ADDENDA E

Supplemental Phase II Environmental Site Assessment – December 2009

Dvirka and Bartilucci
CONSULTING ENGINEERS

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December 30, 2009

Allyn Jackson, Commissioner
Department of Parks and Recreation
Town of Southampton
6 Newtown Road
Hampton Bays, NY 11946

Re: Damascus Road, E. Quogue Town Property
Supplemental Phase II Environmental Site Assessment
D&B No. 2723

Dear Mr. Jackson:

Attached is the Supplemental Phase II Environmental Site Assessment for the Damascus Road Property. Copies have also been sent to Jon Erwin and Chris McKenzie. Please note that Appendix A provides a Compact Disc (CD) in a paper "pocket."

Subsequent to your review and approval, we will submit a copy to Alex Moskie (NYSDEC).

Please don't hesitate to contact me if you have any questions.

Very truly yours,

Steven M. Cabrera
Senior Associate

SMCt/kap
Enclosures
cc: J. Erwin (Town of Southampton)
C. McKenzie (Beveridge & Diamond)
T. Fox (D&B)
M. Walsh (D&B)
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SUPPLEMENTAL
PHASE II ENVIRONMENTAL SITE ASSESSMENT REPORT

DAMASCUS ROAD SITE
EAST QUOGUE, NEW YORK

Prepared for:

TOWN OF SOUTHAMPTON

Prepared by:

DVIRKA AND BARTILUCCI CONSULTING ENGINEERS
WOODBURY, NEW YORK

DECEMBER 2009

List of Tables

1.0 INTRODUCTION AND BACKGROUND

1.1 Project Background

The Town of Southampton (the Town) retained Dvirka and Bartilucci Consulting Engineers (D&B) to conduct a Phase II Environmental Site Assessment (ESA) of the property located at the end of Damascus Road in East Quogue, New York. The site location is shown on Figure 1-1. This work was conducted as a result of the Town's interest in possible redevelopment of the site for athletic fields and associated facilities.

Based upon D&B's review of available maps and information provided by the Town, the Damascus Road Site (the Site) involves three adjacent areas of Town-owned properties that have a total area of approximately 12 acres. Reported prior use of portions of the Site have included open burning, filling of solid waste (including cars), fire training, use as an animal shelter, on-site septic system leaching, and most recently, vacant land since the animal shelter was removed in 2004.

1.2 Summary of 1999 Phase I ESA

A Phase I ESA of the Site completed in May 1999, contained the following recommendations:

- Conduct a subsurface investigation to determine whether releases of fuel had occurred from the 1,000-gallon underground storage fuel oil tank (UST) reportedly located on the east side of the animal shelter building;
- Collect and analyze soil samples (for petroleum, chemical and heavy metals) in the northwest area of the Site that was previously used for septage/sewage leaching;
- Collect and analyze soil samples in the southern and western portions of the Site to determine if petroleum, chemicals or heavy metals are present; and
- Investigate the central portion of the Site for evidence of buried drums.

No previous environmental sampling at the property had been identified.

Dvirka and Bartilucci CONSULTING ENGINEERS
A DIVISION OF WILLIAM F. COSULICH ASSOCIATES, P.C.

146 DAMASCUS ROAD
SOUTHAMPTON, NEW YORK

SITE LOCATION AERIAL MAP

FIGURE 1-1

\\NT3\Jobs_Env\Permitting\2723 (Damascus Road)\Supplemental Assessment\Figure.ppt (MAW 12-21-09)

1.3 Summary of 2007 Phase II ESA

Based on the areas of potential environmental concerns and the recommendations presented in the Phase I ESA, the Town retained D&B Consulting Engineers to conduct a Phase II ESA. The Phase II ESA included a geophysical survey, surface and subsurface soil sampling.

In October 2006, six surface soil samples and four subsurface soil samples were collected from the areas of environmental concern identified in the Phase I ESA. The samples were analyzed for Target Compound List (TCL) volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides and Polychlorinated Biphenyls (PCBs) and Target Analyte List (TAL) metals and cyanide. The results were compared to the NYSDEC Remedial Program Soil Cleanup Objectives (RPSCOs) for "unrestricted use criteria" contained in 6 NYCRR Part 375. Although the appropriate RPSCOs for the proposed use of the Site (athletic fields) is "restricted residential" based on the NYCRR Part 375 regulations, the more stringent "unrestricted use" and "residential use" RPSCOs were utilized as a conservative measure.

In the 2007 Phase II ESA, the only chemical constituents detected at concentrations exceeding the RSCOs for the unrestricted use criteria were zinc (in surface sample FAS-1) and manganese (in surface sample FAS-2). However, neither of these concentrations exceed the RSCO for residential or unrestricted residential use criteria.

