

PROJECT REPORT

NEW YORK UNITED HOSPITAL MEDICAL CENTER

406 Boston Post Road
Port Chester, New York 10573
Mr. Mark Hammond



PHASE II ENVIRONMENTAL ASSESSMENT of UNITED HOSPITAL MEDICAL CENTER

406 Boston Post Road
Port Chester, New York 10573

PREPARED BY:

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EMG Project #: 70884.05R-001.075
Date of Report: June 9, 2005
On-Site Date: May 14, 2005

June 3, 2005

Mr. Mark Hammond
New York United Hospital Medical Center
406 Boston Post Road
Port Chester, New York 10573

RE: Phase II Environmental Assessment
United Hospital Medical Center
406 Boston Post Road
Port Chester, New York 10573
EMG Project No. 70884.05R-001.075

Dear Mr. Hammond:

EMG has performed a Phase II Environmental Assessment at the above referenced property (the "Project") that consisted of a subsurface investigation. The assessment was performed to address the presence of two underground storage tanks (USTs) and whether they have leaked. According to EMG's Phase I ESA for the Project (Project No. 128989), two 25,000-gallon USTs were installed at the Project in 1965, and are used to store No. 6 fuel oil for the three boilers located in the central heating plant. Based on the age of the UST systems, the potential exists for adverse impact to the Project.

The subsurface investigation was conducted within the accessible areas adjacent to the USTs and consisted of the advancement of two Geoprobe soil borings: one soil boring advanced on the accessible end and one soil boring advanced along the accessible side of the two side-by-side USTs. Selected soil samples collected from the soil borings were analyzed for petroleum parameters as further discussed in the attached report.

We have appreciated the opportunity to provide you with this service. If you have any questions regarding the project, please feel free to call us at your convenience.

Surveyed by: Kent Gardenour P.E., Project Manager

Written by: Kent Gardenour P.E., Project Manager

Reviewed by:



Mark W. Fischer, CPG
Senior Consultant

PHASE II ENVIRONMENTAL ASSESSMENT
UNITED HOSPITAL MEDICAL CENTER
406 BOSTON POST ROAD
PORT CHESTER, NEW YORK 10573
EMG PROJECT # 70884.05R-001.075

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1. INTRODUCTION

EMG was contracted by the New York United Hospital Medical Center to perform a Phase II Environmental Assessment of United Hospital Medical Center (the "Project"), located at 406 Boston Post Road in Port Chester, New York 10573.

The scope of work for the Phase II Assessment is outlined below.

- Subsurface Sampling
 - EMG obtained the services of Mud Environmental to advance two Geoprobe soil borings in the vicinity of the UST. See Appendix A for boring locations. Site photographs are included in Appendix B.
 - EMG monitored the advancement of the Geoprobe soil borings to a maximum depth of 16 feet below the ground surface. Soil samples were collected at four-foot depth increments from the soil borings. Shallow bedrock was encountered in several additional attempts at a depth of zero to two feet.
 - Selected soil samples collected in from the soil borings were analyzed for polynuclear aromatic hydrocarbons (PNAs) via EPA Method 8270 and for benzene, toluene, ethylbenzene, and xylenes (BTEX) via EPA Method 5035/8021.



2. ENVIRONMENTAL INVESTIGATION

On May 14, 2005, EMG monitored the advancement of two Geoprobe soil borings around the USTs, one soil boring advanced on the accessible end and one soil boring advanced along the accessible side of the two side-by-side USTs. The other side and end of the USTs were inaccessible due to the proximity of the USTs to a building wall and steep grade behind the USTs. Each soil sample was collected at a depth below the estimated bottom invert of each UST.

No groundwater was encountered in either soil boring. In addition, no petroleum odors or stains were detected in any of the soil samples collected from the soil borings. Field screening of the soil samples with a photoionization detector did not indicate the presence of volatile organic compound contamination in any of the soil samples collected from the soil borings. Boring logs are included in Appendix C.

All down-hole drilling equipment was thoroughly cleaned prior to commencement of drilling operations and between each boring and sampling interval. Soil samples were obtained continuously at four-foot intervals from the soil borings. Soils encountered in the soil borings consisted of brown poorly graded sand (fill) with occasional silt. Bedrock is present at depths ranging from 0 to 16 feet below ground surface in the area of the USTs. The locations of the soil borings are indicated on the Boring Location Map included in Appendix A.

Upon completion, the boreholes were backfilled with excess soil cuttings and bentonite chips, and patched with asphalt where necessary.

3. SAMPLE COLLECTION AND ANALYSES

Soil samples were placed in pre-labeled glass jars with Teflon-lined plastic lids for chemical analyses. A zero headspace sampling protocol was employed. This protocol requires packing the soil into the sampling jars such that the amount of free air space in the sample container is minimized. The samples selected for chemical analyses were immediately placed in a cooler for preservation. The soil samples were then delivered to an accredited laboratory for analyses. The analyses of the samples were performed within their respective holding times. Chain-of-custody was maintained utilizing laboratory chain-of-custody tracking forms.

