitted for definition of groundwater plumes with special attention to delineation of the areas of greatest concentration of critical contaminants and the limits of the plume in the down-gradient direction (generally defined as the attainment of groundwater standards). In latter stages of the project, sampling of down-gradient wells will be required to assess the success	X		

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
23. A site map showing the defined Areas of Concern with an overlay of the site development plan will be submitted. The latter will be linked with the description in the text of the report of the proposed end usage of the property and buildings and will be coordinated with NYSDOH.	**X**		
24. A plan for identification of subterranean piping and fuel conveyance systems will be submitted. An analysis of the piping system and its environmental ramifications will be provided with summary maps of the piping systems.			X
25. Data submitted in a Remedial Investigation or Remedial Investigation Work Plan that are part of prior investigations for which work plans and subsequent reports have not already been reviewed and approved by the Department, and for which site characterization is to be based and/or decisions regarding remedial actions are to be based, must be evaluated for use within a Data Usability Site Report (DUSR). A conclusion must be drawn regarding the suitability of the data with respect to sampling and chemical analytical procedures and quality assurance and quality control, for the intended use.	**X**		
26. A table of data that reports measurement of non-aqueous phase liquid (NAPL) thickness in monitor wells will be presented. The table should also identify locations where there was evidence of NAPL in borings and the approximate thickness based on boring log observations. Tables should also show where free product was **not** identified. Graphical depictions (maps, etc.) should be provided to show the distribution of NAPL onsite.			**X**

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
27. The design of monitor wells will be assessed to determine their capacity for detecting free product (i.e. appropriate screen interval relative to the water table (LNAPL) or the top of underlying confining beds (DNAPL).			**X**
28. A composite of all Sanborn maps will be submitted that includes a summary presentation of all historical structures and features of environmental significance. The assessment of Areas of Concern will consider all of these structures of environmental significance shown on this map. This map will be delivered on an enlarged sheet. Where a site is very large, and the product map complex, multiple sheets must be provided. All past usages of the property that are relevant to the identification of Areas of Concern should be shown including, but not limited to, buildings and other structures, rail lines, transportation conduits, loading, unloading and storage areas, tanks, and drainage channels and structures (dry wells, pits, culverts, pipes, etc.).			**X**
29. Each Area of Concern will be investigated through direct field assessment including, but not limited to, sampling, test pitting, and soil boring.	**X**		
30. All Sanborn maps for the site must be submitted in the Remedial Investigation Work Plan and must be presented at a sufficient scale to be legible.		**X**	
31. A map that shows the land usage in the area surrounding the site will be submitted. The map must be in compliance with guidance in DER-10. The map should include sensitive land uses from a human health perspective (schools, day care, etc.) and sensitive environmental receptors (surface waters, etc.). A map should also include the proximity to the nearest water source.	X		

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
32. A table of proposed samples will be submitted in the Remedial Investigation Work Plan showing all samples that will be collected during site investigations. Samples shown in the table will be cross-referenced with site maps that show sampling locations. All samples that were collected should be similarly reported in the Remedial Investigation Report.	X		
33. Analytical methods for all chemical analyses for all media must be summarized in an Analytical Summary Table to be presented in the Remedial Investigation Work Plan and the Remedial Investigation Report. This table must include, at a minimum; matrix type; number of samples per matrix; number of field and trip blanks; analytical parameters tested for each media; associated analytical test methods; number of MS/MSD samples; holding times and preservation methods; sample container type; description of sample methods; and sample storage methods.	**X**		
34. All data from prior investigations will be summarized, evaluated, and reported in the Remedial Investigation.	**X**		
35. A site map showing the location of NAPL with postings of data will be submitted. The maps will also include an indication of areas where free product was not located based on reliable monitor well and other data. As necessary, maps of individual Areas of Concern will be provided showing existing sample locations and results for groundwater and soil, all observed thicknesses of free product in wells, all observed thicknesses of product-saturated soil/fill in boring logs, and proposed sample locations to complete definition of free product in groundwater/soil.			X
36. Tables of chemical data for soil, groundwater and other environmental media will be submitted to provide summaries of all sampling. Appropriate standards, criteria and guidance values (i.e. Class GA Groundwater Standards, TAGM 4046, etc.) should be included for comparison. All data must be reported in the Remedial Investigation Report including data from earlier phases of study.			**X**

