NYSDEC SPILL#06-09662
1150 METROPOLITAN AVENUE
BROOKLYN, NY

INTERIM REMEDIAL MEASURE (IRM)- GROUNDWATER SAMPLING MARCH 2009

Submitted to:

Division of Environmental Remediation, Region 2
47-40 21st Street
Long Island City, NY 1101-5407

Prepared by:

Associated Environmental Services, Ltd.

Prepared for:

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1.0 INTRODUCTION

Associated Environmental Services, Ltd. (AES) is submitting this Interim Remedial Measure (IRM) in order to the address subsurface groundwater contamination at 1150 Metropolitan Avenue, hereafter referred to the "Site". The location of the Site is depicted on Figure 1.0 – U.S.G.S. Topographic Map.

1.1 Site Description

The subject site is located at 1150 Metropolitan Avenue, Brooklyn, New York. The site is located on the south side of Metropolitan Avenue. The subject site is an irregular shaped parcel, which measures approximately 61,800 square feet.

The subject site is improved with one (1) commercial office/warehouse building. The subject building measures approximately 60,000 square feet. Two (2) tenants currently occupy the subject building. The subject site is utilized for warehouse and distribution purposes. The subject building is constructed with concrete block walls, a poured concrete slab foundation and steel deck ceiling.

The subject site is located in a well-developed commercial/industrial neighborhood. The site is in good condition.

1.2 Site Hydrogeology

During previous investigations, representative soil samples were collected from the ground surface to a depth of twenty (20) feet below grade. The subsurface lithology was relatively homogenous throughout the subject site. The subsurface soil was noted to consist of urban fill, underlain by coarse sand.

Groundwater was encountered at a depth of approximately eleven (11) feet below grade. Based upon the regional topographic gradient, it is assumed that groundwater flow is to the west. Groundwater beneath the site is characterized as Class "GA" groundwater. The best usage for Class "GA" groundwater is as a source of potable (drinking) water. Groundwater is not utilized as a source of potable water at the subject site. Potable water for the subject site is supplied by the City of New York.

1.3 Spill History

A Phase I Environmental Site Assessment (ESA) report was prepared for the subject site by Singer Environmental Group, LTD. Based upon the findings of the Phase I ESA there was a Recognized Environmental Condition (REC), which required further assessment. A review of Sanborn Fire Insurance Maps was conducted as part of the Phase I ESA report. The Sanborn Fire Insurance Maps revealed that the site was utilized as a paving company and oil company from at least 1807 to the late 1960s. The maps indicate the presence of large gasoline and fuel oil storage tanks. The cumulative on-site storage was in excess of one (1) million gallons. There was no further information provided regarding the removal and/or abandonment of the tanks. Furthermore there was no data provided regarding soil and groundwater quality at the site. A copy of the 1968 Sanborn Fire Insurance Map is included as Figure 2.0.

Based upon the findings of the Phase I ESA report, a Phase II Subsurface Investigation was conducted in order to characterize the nature of the soil and groundwater quality at the site. A total of eight (8) soil/groundwater borings, designated as B-1 through B-8, were installed throughout the accessible areas of the subject building. The findings of the Phase II investigation revealed that the soil and groundwater quality at the site had been impacted most likely as a result of the historical site use and operations. The NYSDEC was notified and spill number 06-09662 was assigned to the subject site. A copy of the Phase II report was forwarded to the NYSDEC for review. The boring locations for the original Phase II investigation are depicted on Figure 3.0.

Based upon a review of the Phase II report the NYSDEC requested that additional soil/groundwater borings be installed at the site in order to delineate the subsurface soil and groundwater contamination. A Remedial Investigation Work Plan was prepared and submitted to the NYSDEC for review. The work plan was accepted and subsequently a Phase II Remedial Investigation was conducted at the subject site in order to delineate the extent of contamination. A total of seven (7) soil/groundwater borings, designated as B-9 through B-15, were installed in the predetermined locations. Similar levels of contamination were found in the soil and groundwater during the Remedial Investigation as were present in the original Phase II investigation. The Remedial Investigation report was submitted to the NYSDEC for review. The boring locations from the Remedial Investigations are depicted on Figure 3.0.

A total of four (4) groundwater-monitoring wells were installed at the subject site. An additional well was installed based on the letter dated February 23, 2007 from the NYSDEC. A copy of the letter can be found in the Appendix B. The wells were placed in strategically located up-gradient and down-gradient locations. The wells will be utilized for continuing monitoring of the groundwater quality.

Groundwater samples were collected on April 7th, 2008 analyzed for volatile organic compounds (VOCs) utilizing EPA Method 8260 and for semi-volatile organic compounds (SVOCs) utilizing EPA Method 8270.

The groundwater monitoring wells were sampled prior to the injection to establish a baseline and

will be sampled approximately six (6) months after injection to determine if the persulfate injections have effectively reduced contaminant concentrations.