Selected soil samples collected from the soil borings were analyzed for BTEX via EPA method 5035/8021B and for PNAs via EPA method 8270C.



4. ANALYTICAL RESULTS

Laboratory analytical results for the soil samples are illustrated in Table 1 — Soil Sample Analytical Results. A copy of the analytical results and chain-of-custody is included in Appendix D.

TABLE 1 - SOIL SAMPLE ANALYTICAL RESULTS		
Sample No./Depth (feet)	BTEX (ppb)	PNAs (ppb)
BH-1/16	ND	ND
BH-2/15.5	ND	ND

ppb = parts per million ($\mu\text{g}/\text{kg}$)

ND = Non-detectable (below analytical method detection limit)



5. DISCUSSION AND CONCLUSIONS

No BTEX or PNA compounds were detected in either soil sample. As such, no evidence of a release from the USTs was detected. Therefore, no further investigative action is recommended with respect to the two onsite USTs at this time.



6. QUALIFICATIONS

EMG has completed a Phase II Environmental Site Assessment of the United Hospital Medical Center (the "Project"), located at 406 Boston Post Road in Port Chester, New York 10573. The assessment was performed at the Client's request using the methods and procedures consistent with good commercial and customary practice designed to conform with acceptable industry standards.

This report is exclusively for the use and benefit of the Client identified on the first page of this report.

This report is not for the use or benefit of, nor may it be relied upon by any other person or entity, for any purpose without the advance written consent of EMG. In expressing the opinions stated in this report, EMG has exercised the degree of skill and care ordinarily exercised by a reasonable prudent environmental professional in the same community and in the same time frame given the same or similar facts and circumstances. Documentation and data provided by the Client, designated representatives of the Client or other interested third parties, or from the public domain, and referred to in the preparation of this assessment, have been used and referenced with the understanding that EMG assumes no responsibility or liability for their accuracy.

EMG's professional services have been performed, our findings obtained, and our recommendations prepared in accordance with customary principles and practices in the fields of environmental engineering and sciences. EMG is not responsible for the independent conclusions, opinions, or recommendations made by others based on the field exploration and laboratory test data presented in this report.

The investigation performed for this project is intended as a description of available information at the time of the investigation. This report does not warrant against future operations or conditions present of a type or at a location not investigated.



7. APPENDICES

APPENDIX A: Site Map

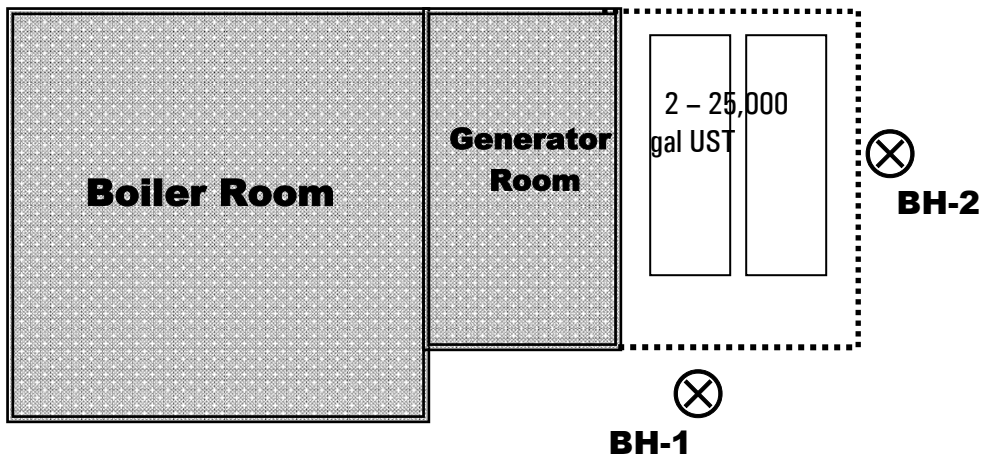
APPENDIX B: Photographic Documentation

APPENDIX C: Boring Logs

APPENDIX D: Laboratory Results/Chain-of-Custody Form



**APPENDIX A:
SITE MAP**



⊗ **BH-1** Soil Boring Location

**APPENDIX B:
PHOTOGRAPHIC DOCUMENTATION**

Project No.: 70884.05R-001.075

Project Name: United Hospital Medical Center



Photo #1:	Boiler Room / Generator Room
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Photo #2:	UST Installation
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Photo #3:	UST Installation
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Photo #4:	Location of BH-1
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Photo #5:	Location of BH-2
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Photo #6:	Side of UST installation
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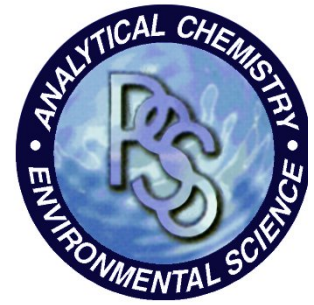
**APPENDIX C:
BORING LOGS**