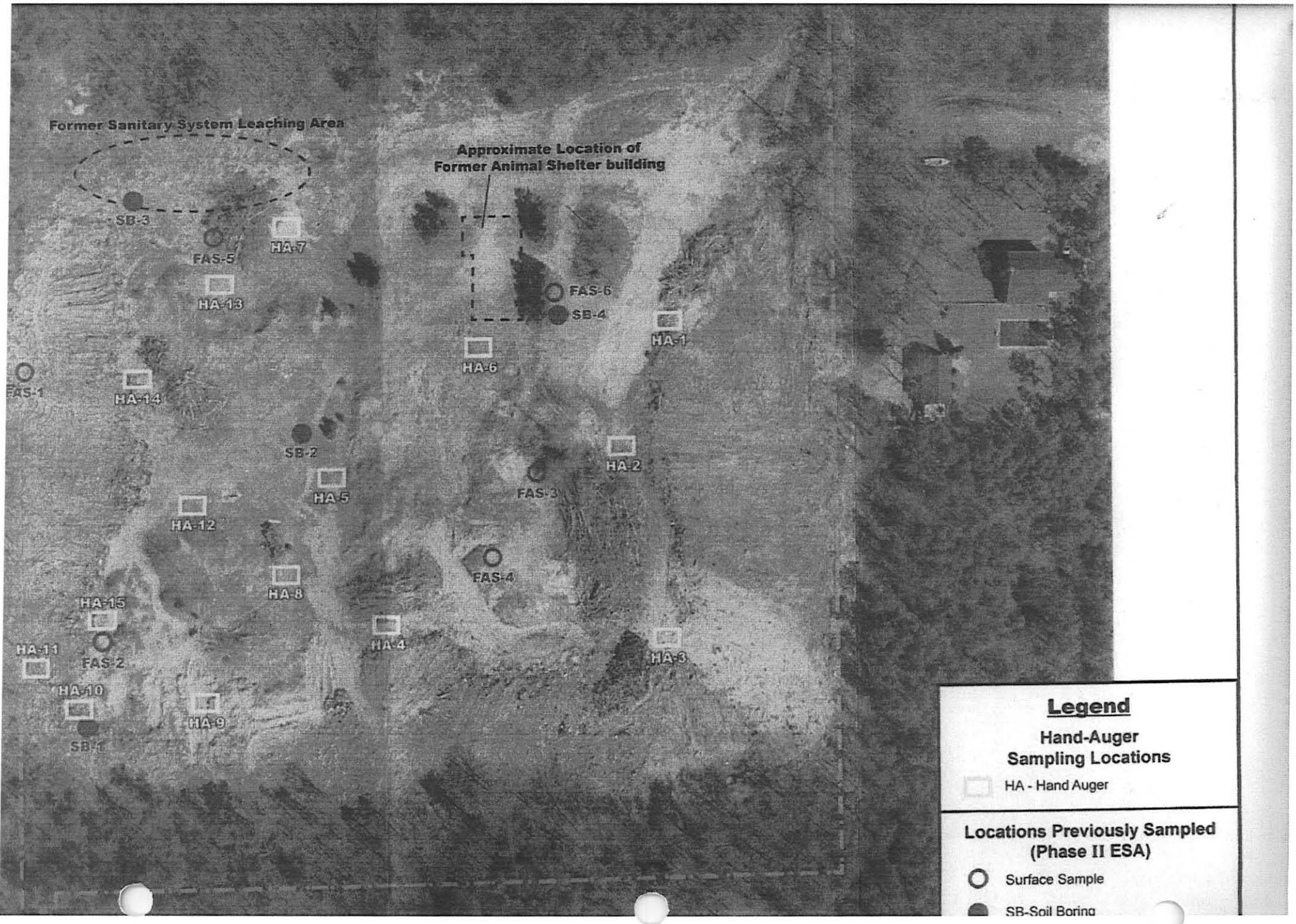
Based on the results of the sampling and analysis, the Phase II ESA report completed in January 2007 (see copy of main sections in Appendix B) recommended that the debris, waste tires and junked vehicles be removed from the Site as part of the redevelopment for athletic fields. Soil remediation and further study were not recommended.

1.4 Rationale for Supplemental Phase II ESA

Subsequent to the Phase II Report, and in response to communications with the NYSDEC, the Town submitted a debris removal protocol to the NYSDEC that included screening soils on-site as part of the debris removal work. In response, the NYSDEC required

the Town to conduct additional soil sampling to ensure that materials to be screened are free of contamination.