In order to remediate the impacted groundwater at the subject property and prevent off-site contaminant migration the affected areas will be treated with a chemical oxidant solution of sodium persulfate. A total of fourteen (14) one (1) inch injection wells were installed throughout the interior of the building. The locations of the injection points needed to be moved from the proposed locations due to refusal at depth and accessibility. In addition the injection points located in the north-west portion of the site, could not be installed due to the very high water table and the thickness of the concrete being over two and one-half feet thick. Based on the site visit with the NYSDEC, the injection points in this area were not needed. The injection points were advanced to a depth of approximately fifteen (15) feet below grade.

The baseline laboratory analysis indicated slightly elevated levels of VOCs and SVOC in the groundwater.

1.4 Scope of Work

The scope of work will involve the groundwater-sampling of the four (4) onsite wells to determine if the chemical oxidant solution has effectively reduced contaminant concentrations in the groundwater. The specific tasks for the above noted actions are outlined in Section 2.0 of this report.

2.0 GROUNDWATER SAMPLING RESULTS

2.1 Groundwater Characterization

The depth to groundwater at the site is approximately eleven (11) feet below ground surface. Disposable single-use bailers were used to collect the groundwater samples from the four (4) monitoring wells.

Due to the debris and reorganization of the warehouse, MW-4 could not be located and therefore not sampled. The groundwater samples collected from MW-1, MW-2 and MW-3 were immediately stored in laboratory-approved glassware and packed on ice. The samples were submitted to a New York State Department of Health (NYSDOH) certified laboratory for analysis. The laboratory chosen for this investigation was Long Island Analytical Laboratories. The NYSDOH Environmental Laboratory Approval Program (ELAP) certification number for the laboratory is 11693.

The groundwater samples were submitted for analysis of volatile organic compounds (VOCs) utilizing EPA Method 8021 STARS and for semi-volatile organic compounds (SVOCs) utilizing EPA Method 8270 STARS. The analytical results for the groundwater samples were compared to the Groundwater Standards listed in the New York State Department of Environmental Conservation (NYSDEC) 6 NYCRR Part 703 – Surface Water and Groundwater Quality Standards.

The analytical results for the groundwater samples from MW-1, MW-2, MW-3 and MW-4 indicated that there were several VOCs and SVOCs detected at concentrations, which exceeded their respective NYSDEC Groundwater Standards. The analytical results are summarized in Table 1 and Table 2. A copy of the laboratory analytical report and chain of custody are included with this report as Appendix A.

TABLE 1
Groundwater Analytical Data
EPA Method 8021 (STARS) - Volatile Organic Compounds (VOCs)

Analytical Parameter	NYSDEC Guidance Values	MW-1 4/7/08	MW-1 2/9/09	MW-2 4/7/08	MW-2 2/9/09	MW-3 4/7/08	MW-3 2/9/09	MW-4 4/7/08	MW-4 2/9/09
MTBE	10	**44**	**23**	ND	ND	8	ND	ND	NS
Benzene	1.0	ND	ND	ND	ND	ND	ND	<0.7	NS
n-Butylbenzene	5	ND	ND	ND	ND	ND	ND	**89**	NS
sec-Butylbenzene	5	ND	ND	ND	ND	ND	ND	ND	NS
tert-Butylbenzene	5	ND	ND	ND	ND	ND	ND	**68**	NS
Isopropylbenzene	5	ND	ND	ND	ND	ND	ND	ND	NS
p-Isopropyltoluene	5	ND	ND	ND	ND	ND	ND	ND	NS
n-Propylbenzene	5	ND	ND	ND	ND	ND	ND	ND	NS
Ethylbenzene	5	**6.6**	ND	.82	ND	ND	ND	ND	NS
Naphthalene	10	**63**	ND	ND	ND	ND	ND	ND	NS
Toluene	5	**29**	ND	2.7	ND	**23**	ND	**200**	NS
1,2,4-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	NS
1,3,5-Trimethylbenzene	5	ND	ND	ND	ND	ND	ND	ND	NS
p & m- Xylenes	10	**36**	<10	3.4	<10	**18**	<10	**260**	NS
o- Xylenes	5	**11**	ND	1.2	ND	**7.0**	ND	**85**	NS

Notes:
1. All results are in ug/L (parts per billion - ppb)
2. The Groundwater Standards and Guidance Values are listed in the New York State Department of Environmental Conservation (NYS DEC) TOGS 1.1.1
3. NL = No guidance value listed.
4. ND- Not Detected above Laboratory Detection Limits
5. NS-Not Sampled

TABLE 2
Groundwater Analytical Data
EPA Method 8270 (STARS) - Semi-Volatile Organic Compounds (SVOCs)