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
37. A table summarizing exceedences of applicable standards, criteria, and guidance for groundwater, soil, surface water and other environmental media will be submitted.			X
38. Table summarizing exceedences of proposed site-specific soil action levels (SSSALs) will be submitted.			X
39. A table of chemical data for computed index parameters (i.e. total cPAH, B(a)P equivalents, total SVOC's, total VOC's, etc.) will be submitted. This data can be included as part of other tables.			X
40. Large-dimension site maps (sheets) showing posted data for all exceedences of standards, criteria and guidance values for groundwater, soil, surface water and sediment will be submitted.			X
41. Maps of individual VOC Areas of Concern will be submitted showing existing sample locations and results for groundwater and soil. Proposed supplemental sample locations required to complete definition of Areas of Concern in groundwater/soil and design of remedy should be shown.			X
42. Groundwater equipotential maps containing current data from on-site monitor wells will be submitted. Maps must be presented for discrete water-bearing zones and must not mix equipotentials for different water-bearing zones. If multiple water-bearing zones are encountered, separate maps will be provided for each zone. Average data for hydraulic head measurements taken from different hydrostratigraphic horizons (depths) at the same location or data from different measurement events will not be used to create equipotential maps. Average data is acceptable where a detailed tidal fluctuation analysis has been performed during a single measurement event according to a prescribed plan.			X
43. A table of data for all water level measurements taken at wells on-site will be submitted. The table should include date and time of measurement, and the time of the most recent high and low tide for tidally-influenced environments			X

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
44. For sites in tidally influenced environments, groundwater flow will be determined and mapped, at a minimum, using averaged head values from monitor wells calculated from non-time-weighted data that has been obtained regularly across complete tidal cycles. A separate map will also be submitted that shows the tidal variability in groundwater head (delta) in monitor wells. Methods of analysis will be discussed. Analyses are not limited to this approach.	N/A		
45. Methods for collection of groundwater head data in tidal environments can include hand measurements taken synoptically at regular intervals throughout complete tidal cycles or use of automated data recording devices using pressure transducers or equivalent data collection methods.	N/A		
46. A table of data on the construction details for monitor wells that have been built on-site will be submitted. This will include screen elevations, date of construction, geologic interval screened, and current status (i.e. available for sampling, destroyed, intact, needs development, etc.).	**X**		
47. Coordinates in GPS will be provided for all groundwater monitor wells, soil borings and test pits performed for site characterization. These features will also be surveyed.			**X**
48. For sites with known contaminants that have physical properties that suggest deep transport in groundwater column (i.e. compounds with a specific gravity greater than water), or where such contaminants are suspected, a plan for investigation must include well placement at the base of the water column screening the top of the uppermost confining bed, and at least one appropriately placed well at depth below the uppermost confining bed.			**X**
49. For all sites, at least one well should be placed at depth to establish vertical flow conditions and hydrogeologic conditions.			**X**

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
50. Representative geologic cross sections will be submitted that show the occurrence of geologic strata within the entire stratigraphic section capable of being impacted by contaminants beneath the site. These sections must clearly define the hydrostratigraphic significance of unconsolidated layers (water-yielding aquifers such as fill, sands and gravel; aquicludes such as clay; aquitards such as silt or till; etc.) and fractured and competent bedrock. These maps should also be used as base maps for other presentations that show monitor well placement, soil sample collection points and analytical results, and hydraulic head.			**X**
50. In environments containing historic fill, a narrower monitor well slot size and finer-grained and commensurate sand pack will be considered to minimize the inward migration of fines from the formation into the well.	**X**		
51. Wells will be developed aggressively to remove fines from the formation, sand pack and well trap. Quiescent well purging and low-flow sampling methods will be used to minimize suspension and mobilization of fines in the well and formation during sampling.	**X**		
51. Wells will be constructed with a minimum two-foot blind pipe sediment trap at its base. A cap will be placed over the base of the trap.	**X**		
52. Historic Fill maps will be submitted that show the location and thickness of historic fill (as distinguished from redistributed natural soils) on-site. Representative geologic cross-sections will be provided to illustrate the occurrence of historic fill.			**X**
53. Tables will be submitted that summarize a subset of chemical parameters and computed parameters for on-site soil and historical fill. Multiple tables should be presented with analytes (i.e. Pb, Hg, etc.) in individual columns and discrete sample results in rows. One table should be presented for each of several indicator parameters for the site that shows the ordered ranking of that analyte (from highest concentration in observed samples to lowest in observed samples) with the corresponding results for other analytes. These tables enable tabular assessment of correlation of analytes with other analytes. The analytes that should be included are, at a minimum, trace and minor metals (i.e. Pb, Hg, Cd, Cr, As, Zn, Ni, Cu, Se, Th, Be) and organic compounds found to be abundant at the site (Benzene, PCE, TCE, etc.) and summary parameters (total cPAH, total VOC's, total SVOC's, B(a)P equivalents). A separate assessment should be provided for historical fill if this material can be distinguished from other areas of concern.			**X**