Ultimately, after subsequent communications and meetings with the NYSDEC, the Town agreed to conduct hand-auger, sub-surface sampling at fifteen (15) locations throughout the Site, with oversight provided by NYSDEC, as part of a Supplemental Phase II ESA.


Former Sanitary System Leaching Area
Approximate Location of Former Animal Shelter building
SB-3
FAS-5
HA-7
HA-13
FAS-6
SB-4
HA-1
HA-6
FAS-1
HA-14
SB-2
HA-2
HA-5
FAS-3
HA-12
FAS-4
HA-8
HA-15
HA-4
HA-3
HA-11
FAS-2
HA-10
HA-9
SB-1
Legend
Hand-Auger Sampling Locations
HA - Hand Auger
Locations Previously Sampled (Phase II ESA)
Surface Sample
SB-Soil Boring

sampling equipment was decontaminated with an alconox and water solution. A new set of latex gloves and sample bottles were used at each location. Samples for laboratory Quality Assurance/Quality Control (QA/QC) analysis were also collected.

All of the samples were analyzed for TCL SVOCs, pesticides and PCBs and TAL metals and cyanide. Based on guidance from the NYSDEC representative and the results of the PID screening, 4 of the 15 samples were also selected for TCL VOC analysis.

2.3 Analytical Methods and Data Validation

Chemical laboratory analyses of soil samples collected by D&B were performed by Mitkem Corporation. Mitkem is certified under the New York State Department of Health Environmental Laboratory Accreditation Program (ELAP) for the analyses performed.

All analyses were performed using New York State Department of Environmental Conservation (NYSDEC) 6/00 Analytical Services Protocols (ASP) methods using standard, 28-day turnaround time. A Category B data package was provided, using batch quality assurance/quality control (QA/QC) samples.

The data packages were reviewed in accordance with NYSDEC QA/QC requirements. All QA sample (calibrations, blanks, spikes, etc.) results have been reviewed for transcription errors and contract compliance. The results of the data validation process are presented as a Data Usability Summary Report (DUSR) in Section 3.3.

3.0 FINDINGS

In general, the shallow geology identified at the Site consists of sand and gravel.

3.1 Identification of Standards, Criteria and Guidelines

Analytical results for all parameters in the surface soil and subsurface soil samples were compared to the NYSDEC Remedial Program Soil Cleanup Objectives (RPSCOs) which are presented in 6 NYCRR Part 375, and became effective on December 14, 2006. RPSCOs have been developed for unrestricted Site use and restricted Site uses to protect human health, groundwater and ecological resources from contaminants.

3.2 Results

This section presents the results of the laboratory analysis of the 15 subsurface samples collected on November 19, 2009. A CD of the full Analytical Data Package from Mitkem Laboratories is provided in Appendix A. As a conservative measure, all results were compared to the most stringent Remedial Program Recommended Soil Cleanup Objectives (RSCOs), namely the RSCOs for the "unrestricted use" in 6 NYCRR Part 375. However, given the proposed active recreational use of the Site (athletic fields), the appropriate use category, determined based on 6 NYCRR Part 375-1.8(g)(2)(ii)(b) and with NYSDEC concurrence, is "restricted residential." Therefore, all samples were also compared to the RSCOs for the restricted residential criteria in Part 375-6.8.

Volatile Organic Compounds (VOCs)

None of the subsurface soil samples contained VOCs at concentrations exceeding unrestricted use criteria. See Table 3-1.