Analytical Parameter	NYSDEC Guidance Values	MW-1 4/7/08	MW-1 2/9/09	MW-2 4/7/08	MW-2 2/9/09	MW-3 4/7/08	MW-3 2/9/09	MW-4 4/7/08	MW-4 2/9/09
Acenaphthene	5	**41**	**47**	2.0	ND	ND	ND	**16**	NS
Acenaphthylene	5	ND	ND	ND	ND	ND	ND	ND	NS
Anthracene	5	**9.5**	ND	ND	ND	ND	ND	**11**	NS
Benzo(a)anthracene	5	3.7	ND	ND	ND	2.8	ND	**6.3**	NS
Benzo(a)pyrene	5	1.8	ND	ND	ND	1.8	ND	4.7	NS
Benzo(b)fluoranthene	5	1.8	ND	ND	ND	ND	ND	ND	NS
Benzo(g,h,i)perylene	5	ND	ND	ND	ND	ND	ND	ND	NS
Benzo(k)fluoranthene	5	1.2	ND	ND	ND	ND	ND	ND	NS
Chrysene	5	4.0	ND	ND	ND	ND	ND	**8.4**	NS
Dibenzo(a,h)anthracene	5	ND	ND	ND	ND	ND	ND	<10	NS
Fluoranthene	5	**21**	**14**	ND	ND	ND	ND	**9.6**	NS
Fluorene	5	**26**	**22**	.92	ND	ND	ND	**18**	NS
Indeno(1,2,3-cd)pyrene	5	ND	ND	ND	ND	ND	ND	ND	NS
Naphthalene	5	ND	ND	2.7	ND	ND	ND	ND	NS
Phenanthrene	5	**43**	**40**	2.6	ND	ND	ND	**51**	NS
Pyrene	5	**16**	**12**	ND	ND	**9.1**	ND	**15**	NS

Notes:
1. All results are in ug/L (parts per billion - ppb)
2. The Groundwater Standards and Guidance Values are listed in the New York State Department of Environmental Conservation (NYS DEC) TOGS 1.1.1
3. NL = No guidance value listed.
4. ND- Not Detected above Laboratory Detection Limits
5. NS- Not Sampled

3.0 CONCLUSIONS AND RECOMMENDATIONS

Groundwater samples were collected on February 9, 2009 and analyzed for volatile organic compounds (VOCs) utilizing EPA Method 8021 STARS and for semi-volatile organic compounds (SVOCs) utilizing EPA Method 8270 STARS. MTBE and several SVOCs were found in MW-1 that exceeds the NYSDEC groundwater standards. The levels found in the groundwater were at less concentration then the previous round of sampling. In addition MW-2 and MW-3 did not exhibit any elevated VOCs or SVOCs above the NYSDEC groundwater standards with the exception of pyrene in MW-2.and were a

3.1 Conclusions

Based upon the results of the groundwater sampling event conducted on Febuary 9, 2009 and the conversation with Mr. Jonathan Kolleeny and Ms. Ainura Doronova of the NYSDEC during a site visit (March 2008) regarding the current and future use of the property, subsequent remedial and groundwater sampling may not be necessary following the results of this sampling event.

The MTBE found in the groundwater sample collected from MW-1 is likely from an off-site source. Sanborn maps indicate a former gas station was present up gradient form the subject site.

3.2 Recommendations

Based on the results of the concentrations found during the recent groundwater sampling and due to the fact that the subject building is occupied and the removal of impacted soil is presently not feasible. It is recommended that no further action be required and that spill # 06-09662 be closed. Should the site be developed in the future then any impacted soil should be removed and disposed of at a licensed facility.

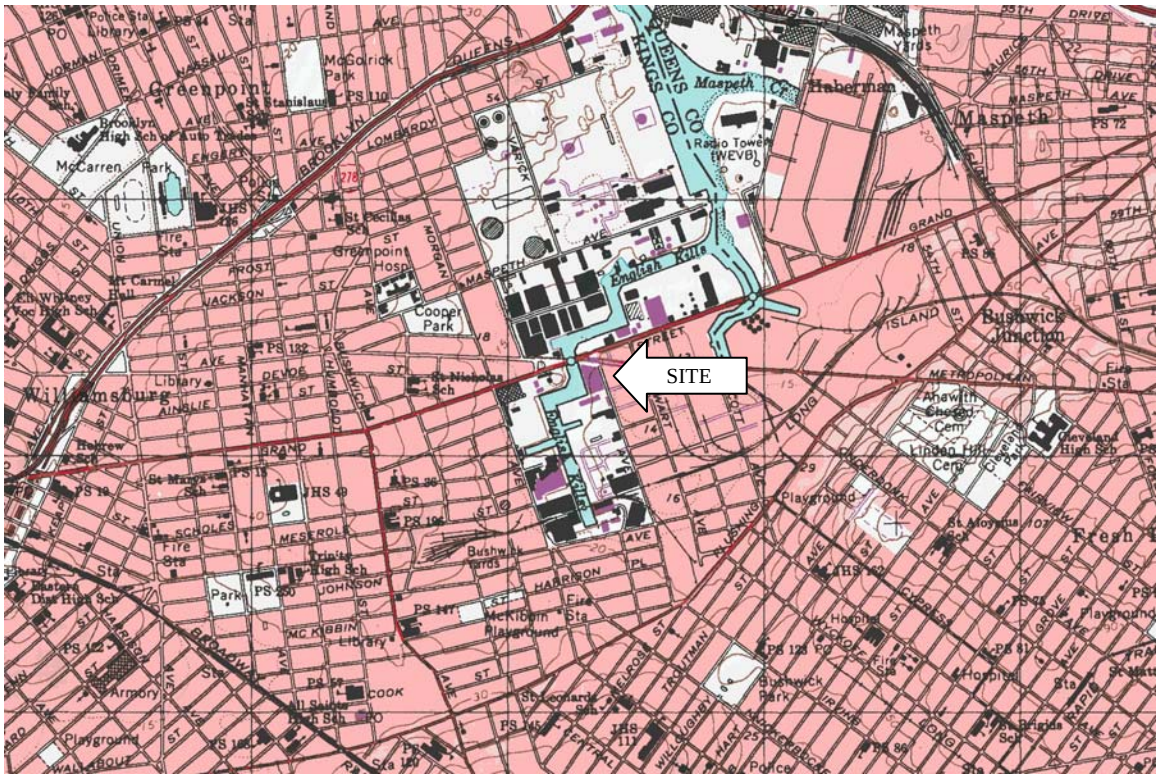
Prepared By:

_____

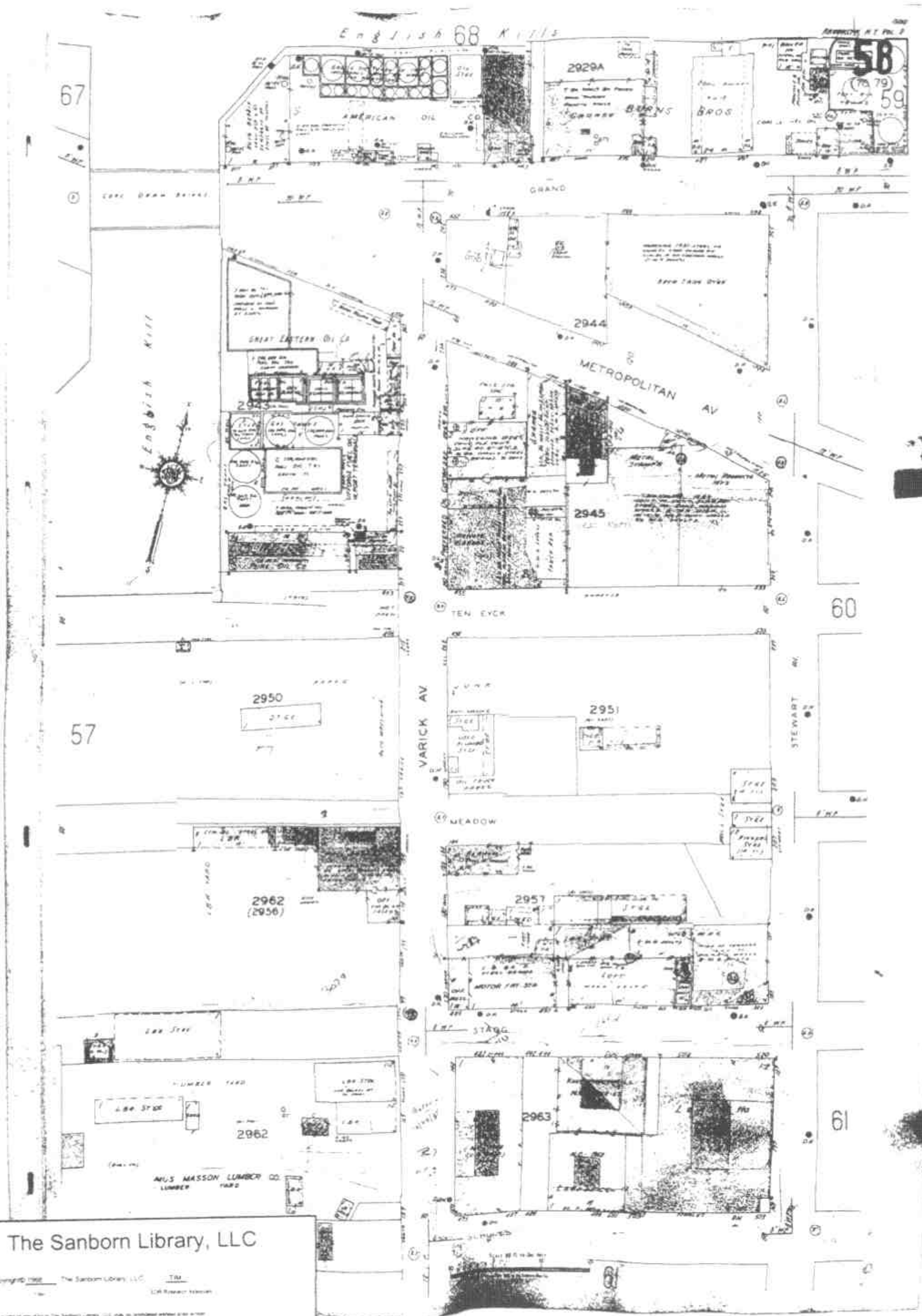
John Schretzmayer
Project Manager
Associated Environmental Services, Ltd.