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
54. A soil gas monitoring plan will be required to determine the presence of methane derived from sites with historic fill or other organic-rich fill material.			X
55. Soil gas investigation is required at all sites that contain VOC's and historic fill. Soil gas data and interpretation from surveys performed at the site must be presented in the Remedial Investigation Report.			X
56. Geophysical surveys will be required on most sites. Where buildings are to be demolished in late stages and after remedial investigations are substantially complete, a plan should be developed for geophysical surveys to be performed over the remainder of the site after the buildings and other interferences have been removed.	X Appendix-B		
57. Geophysical pilot studies should be considered to assess the most effective method for use at the site. Gradiometer magnetometry should be considered to enable distinction of the magnitude and depth of metallic objects in the subsurface.	X Appendix-B		
58. An off-site Qualitative Human Health Exposure Assessment will be performed and reported. Sampling necessary to complete this assessment will be performed. Analysis will include current and future exposure assessment scenarios.			X
59. A site map showing the defined Areas of Concern with an overlay of the site development plan will be submitted. The latter will be linked with the description of the proposed end usage of the property and buildings in the text of the report and will be coordinated with NYSDOH.			X
60. A site map and plan will be submitted that shows the design detail and location for each of the proposed final surfaces contemplated for the site. This should include, at a minimum, building structure areas, concrete/asphalt areas, and soil cover on open areas.			X

Generic List of Agreements Numbers and Description	Addressed in RIWP	Addressed in RIWP Addendum	To be Included in RIR
61. Daily Reports will be provided to the Project Manager for NYSDEC and NYSDOH during all periods of major investigative activity on remedial projects. These reports will include daily activities. A map with an alpha-numeric grid will be submitted and used for identification of work areas. These reports will include a summary of substantive findings and other pertinent information including all complaints received from the public.	X		
62. An odor control plan will be submitted that is capable of controlling emissions of nuisance odors off-site, and on-site, where there are residents or tenants on the property. Specific odor control methods to be used on a routine basis will be defined in the Remedial Investigation Work Plan. If nuisance odors are identified, work will be halted and the source of odors will be identified and corrected. Work will not resume until all nuisance odors have been abated. NYSDEC and NYSDOH will be notified of all odor events and of all other complaints. Implementation of all odor controls, including the halt of work, will be the responsibility of the applicant.			X
63. The means to be considered for minimization of odors during remedial actions include, but are not limited to, limiting the area of open excavations; shrouding open excavations with tarps; use of foams to cover exposed odorous soils; use of chemical odorants in spray or misting systems; and containment of excavation areas through the use of tents and equivalent containment structures.			X
64. The Health and Safety Plan (HASP) will be submitted as a separate, standalone document independent from all project plans.	X Appendix D		
65. The Applicant, Volunteer, Responsible Party and associated parties preparing the remedial documents submitted to the State, and parties performing this work, are completely responsible for the preparation of an appropriate Health and Safety Plan and for the appropriate performance of work according to that plan. This plan must cover both the remedial work and construction work and will be submitted separately from all other investigation and remediation documents prepared under applicable agreements with New York State. This document must be submitted to the State for review. This document is the full responsibility of the above referenced parties.	X Appendix D		