TABLE 3-1
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	HA-01	HA-03	HA-05	HA-13	6 NYCRR Part 375 Unrestricted Use Criteria
SAMPLE DEPTH (FT)	0-4	0-4	0-3.5	0-3	
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	
PERCENT MOISTURE	6	6	7	8	
DILUTION FACTOR	1	1	1	1	
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
VOCs					
Dichlorodifluoromethane	UJ	UJ	UJ	UJ	--
Chloromethane	UJ	U	UJ	UJ	--
Vinyl Chloride	UJ	UJ	UJ	UJ	20
Bromomethane	U	U	U	U	--
Chloroethane	U	U	U	U	--
Trichlorofluoromethane	UJ	UJ	UJ	UJ	--
1,1-Dichloroethene	UJ	UJ	UJ	UJ	330
Acetone	U	UJ	U	U	50
Iodomethane	UJ	UJ	UJ	UJ	--
Carbon Disulfide	U	U	U	U	--
Methylene Chloride	U	U	U	U	50
Trans-1,2-Dichloroethene	UJ	UJ	UJ	UJ	190
Methyl Tert-Butyl Ether	UJ	UJ	UJ	UJ	930
1,1-Dichloroethane	UJ	UJ	UJ	UJ	270
Vinyl Acetate	UJ	UJ	UJ	UJ	--
2-Butanone	U	UJ	U	U	--
Cis-1,2-Dichloroethene	UJ	UJ	UJ	UJ	250
2,2-Dichloropropane	UJ	UJ	UJ	UJ	--
Bromochloromethane	UJ	UJ	UJ	UJ	--
Chloroform	UJ	UJ	UJ	UJ	370
1,1,1-Trichloroethane	UJ	UJ	UJ	UJ	680
1,1-Dichloropropene	UJ	UJ	UJ	UJ	--
Carbon Tertrachloride	UJ	UJ	UJ	UJ	760
1,2-Dichloroethane	UJ	UJ	UJ	UJ	20
Benzene	UJ	UJ	UJ	UJ	60
Trichloroethene	UJ	UJ	UJ	UJ	470
1,2-Dichloropropane	UJ	UJ	UJ	UJ	--
Dibromomethane	UJ	UJ	UJ	UJ	--
Bromodichloromethane	UJ	UJ	UJ	UJ	--
Cis-1,3-Dichloropropene	UJ	UJ	UJ	UJ	--
4-Methyl-2-Pentanone	U	U	U	U	--
Toluene	1.6 J	1.3 J	9.6 J	7.8 J	700
Trans-1,3-Dichloropropene	UJ	UJ	UJ	UJ	--
1,1,2-Trichloroethane	UJ	U	UJ	UJ	--
1,3-Dichloropropane	UJ	UJ	UJ	UJ	--
Tetrachloroethene	UJ	UJ	UJ	UJ	1300
2-Hexanone	UJ	UJ	UJ	UJ	--
Dibromochloromethane	UJ	UJ	UJ	UJ	--
1,2-Dibromoethane	UJ	UJ	UJ	UJ	--
Chlorobenzene	UJ	UJ	UJ	UJ	1100
1,1,1,2-Tetrachloroethane	UJ	UJ	UJ	UJ	--
Ethylbenzene	UJ	UJ	UJ	UJ	1000

TABLE 3-1 (CONTINUED)
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	HA-01	HA-03	HA-05	HA-13	
SAMPLE DEPTH (FT)	0-4	0-4	0-3.5	0-3	
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	
PERCENT MOISTURE	6	6	7	8	6 NYCRR Part 375 Unrestricted Use Criteria
DILUTION FACTOR	1	1	1	1	
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
m,p-Xylene	UJ	UJ	UJ	UJ	260
o-Xylene	UJ	UJ	UJ	UJ	260
Xylene (Total)	UJ	UJ	UJ	UJ	260
Styrene	UJ	UJ	UJ	UJ	--
Bromoform	UJ	UJ	UJ	UJ	--
Isopropylbenzene	UJ	UJ	UJ	UJ	--
1,1,2,2-Tetrachloroethane	U	U	U	U	--
Bromobenzene	UJ	UJ	UJ	UJ	--
1,2,3-Trichloropropane	UJ	UJ	UJ	UJ	--
n-Propylbenzene	UJ	UJ	UJ	UJ	3900
2-Chlorotoluene	UJ	UJ	UJ	UJ	--
1,3,5-Trimethylbenzene	UJ	UJ	UJ	UJ	8400
4-Chlorotoluene	UJ	UJ	UJ	UJ	--
tert-Butylbenzene	UJ	UJ	UJ	UJ	5900
1,2,4-Trimethylbenzene	UJ	UJ	UJ	UJ	3600
sec-Butylbenzene	UJ	UJ	UJ	UJ	1100
4-Isopropyltoluene	UJ	UJ	UJ	UJ	--
1,3-Dichlorobenzene	UJ	UJ	UJ	UJ	2400
1,4-Dichlorobenzene	UJ	UJ	UJ	UJ	1800
n-Butylbenzene	UJ	UJ	UJ	UJ	1200
1,2-Dichlorobenzene	UJ	UJ	UJ	UJ	1100
1,2-Dibromo-3-Chloropropane	U	U	U	U	--
1,2,4-Trichlorobenzene	UJ	UJ	UJ	UJ	--
Hexachlorobutadiene	UJ	UJ	UJ	UJ	--
1,2,3-Trichlorobenzene	UJ	UJ	UJ	UJ	--
Naphthalene	UJ	UJ	UJ	UJ	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	UJ	UJ	UJ	UJ	--
Cyclohexane	UJ	UJ	UJ	UJ	--
Methyl Acetate	U	U	U	U	--
Methylcyclohexane	UJ	UJ	UJ	UJ	--

Qualifiers:

U: Constituent analyzed for but not detected.