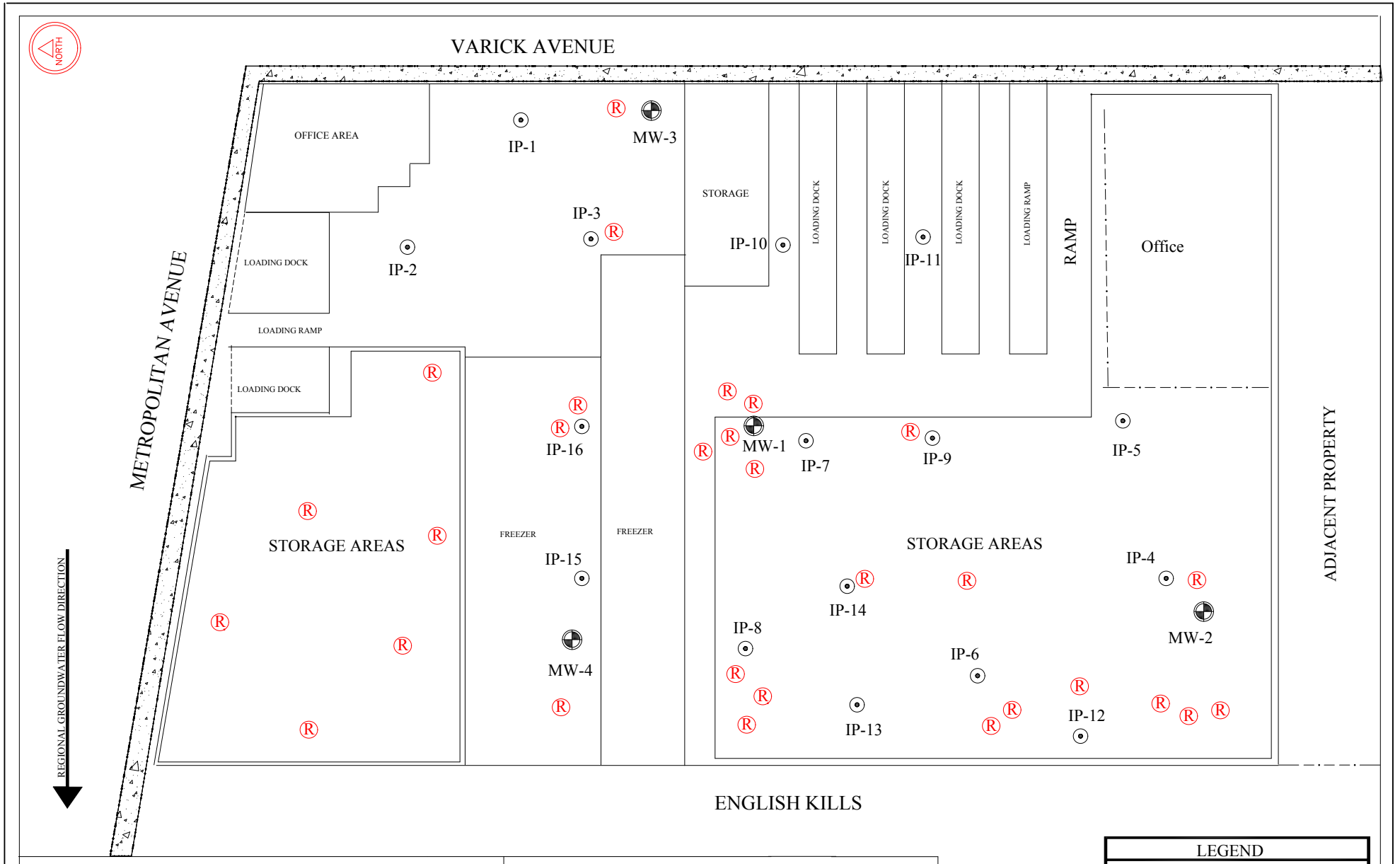
FIGURE 1.0 – U.S.G.S. TOPOGRAPHIC MAP

1150 Metropolitan Ave
Brooklyn, New York



Associated Environmental Services, Ltd.





ASSOCIATED ENVIRONMENTAL SERVICES, Ltd.
25 CENTRAL AVENUE
HAUPPAUGE, NEW YORK 11788

FIGURE 3.0 - MONITORING WELL AND INJECTION POINT LOCATION MAP

SITE LOCATION: 1150 METROPOLITAN AVENUE
BROOKLYN, NEW YORK

DATE: March 2009

SCALE: 1" = 40'

0 20 40

LEGEND

- INJECTION WELL LOCATION
- MONITORING WELL LOCATION
- REFUSAL LOCATIONS (R)

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NJDEP# NY012
PADEP# 68-2943

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DATA REPORTING FLAGS

For reporting results, the following "Flags" are used:

A: Time not supplied by client, may have exceeded holding time
B: Holding time exceeded, results cannot be used for regulatory purposes
C: Minimum detection limit raised due to matrix interference
D: Minimum detection limit raised due to target compound interference
E: Minimum detection limit raised due to non-target compound interference
F: Minimum detection limit raised due to insufficient sample volume
G: Sample received in incorrect container
H: Sample not preserved, corrected upon receipt
I: Dilution Water does not meet QC Criteria
J: Estimated concentration, exceeds calibration range
K: Target compound found in blank
L: Subcontractor ELAP #11398
M: Subcontractor ELAP #10320
N: Subcontractor NVLAP #102047.0
O: Subcontractor AIHA #103005
P: Subcontractor A2LA 2004-01
Q: Subcontractor ELAP #11026
R: Subcontractor ELAP #10155
S: Subcontractor ELAP #11501
T: Subcontractor CTC
U: Subcontractor ELAP #11685
V: QC affected by matrix
W: Subcontractor ELAP #10248
X: QC does not meet acceptance criteria
Y: Sample container received with head space
Z: Insufficient sample volume received
AA: Preliminary results, cannot be used for regulatory purposes.
BB: Spike recovery does not meet QC criteria due to high target concentration
CC: Date reported below the lower limit of quantitation and should be considered to have an increased quantitative uncertainty.
DD: Sampling information not supplied and/or sample not taken by qualified technician, therefore verifiability of the report is limited to results only. Report cannot be used for regulatory purposes.
EE: Subcontractor ELAP : #11777
FF: Unable to verify that the wipe samples submitted conform to ASTM E1792 or specifications issued by the EPA.
GG: Level found exceeds the maximum contaminant level (MCL) as set by local, state or federal agencies.
HH: Subcontractor ELAP #10750
II: Subcontractor ELAP #10145
JJ: Subcontractor ELAP #11838
KK: Cassette received without tap(s)
LL: Spike duplicate recovery out of range due to matrix inconsistency

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NYSDOH ELAP# 11693
USEPA# NY01273
CTDOH# PH-0284
AIHA# 164456
NJDEP# NY012
PADEP# 68-2943

LIAL #1172463

March 2, 2009

Associated Environmental Services
John Schretzmayer
25 Central Avenue
Hauppauge, NY 11788

Re: 1150 Metropolitan Avenue, Brooklyn

Dear Mr. Schretzmayer:

Enclosed please find the Laboratory Analysis Report(s) for sample(s) received on February 26, 2009. Long Island Analytical Laboratories analyzed the samples on March 2, 2009 for the following:

CLIENT ID	ANALYSIS
MW-1	Stars 8021, Stars 8270
MW-2	Stars 8021, Stars 8270
MW-3	Stars 8021, Stars 8270

Samples received at 3.1°C.

If you have any questions or require further information, please call at your convenience. Long Island Analytical Laboratories Inc. is a NELAP accredited laboratory. All reported results meet the requirements of the NELAP standards unless noted with the appropriate flag. Report shall not be reproduced except in full, without the written approval of the laboratory. Long Island Analytical Laboratories would like to thank you for the opportunity to be of service to you.

Best Regards,

Long Island Analytical Laboratories, Inc.

Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-1)
Date received: 2/26/09	Laboratory ID: 1172463
Date extracted: 2/27/09	Matrix: Liquid
Date analyzed: 2/27/09	ELAP #: 11693

VOLATILE ANALYSIS (STARS MEMO)

Parameter	CAS No.	MDL	Results ug/L	Flag
MTBE	1634-04-4	5 ug/L	23	
Benzene	71-43-2	0.7 ug/L	<0.7	
n-Butylbenzene	104-51-8	5 ug/L	<5	
sec-Butylbenzene	135-98-7	5 ug/L	<5	
tert-Butylbenzene	98-06-8	5 ug/L	<5	
Isopropylbezene	98-82-8	5 ug/L	<5	
p-Isopropyltoluene	99-87-6	5 ug/L	<5	
n-Propylbenzene	103-65-1	5 ug/L	<5	
Ethylbenzene	100-41-4	5 ug/L	<5	
Naphthalene	91-20-3	5 ug/L	<5	
Toluene	108-88-3	5 ug/L	<5	
1,2,4-Trimethylbenzene	95-63-6	5 ug/L	<5	
1,3,5-Trimethylbenzene	108-67-8	5 ug/L	<5	
p & m-Xylenes	1330-20-7	10 ug/L	<10	
o-Xylene	1330-20-7	5 ug/L	<5	

MDL = Minimum Detection Limit. EPA Method 8260/624

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-1)
Date received: 2/26/09	Laboratory ID: 1172463
Date extracted: 3/2/09	Matrix: Liquid
Date analyzed: 3/2/09	ELAP #: 11693

SEMI-VOLATILE ANALYSIS (STARS MEMO)

PARAMETER	CAS No	MDL	RESULTS ug/L	FLAG
ACENAPHTHENE	83-32-9	5 ug/L	47	
ACENAPHTHYLENE	208-96-8	5 ug/L	<10	C
ANTHRACENE	120-12-7	5 ug/L	<10	C
BENZO(a)ANTHRACENE	56-55-3	5 ug/L	<10	C
BENZO(a)PYRENE	50-32-8	5 ug/L	<10	C
BENZO(b)FLUORANTHENE	205-99-2	5 ug/L	<10	C
BENZO(ghi)PERYLENE	191-24-2	5 ug/L	<10	C
BENZO(k)FLUORANTHENE	207-08-9	5 ug/L	<10	C
CHRYSENE	218-01-9	5 ug/L	<10	C
DIBENZO(a,h)ANTHRACENE	53-70-3	5 ug/L	<10	C
FLUORANTHENE	206-44-0	5 ug/L	14	
FLUORENE	86-73-7	5 ug/L	22	
INDENO(1,2,3-cd)PYRENE	193-39-5	5 ug/L	<10	C
NAPHTHALENE	91-20-3	5 ug/L	<10	C
PHENANTHRENE	85-01-8	5 ug/L	40	
PYRENE	129-00-0	5 ug/L	12	

MDL = Minimum Detection Limit.