SOIL BORING LOG - FIELD READINGS				
EMG Project # 70884.05R-001.075				
Project : <u>United Hospital Medical Center</u>				
BORING METHOD: <u>Geoprobe</u> DATE: <u>May 14, 2005</u>				
Sample #	Depth (FT)	Moisture (H-M-L)	PID Reading	Soil Description
B-1	0-4	M	0	Grass / topsoil, soft loose silty SAND, some gravel (FILL)
B-1	4-8	M	0	Silty sand FILL, some gravel
B-1	8-12	M	0	Silty sand FILL, some gravel
B-1	12-16	M	0	Silty sand FILL, some gravel
Bottom of Boring at 16'				
B-1	0-4	M	0	Asphalt, silty SAND, some gravel (FILL)
B-1	4-8	M	0	Silty sand FILL, some gravel
B-1	8-12	M	0	Silty sand FILL, some gravel
B-1	12-16	M	0	Silty sand FILL, some gravel, refusal at 15.5' (bedrock)
Bottom of Boring at 15.5'				

**APPENDIX D:
LABORATORY RESULTS/CHAIN-OF-CUSTODY
FORM**

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS
 No. 05052503 Page 1 of 2
EMG, Inc.
 May 31, 2005

Project: New York United Hospital Medical Center
 Site Location: Port Chester, NY
 Project Number: 70884.05R

Date Sampled: 5/19/2005
 Date Received: 5/25/2005

Sample ID:	Result	Unit	Method	PQL	Prepared	Analyzed	Init.
BH-1 16' / 05052503-01 / Soil							
Percent Solids							
Percent Solids	86	%	Gravimetry			05/26/05	
Polynuclear Aromatic Hydrocarbons							
Acenaphthene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Acenaphthylene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Anthracene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Benzo (a) anthracene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Benzo (a) pyrene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Benzo (b,k) fluoranthene	ND	ug/kg	EPA 8270C	770	05/26/05	05/27/05	BW
Benzo (g,h,i) perylene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Chrysene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Dibenzo (a,h) anthracene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Fluoranthene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Fluorene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Indeno (1,2,3-cd) pyrene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
2-Methylnaphthalene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Naphthalene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Phenanthrene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Pyrene	ND	ug/kg	EPA 8270C	390	05/26/05	05/27/05	BW
Purgeable Aromatics							
Benzene	ND	ug/kg	5035/8021B	0.9		05/26/05	AK
Toluene	ND	ug/kg	5035/8021B	0.9		05/26/05	AK
Ethylbenzene	ND	ug/kg	5035/8021B	0.9		05/26/05	AK
Total Xylenes	ND	ug/kg	5035/8021B	0.9		05/26/05	AK

Results reported on a dry weight basis where applicable.

USEPA methods recommend that the appearance of detectable levels of the above 8021B compounds be confirmed when unfamiliar samples are analyzed.

Footnotes:

PQL - Practical Quantitation Limit

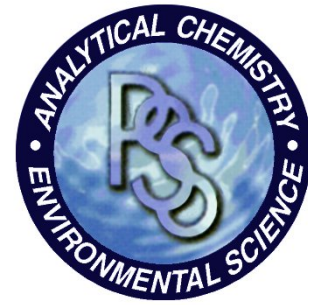
ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: _____

Quality Assurance Chemist

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PHASE SEPARATION SCIENCE, INC.



CERTIFICATE OF ANALYSIS
 No. 05052503 Page 2 of 2
EMG, Inc.
 May 31, 2005

Project: New York United Hospital Medical Center
 Site Location: Port Chester, NY
 Project Number: 70884.05R

Date Sampled: 5/19/2005
 Date Received: 5/25/2005

Sample ID:	Result	Unit	Method	PQL	Prepared	Analyzed	Init.
BH-2 15.5' / 05052503-02 / Soil							
Percent Solids							
Percent Solids	90	%	Gravimetry			05/26/05	
Polynuclear Aromatic Hydrocarbons							
Acenaphthene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Acenaphthylene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Anthracene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Benzo (a) anthracene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Benzo (a) pyrene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Benzo (b,k) fluoranthene	ND	ug/kg	EPA 8270C	730	05/26/05	05/27/05	BW
Benzo (g,h,i) perylene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Chrysene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Dibenzo (a,h) anthracene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Fluoranthene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Fluorene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
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2-Methylnaphthalene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Naphthalene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Phenanthrene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Pyrene	ND	ug/kg	EPA 8270C	370	05/26/05	05/27/05	BW
Purgeable Aromatics							
Benzene	ND	ug/kg	5035/8021B	1		05/26/05	AK
Toluene	ND	ug/kg	5035/8021B	1		05/26/05	AK
Ethylbenzene	ND	ug/kg	5035/8021B	1		05/26/05	AK
Total Xylenes	ND	ug/kg	5035/8021B	1		05/26/05	AK

Results reported on a dry weight basis where applicable.

USEPA methods recommend that the appearance of detectable levels of the above 8021B compounds be confirmed when unfamiliar samples are analyzed.

Footnotes:

PQL - Practical Quantitation Limit

ND - Not Detected at a concentration greater than or equal to the PQL.

Reviewed By: _____

Quality Assurance Chemist