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
66. The Site Safety Coordinator will be identified. A resume will be provided.	**X** Appendix D		
69. Details of the Community Air Monitoring Plan (CAMP) will be defined and will be coordinated with the NYSDOH.	**X**		
70. Exceedences observed in the CAMP will be reported in the daily report to the NYSDEC Project Manager.	**X**		
71. The HASP will include affirmative statements to indicate procedures to be followed and not non-committal statements about general requirements for such work.	**X** Appendix D		
72. HAZWOPER training will be provided as required for remedial investigation activities as appropriate.	**X**		
73. Fact Sheets are the property of New York State. The applicant will be requested to assist in their preparation (such as the development of draft Fact Sheets) and their distribution. However, only Fact Sheets approved by NYSDEC will be issued under any state-managed project. No changes will be made to approved Fact Sheets authorized for release by NYSDEC without the express consent of the Department in writing. No other unapproved information, such as brochures and flyers, will be included with the Fact Sheet mailing.			ok
74 Draft Fact Sheets will be provided to the Department in a WordPerfect file and in the format used by Region 2.			ok
75. A certification of mailing will be sent by the Applicant to the NYSDEC Project Manager following distribution of all Fact Sheets and notices, providing certification that the Fact Sheets were mailed, when they were mailed, a copy of the Fact Sheet, and a list of recipients.			ok

Generic List of **Agreements** Numbers and **Description**	**Addressed in RIWP**	**Addressed in RIWP Addendum**	**To be Included in RIR**
76. Final Remedial Investigation Report will be submitted that transmits the results of all site investigation data and information, including all of the data obtained during preliminary and supplemental investigations, and thorough evaluation of that data.			**X**
77. All primary contaminant sources (including but not limited to tanks and hotspots) identified during site characterization, remedial investigation, and remedial action will be surveyed by a surveyor licensed to practice in the State of New York and will be reported in the Remedial Investigation Report. The location of these sources will also be reported in the Final Remedial Report.			**X**
78. The Remedial Investigation Report will include a conceptual site model that explains the occurrence of contaminant sources and their fate and transport at the site in the context of the local site stratigraphy and hydrogeology. The conceptual model will utilize both plan and cross-sectional views of the site.			**X**

APPENDIX – G

GLOSSARY OF REMEDIATION TERMS

tdoor Recreation
mals, Plants, Aquatic Life
emical & Pollution Control
nvironmental Cleanup & rownfields
Environmental Site Remediation Database Search
Glossary - Site Remediation Terms
ıds and Waters
ıcation
ergy and Climate
rmits and Licenses
olic Involvement and News
gulations and Enforcement
olications, Forms, Maps
out DEC

Glossary - Site Remediation Terms

The record for each site listed is composed of a series of "Record Fields" that contain specific information about each site. To help the reader interpret the information provided in this on-line data base, the alphabetical list below gives definitions and descriptions for the Record Fields.

Address

The actual street listing associated with the Remediation Site. With city and zip, constitutes the complete physical address for the site.

Assessment of Environmental Problems

Summary of events and/or conditions at the Remediation Site that either have impacted the environment or pose an environmental threat

Assessment of Health Problems

Summary of events and/or conditions at the Remediation Site that either have impacted or pose a threat to public health

City

The actual municipal entity (according to zip code) where the Remediation Site is located. With street address and zip, constitutes the complete physical address for the site.

Class Code

Statutory or Administrative Classification of an

Contact for this Page:

NYS DEC
Environmental Remediation
625 Broadway
Albany, NY 12233-7012
518-402-9764
email us

Inactive Hazardous Waste Site - represents both a measure of threat to the environment and/or public health posed by existing site conditions, and the status of remedial efforts at the site

Confirmed Hazardous Waste Disposal

Identifies specific hazardous waste materials confirmed to be present at the Remediation Site

County

The particular County where the Remediation Site is located. New York State has sixty-two Counties.

Current Owner Name

Currently known or reported owner or owners of the Remediation Site

Current Owner Address

Known or reported address of the current owner or owners of the Remediation Site

EPA Id

The set of alpha-numeric characters assigned to a given parcel of property by the United States Environmental Protection Agency (USEPA or EPA) for consideration under the Federal Superfund Program. The EPA Id for the Remediation Site serves as a cross-reference between the Federal Superfund and State Superfund Programs.