EPA Method 8270/625

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-2)
Date received: 2/26/09	Laboratory ID: 1172464
Date extracted: 2/27/09	Matrix: Liquid
Date analyzed: 2/27/09	ELAP #: 11693

VOLATILE ANALYSIS (STARS MEMO)

Parameter	CAS No.	MDL	Results ug/L	Flag
MTBE	1634-04-4	5 ug/L	<5	
Benzene	71-43-2	0.7 ug/L	<0.7	
n-Butylbenzene	104-51-8	5 ug/L	<5	
sec-Butylbenzene	135-98-7	5 ug/L	<5	
tert-Butylbenzene	98-06-8	5 ug/L	<5	
Isopropylbezene	98-82-8	5 ug/L	<5	
p-Isopropyltoluene	99-87-6	5 ug/L	<5	
n-Propylbenzene	103-65-1	5 ug/L	<5	
Ethylbenzene	100-41-4	5 ug/L	<5	
Naphthalene	91-20-3	5 ug/L	<5	
Toluene	108-88-3	5 ug/L	<5	
1,2,4-Trimethylbenzene	95-63-6	5 ug/L	<5	
1,3,5-Trimethylbenzene	108-67-8	5 ug/L	<5	
p & m-Xylenes	1330-20-7	10 ug/L	<10	
o-Xylene	1330-20-7	5 ug/L	<5	

MDL = Minimum Detection Limit. EPA Method 8260/624

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-2)
Date received: 2/26/09	Laboratory ID: 1172464
Date extracted: 3/2/09	Matrix: Liquid
Date analyzed: 3/2/09	ELAP #: 11693

SEMI-VOLATILE ANALYSIS (STARS MEMO)

PARAMETER	CAS No	MDL	RESULTS ug/L	FLAG
ACENAPHTHENE	83-32-9	5 ug/L	<10	C
ACENAPHTHYLENE	208-96-8	5 ug/L	<10	C
ANTHRACENE	120-12-7	5 ug/L	<10	C
BENZO(a)ANTHRACENE	56-55-3	5 ug/L	<10	C
BENZO(a)PYRENE	50-32-8	5 ug/L	<10	C
BENZO(b)FLUORANTHENE	205-99-2	5 ug/L	<10	C
BENZO(ghi)PERYLENE	191-24-2	5 ug/L	<10	C
BENZO(k)FLUORANTHENE	207-08-9	5 ug/L	<10	C
CHRYSENE	218-01-9	5 ug/L	<10	C
DIBENZO(a,h)ANTHRACENE	53-70-3	5 ug/L	<10	C
FLUORANTHENE	206-44-0	5 ug/L	<10	C
FLUORENE	86-73-7	5 ug/L	<10	C
INDENO(1,2,3-cd)PYRENE	193-39-5	5 ug/L	<10	C
NAPHTHALENE	91-20-3	5 ug/L	<10	C
PHENANTHRENE	85-01-8	5 ug/L	<10	C
PYRENE	129-00-0	5 ug/L	<10	C

MDL = Minimum Detection Limit. EPA Method 8270/625

Michael Veraldi

Michael Veraldi-Laboratory Director

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Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-3)
Date received: 2/26/09	Laboratory ID: 1172465
Date extracted: 2/27/09	Matrix: Liquid
Date analyzed: 2/27/09	ELAP #: 11693

VOLATILE ANALYSIS (STARS MEMO)

Parameter	CAS No.	MDL	Results ug/L	Flag
MTBE	1634-04-4	5 ug/L	8	
Benzene	71-43-2	0.7 ug/L	<0.7	
n-Butylbenzene	104-51-8	5 ug/L	<5	
sec-Butylbenzene	135-98-7	5 ug/L	<5	
tert-Butylbenzene	98-06-8	5 ug/L	<5	
Isopropylbezene	98-82-8	5 ug/L	<5	
p-Isopropyltoluene	99-87-6	5 ug/L	<5	
n-Propylbenzene	103-65-1	5 ug/L	<5	
Ethylbenzene	100-41-4	5 ug/L	<5	
Naphthalene	91-20-3	5 ug/L	<5	
Toluene	108-88-3	5 ug/L	<5	
1,2,4-Trimethylbenzene	95-63-6	5 ug/L	<5	
1,3,5-Trimethylbenzene	108-67-8	5 ug/L	<5	
p & m-Xylenes	1330-20-7	10 ug/L	<10	
o-Xylene	1330-20-7	5 ug/L	<5	

MDL = Minimum Detection Limit. EPA Method 8260/624

Michael Veraldi

Michael Veraldi-Laboratory Director

Client: Associated Environmental	Client ID: 1150 Metropolitan Avenue (MW-3)
Date received: 2/26/09	Laboratory ID: 1172465
Date extracted: 3/2/09	Matrix: Liquid
Date analyzed: 3/2/09	ELAP #: 11693

SEMI-VOLATILE ANALYSIS (STARS MEMO)

PARAMETER	CAS No	MDL	RESULTS ug/L	FLAG
ACENAPHTHENE	83-32-9	5 ug/L	<10	C
ACENAPHTHYLENE	208-96-8	5 ug/L	<10	C
ANTHRACENE	120-12-7	5 ug/L	<10	C
BENZO(a)ANTHRACENE	56-55-3	5 ug/L	<10	C
BENZO(a)PYRENE	50-32-8	5 ug/L	<10	C
BENZO(b)FLUORANTHENE	205-99-2	5 ug/L	<10	C
BENZO(ghi)PERYLENE	191-24-2	5 ug/L	<10	C
BENZO(k)FLUORANTHENE	207-08-9	5 ug/L	<10	C
CHRYSENE	218-01-9	5 ug/L	<10	C
DIBENZO(a,h)ANTHRACENE	53-70-3	5 ug/L	<10	C
FLUORANTHENE	206-44-0	5 ug/L	<10	C
FLUORENE	86-73-7	5 ug/L	<10	C
INDENO(1,2,3-cd)PYRENE	193-39-5	5 ug/L	<10	C
NAPHTHALENE	91-20-3	5 ug/L	<10	C
PHENANTHRENE	85-01-8	5 ug/L	<10	C
PYRENE	129-00-0	5 ug/L	<10	C

MDL = Minimum Detection Limit

EPA Method 8270/625

Michael Veraldi

Michael Veraldi-Laboratory Director

LONG ISLAND ANALYTICAL LABORATORIES INC.

"TOMORROWS ANALYTICAL SOLUTIONS TODAY"

110 Colin Drive • Holbrook, New York 11741

Phone (631) 472-3400 • Fax (631) 472-8505 • Email: LIAL@lialinc.com

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CHAIN OF CUSTODY / REQUEST FOR ANALYSIS DOCUMENT (3)

CLIENT NAME/ADDRESS: Associated Env Svcs

CONTACT: John

PHONE:

FAX:

SAMPLER (SIGNATURE): [signature] DATE: 2/23/09 TIME:

SAMPLER NAME (PRINT): DATE: TIME:

SAMPLE(S) SEALED: (YES) / NO

CORRECT CONTAINER(S): (YES) / NO

0043211

PROJECT LOCATION: 1150 Metropolitan Ave, Brooklyn

SAMPLES RECEIVED AT 3.1 °C

TERMS & CONDITIONS: Accounts are payable in full within thirty days, outstanding balances accrue service charges of 1.5% per month. Tendering of samples to LIAL for analytical testing constitutes agreement by buyer/sampler to LIAL's Standard terms

LABORATORY ID # (For Laboratory Use Only)	MATRIX	TYPE	pH	RES. CHLORINE	PRES.	DATE	TIME	SAMPLE # LOCATION	ANALYSIS REQUIRED: 8021 STARS	8270 STARS											# OF CONTAINERS
1. 1172463	L	G	8	2001	1	2/23		MW-1	X	X											3
2. 1172464	L	G						MW-2	X	X											3
3. 1172465	L	G						MW-3	X	X											3
4.	L	G						MW-4	X	X	HOLD										
5.																					
6.																					
7.																					
8.																					
9.																					
10.																					
11.																					
12.																					
13.																					
14.																					

MATRIX: S=SOIL; SL=SLUDGE; DW=DRINKING WATER; A=AIR; W=WIPE; PC=PAINT CHIPS; BM= BULK MATERIAL; O=OIL; WW=WASTE WATER

TYPE: G=GRAB; C=COMPOSITE; SS=SPLIT SPOON

PRES: (1) ICE; (2) HCL; (3) H_2SO_4; (4) NAOH; (5) $NA_2S_2O_3$; (6) HNO_3; (7) OTHER

TURNAROUND REQUIRED: ☒ NORMAL ☐ STAT

BY / /

COMMENTS / INSTRUCTIONS: Hold MW-4 Call me

RELINQUISHED BY (SIGNATURE)	DATE / TIME	PRINTED NAME	RECEIVED BY (SIGNATURE)	DATE / TIME	PRINTED NAME
[signature]	DATE 2/26/09 TIME	[signature]	[signature]	DATE 2/26/09 TIME 2:53	Chris Ortiz
RELINQUISHED BY (SIGNATURE)	DATE TIME	PRINTED NAME	RECEIVED BY SAMPLE CUSTODIAN: [signature]	DATE 2-26-09 TIME 3:30pm	PRINTED NAME