Hazardous Waste Disposal Period

Known or reported time when wastes were being deposited at the Remediation Site

Latitude

Geographic position of the Remediation Site with respect to the Earth's Equator; expressed in degrees, minutes, and seconds. Used together with a measurement of longitude to identify a specific location on the earth's surface.

Longitude

Geographic position of the Remediation Site with respect to the Prime Meridian; expressed

in degrees, minutes, and seconds. Used together with a measurement of latitude to identify a specific location on the earth's surface.

Owner(s) during disposal

Known or reported owner or owners of the Remediation Site during the hazardous waste disposal period.

Quantity

Known or reported amount of a specific hazardous waste material confirmed to be present at the Remediation Site

Region

Geographic area of New York State where the Remediation Site is located. Nine Regions have been established by the NYSDEC. (The reader is directed to the NYSDEC Regional Office Map and Directory that shows the location of each Regional Office, illustrates the area of the State served by each Regional Office, and provides an appropriate telephone number and address for each Regional Office.)

Site Code

A six digit number, sometimes followed by a letter, that uniquely identifies each Inactive Hazardous Waste Disposal Site. Site Codes are assigned by the NYSDEC.

Site Description

Details about the Remediation Site

Site Name

The name assigned by the NYSDEC to an individual Inactive Hazardous Waste Disposal Site

Site Type

The overall physical nature of the disposal area or features of the Remediation Site

Zip

The five digit code assigned by the United States Postal Service for a particular address (in this case, one associated with the

Remediation Site). With street address and city, constitutes the complete physical address for the site.

Definitions of Terms and Acronyms

Common terms and acronyms that may appear in a Site Record include (in alphabetical order):

AG

Acronym for the Attorney General of the State of New York

ATSDR

Federal Agency for Toxic Substances and Disease Registry.

BHC

Acronym for benzene hexachloride (synonymous with 1,2,3,4,5,6-hexachlorocyclohexane; gammexane; and hexachlorocyclohexane) . . . a toxic, persistent organochloride pesticide

BTX

Acronym for benzene, toluene, and xylene . . . some components of petroleum

C&D

Construction and Demolition Debris

CERCLA

Comprehensive Environmental Response, Compensation and Liability Act of 1980, also known as Federal Superfund

C. O.

Acronym for a Consent Order, or Order on Consent, an enforceable order of the New York State Commissioner of Environmental Conservation

DEC

New York State Department of Environmental Conservation

DEE

Division of Environmental Enforcement, DEC

DER

Division of Environmental Remediation, DEC

DOE

United States Department of Energy

DOH

New York State Department of Health

DOT

New York State Department of Transportation

DPW

Department of Public Works (city, village, county)

DSHM

Division of Solid and Hazardous Materials, DEC

ECDEP

Erie County Department of Environment and Planning

EMC

Environmental Management Council (advisory group at the county level)

EPA

United States Environmental Protection Agency (synonymous with USEPA)

EP Toxicity

A chemical test used to measure the leaching potential of certain hazardous substances

EQBA

New York State Environmental Quality Bond Act of 1986

FSF

Federal Superfund (see CERCLA)

GW

Groundwater

HRS

Hazard Ranking System, a ranking system used by the EPA to establish the National Priorities List for federal Superfund cleanups

IRM

Interim Remedial Measure, a remedial action that can be conducted without extensive investigation and evaluation; may be used for both emergency and non-emergency

situations

MCL

Maximum Contaminant Limit

MEK

Methyl ethyl ketone (synonymous with 2-butanone, ethyl methyl ketone, and methyl acetone), a common solvent used in the manufacture of adhesives and vinyl films

MIBK

Methyl isobutyl ketone (synonymous with 4-methyl-2-pentanone, hexone, isobutyl methyl ketone, and isopropyl-acetone), a common solvent used in paint, varnish, and lacquer

MW

Monitoring Well, a well used to observe groundwater conditions

MTA

Metropolitan Transportation Authority of New York City

MTBE

Methyl tert-butyl ether (synonymous with methyl t-butyl ether; methyl-1,1-dimethyl ethyl ether; t-butyl methy ether; tert-butyl methyl ether; and 2-methoxy-2-methylpropane), a synthetic additive used in reformulated gasoline to boost octane

NFTA

Niagara Frontier Transportation Authority

NPL

National Priorities List, used by the federal Superfund to designate inactive hazardous waste sites eligible for Federal Superfund cleanup

NYCDOS

New York City Department of Sanitation

NYCRR

New York Codes, Rules and Regulations, the official compilation of state regulations. Environmental regulations are cited as 6NYCRR.

NYSDEC

New York State Department of Environmental Conservation

OGS

New York State Office of General Services

Part 212

6NYCRR Part 212, New York State Regulations for Air General Emission Sources

Part 360

6NYCRR Part 360, New York State Regulations for Solid Waste Facilities

Part 364

6NYCRR Part 364, New York State Regulations for Solid Waste Transportation

Part 371

6NYCRR Part 371, New York State Regulations regarding Identification of Hazardous Wastes

Part 373

6NYCRR Part 373, New York State Regulations for Hazardous Waste Facilities

Part 703

6NYCRR Part 703, New York State Regulations regarding Groundwater

P. A.

Preliminary Assessment, the first stage in evaluating and classifying an Remediation Site for Federal Superfund eligibility

PAHs

Polynuclear (or polycyclic) aromatic hydrocarbons, organic chemicals formed during the combustion of fossil fuel. A partial list of PAH compounds includes: benz[a] anthracene; benzo[a]pyrene; benzo[b] fluoranthene; benzo[ghi]perylene; benzo[j] fluoranthene; benzo[k]fluoranthene; dibenz [a,h]anthracene; fluoranthene; indeno[1,2,3-cd]pyrene; and pyrene.

PCBs

Polychlorinated biphenyls (synonymous with Aroclor; Chlorextol; Dykanol; Pyranol; and other Trade names), a group of synthetic

organic chlorinated compounds. Variable blends of PCBs were formerly used in many applications, including as fluid in heat transfer systems and hydraulic systems; as plasticizer in the manufacture of adhesives, textiles, and carbon-less copy paper; as dielectric fluid in capacitors and transformers.

PCE

An irregular acronym for 1,1,2,2-tetrachloroethylene (synonymous with carbon bichloride; carbon dichloride; ethylene tetrachloride; perchloroethylene; perclene; tetrachloroethene; and tetrachloroethylene). This solvent is commonly used as a dry cleaning agent or degreaser.

Perc

Another term for PCE

Phase I

A preliminary investigation conducted by DEC of site location and history

Phase II

A preliminary investigation conducted by DEC of site conditions that may include evaluations of the groundwater, surface water and soils at and near the site

PNAs

Polynuclear aromatic hydrocarbons, a class of organic compounds formed during the combustion of fossil fuel (see PAHs); many of these compounds are toxic

POTW

Publicly Owned Treatment Works, local facilities for treatment of sewage waste

ppb

Abbreviation for parts per billion, used to express contaminant concentration(1 ppb equals 1 part out of 1,000,000,000 parts)

ppm

Parts per million (1 ppm equals 1 part out of 1,000,000 parts)

ppt

Parts per trillion (1 ppt equals 1 part out of 1,000,000,000,000 parts)

PRAP

Proposed Remedial Action Plan, a publicly-available document prepared by DEC to lay out steps for site remediation

PRP

Potentially Responsible Party, a person, firm or unit of government that may be financially responsible for site remediation

PSA

Preliminary Site Assessment, a publicly-available document prepared by DEC to document site conditions and the initial site investigation to determine State Superfund eligibility

RAMP

Remedial Action Management Plan

RCRA

Federal Resource Conservation and Recovery Act, which is administered in New York State by DEC's Division of Solid and Hazardous Materials

RD/RA

Remedial Design / Remedial Action, a publicly-available technical document prepared by DEC to report the Remedial Investigation and decision factors for remediation; summarized in the Proposed Remedial Action Plan

RI/FS

Remedial Investigation / Feasibility Study, a publicly-available document prepared by DEC to document the investigation determining the nature and extent of contamination at the site and feasible methods for remediation

ROD

Record of Decision, a publicly-available document prepared by DEC to document the department's decision on how the site will be handled

RP

Responsible Party, designated by DEC as having at least some financial responsibility for site remediation

RTK

Community Right To Know program, created under NYS Executive Order No. 33

SARA

Federal Superfund Amendments Reauthorization Act

S. I.

Site Investigation (USEPA)

SPDES

State Pollutant Discharge and Elimination System, New York's water pollution control permit program

SSF

State Superfund

STP

Sewage Treatment Plant

SW

Surface Water

SWMU

Solid Waste Management Unit

SVOCs

Semi-volatile Organic Compounds, a class of chemicals whose presence suggests the presence of hazardous waste; since some of these chemicals occur naturally, their presence is not conclusive evidence of contamination

TCA

Irregular acronym for 1,1,1-trichloroethane (synonymous with chloroethene; methyl chloroform; methyltrichloromethane; and alpha-trichloroethane), a solvent commonly used as a degreaser, as a cleaning agent for fabricated metal parts, and as an agent in some dry cleaning applications

TCDD

2,3,7,8-tetrachlorodibenzo-p-dioxin

(synonymous with 2,3,7,8-TCDD and dioxin), an extremely toxic impurity that may form during the production of 2,4,5-trichlorophenol and that may be an inadvertent contaminant in that compound. (2,4,5-trichlorophenol was formerly used in the manufacture of the herbicide Silvex and directly as an algaecide, bactericide, and fungicide.) 2,3,7,8-tetrachlorodibenzo-p-dioxin may also be formed during the combustion of some chlorinated organic compounds such as PCBs or chlorinated benzenes.

TCDF

2,3,7,8-tetrachlorodibenzofuran (synonymous with 2,3,7,8-TCDF), an extremely toxic impurity that may form during the production of polychlorinated biphenyls (PCBs) and that may be an inadvertent contaminant in those compounds. 2,3,7,8-tetrachlorodibenzofuran may also form, under certain conditions, during the production of chlorophenols and may be an inadvertent contaminant in those compounds.

TCE

Irregular acronym for trichloroethylene (synonymous with acetylene trichloride; ethylene trichloride; trichloroethene; 1,1-dichloro-2-chloroethylene; and 1,1,2-trichloroethylene), a solvent commonly used as a degreaser; as a dry cleaning agent; as an agent to remove caffeine from coffee; and as an ingredient in the manufacture of some pesticides, resins, paints, and varnishes

TCL

Target Compound List

TCLP

Toxicity Characteristic Leaching Procedure, a test used to estimate a waste's potential for contaminating the environment

THC

Total Halogenated Compounds, a rough

measure of the toxicity of contaminants

Title 3

The section of the Environmental Quality Bond Act of 1986 that authorizes Grants to Municipalities

TOCs

Total Organic Compounds, a rough indicator of the toxicity of contaminants; many organic compounds occur naturally

TSDF

Hazardous waste Treatment, Storage or Disposal Facility

USEPA

United States Environmental Protection Agency (synonymous with EPA)

USGS

United States Geological Survey

VOCs

Volatile Organic Compounds

WWTP

Waste Water Treatment Plant

APPENDIX – H

ITEMIZED SUMMARY OF PROJECTED COSTS

ADVANCED SITE RESTORATION, LLC
ENVIRONMENTAL SERVICES

APPENDIX H

ITEMIZED SUMMARY OF PROJECTED COSTS

ITEM	# OF ITEMS	COST EACH ($)	TOTAL ($)
Drilling	5days	$2,500	$12,500
Well Materials	8 wells	$400 per well	$3,200
PID	5 days	$150 per day	$750
Laboratory Analysis EPA 8260/8270, 8021/8022 PCB's TAL Metals (Class B Deliverables)	30 sample points	$1,015 per sample group	$30,450
Field Blanks, Trip Blanks	3 samples	$1,015 per sample group	$3,045
Site Survey	1	$750 per survey	$750
Maps	3	$100 per map	$300
ASR Project Manager,	3 days	$1,400 per day	$4,200
ASR Supervisor	5 days	$1,200 per day	$6,000
ASR Technician (sampling)	1 day	$900 per day	$900
ASR Administration	2 day	$250 per day	$500
Expeditor (permits)	1 day	$500 per day	$500
Air Monitor with tripod	2 day	$1500 per day	$3000
Sidewalk Opening Permits	2	$165 per permit	$330
55 gal. drums (includes disposal)	10 drums	$325 per drum	$3,250
Geoprobe & Operator	2	$2,500 per day	$5,000
Vapor Point Material	11 points	$250 per point	$2,750
Summa Canisters (TO-15)	12 canisters	$650 per canister	$7,800
2 hour Regulators	4 regulators	$125 per regulator	$500
Tracer Gas	1 cylinder	$500 per cylinder	$500
Investigation Summary Report	1 report	$5,000 per report	$5,000
Engineer review	1	$5,000 per review	$5,000
Sub Total			**$96,225.00**
NYS Sales Tax (8.375%) for taxable items			$3,228.56
Total			**$99,453.56**

APPENDIX – I

EMERGENCY CONTACTS

APPENDIX I

EMERGENCY CONTACTS

The following are a list of emergency contact numbers for this project:

Day or Night:

Advanced Site Restoration Office: 212-809-1110 (Day Only)

Christopher Tomasello Cell Phone 516-233-7944

Richard Levato Cell Phone 646-235-4800

Steven Muller Cell Phone 516-395-5957

APPENDIX - J

NEW YORK STATE LETTER APPROVING THIS PLAN (OCTOBER 10, 2007)

New York State Department of Environmental Conservation
Division of Environmental Remediation
Remedial Bureau B, Section C
625 Broadway, Albany, New York 12233-7016
Phone: (518) 402-9768 • **FAX:** (518) 402-9020
Website: www.dec.ny.gov

Alexander B. Grannis
Commissioner

October 10, 2007

M. Porcelli
4566 Broadway, LLC
364 Maspeth Avenue
Brooklyn
New York, NY 11211

Ref.: Remedial Investigation Work Plan (RIWP)
4566 Broadway Ave (Nagel), Site ID: C231054
New York, New York, NY 10040

Dear Mr. Porcelli:

The Department has completed its review of the document entitled "Remedial Investigation Work Plan", dated August 15, 2007 and has determined that the work plan, with modifications, substantially addresses the requirements of the Brownfield Cleanup Agreement. The modifications are outlined as follows:

1) At page 6, under section 5.0, Soil and groundwater sampling, TAL Metals in soil and groundwater samples should be analyzed via EPA 6010B method.

2) The site history does not include dates of construction and previous activities of the school and the apartment building lands adjacent to the site. Please include these in the Remedial Investigation Report.

3) If the sampling results from the proposed soil vapor sampling points adjacent to the apartment building and the proposed monitoring wells across the street on Nagle Avenue indicate high concentrations of VOC's, indoor testing for soil vapor intrusion will be warranted.

With the understanding that the above noted modifications are agreed to, the document is hereby approved. This letter shall be attached to the final document and a copy of the approved document is required to be kept in the document repository located at The New York Public Library, Inwood branch, 4790 Broadway Avenue, New York, NY 10034-4916 and Community Board 12, 711 West 168th Street, New York and the draft document removed.

Based upon the schedule in the approved Remedial Investigation Work Plan, the next submittal shall be the remedial Investigation Report on December 15, 2007.

As a reminder, all final documents and reports are to be in electronic format on compact computer discs (CDs). In general, documents should be delivered on a standard CD which is CD-R type and "closed" so that no changes can be made to the file on the disk. The disk should contain an Adobe® Acrobat® Portable Document Format (PDF) file and must be searchable.

If "4566 Broadway, LLC" chooses not to accept the modifications proposed by the Department, you are required to notify this office within 20 days after receipt of this letter. Your notification shall identify whether "4566 Broadway, LLC" is seeking to invoke dispute resolution or terminate the Brownfield Cleanup Agreement. In this event I suggest a meeting be scheduled to discuss concerns of "4566 Broadway, LLC" prior to the end of this 20 day period.

We look forward to working together to bring this site back into productive use. If you have questions or concerns on this matter, please contact me.

Sincerely,

Sadique Ahmed
Project Manager
Remedial Bureau B, Section C

cc: Christopher P. Tomasello, ADVANCED Site Restoration, LLC, 62 William Street, 3rd Floor, New York, NY 10005.

ec: Jack A. Aversa
Geoffrey Laccetti, NYS DOH
Albert DeMarco, Public Health Specialist, NYS DOH.