J: Compound detected at a concentration below CRDL and value estimated

UJ: Constituent not detected but detection limit estimated.

Notes:

--: Cleanup criteria does not exist.

Semivolatile Organic Compounds (SVOCs)

None of the subsurface soil samples contained SVOCs at concentrations exceeding unrestricted use criteria. See Table 3-2.

Pesticides and PCBs

The pesticides DDT, DDE, and/or DDD were detected at concentrations exceeding their unrestricted use RSCO (3.3 ug/kg) in 9 or the 15 samples, namely HA-1, 2, 3, 4, 5, 6, 9, 10, and 13. The concentrations of the exceedances ranged from 4.2 ug/kg to 36.0 ug/kg. However, none of the samples exceeded the RPRSCO for the restricted residential use criteria, the appropriate category for the proposed use of the Site. See Table 3-3.

The PCB Arochlor 1254 was detected in concentrations exceeding the RSCO (100 ug/kg) for the unrestricted use criteria in samples HA-5 (230 ug/kg) and HA-11 (170 mg/kg). However, neither of these samples exceeded the RSCO (1000 ug/kg) for the restricted residential use criteria. See Table 3-4.

Metals

Zinc was detected at a concentration exceeding the RSCO (109 mg/kg) for the unrestricted use criteria in samples HA-2 (197 mg/kg) and HA-13 (249 mg/kg). However, neither sample exceeded the restricted residential RSCO for zinc (10,000 mg/kg). See Table 3-5.

3.3 Data Usability Summary Report

Fifteen soil samples were collected on November 19, 2009 at the Damascus Road Site in East Quogue, New York. The samples were analyzed for TCL VOCs, SVOCs, pesticides, PCBs, metals and cyanide.

TABLE 3-2
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	HA-01	HA-02	HA-03	HA-04	HA-05	HA-06	HA-07	HA-08	
SAMPLE DEPTH (FT)	0-4	0-4	0-4	0-3	0-3.5	0-4	0-4	0-4	
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	
PERCENT MOISTURE	6	-	6	8	7	5	5	5	
DILUTION FACTOR	1	1	1	1	1	1	1	1	6 NYCRR Part 375 Unrestricted Use Criteria
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
SVOCs									
Phenol	U	U	U	U	U	U	U	U	330
Bis(2-Chloroethyl) Ether	U	U	U	U	U	U	U	U	--
2-Chlorophenol	U	U	U	U	U	U	U	U	--
1,3-Dichlorobenzene	U	U	U	U	U	U	U	U	--
1,4-Dichlorobenzene	U	U	U	U	U	U	U	U	--
1,2-Dichlorobenzene	U	U	U	U	U	U	U	U	--
2-Methylphenol	U	U	U	U	U	U	U	U	--
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	U	--
4-Methylphenol	U	U	U	U	U	U	U	U	--
N-Nitroso-di-n-Propylamine	U	U	U	U	U	U	U	U	--
Hexachloroethane	U	U	U	U	U	U	U	U	--
Nitrobenzene	U	U	U	U	U	U	U	U	--
Isophorone	U	U	U	U	U	U	U	U	--
2-Nitrophenol	U	U	U	U	U	U	U	U	--
2,4-Dimethylphenol	U	U	U	U	U	U	U	U	--
2,4-Dichlorophenol	U	U	U	U	U	U	U	U	--
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	U	--
Naphthalene	U	U	U	U	U	U	U	U	12000
4-Chloroaniline	U	U	U	U	U	U	U	U	--
Bis(2-Chloroethoxy) Methane	U	U	U	U	U	U	U	U	--
Hexachlorobutadiene	U	U	U	U	U	U	U	U	--
4-Chloro-3-Methylphenol	U	U	U	U	U	U	U	U	--
2-Methylnaphthalene	U	U	U	U	U	U	U	U	--
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	U	--
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	U	--
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	U	--
2-Chloronaphthalene	U	U	U	U	U	U	U	U	--
2-Nitroaniline	U	U	U	U	U	U	U	U	--
Dimethylphthalate	U	U	U	U	U	U	U	U	--
Acenaphthylene	U	U	U	U	U	U	U	U	100000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	U	--
3-Nitroaniline	U	U	U	U	U	U	U	U	--
Acenaphthene	U	U	U	U	U	U	U	U	20000
2,4-Dinitrophenol	U	U	U	U	U	U	U	U	--
4-Nitrophenol	U	U	U	U	U	U	U	U	--
Dibenzofuran	U	U	U	U	U	U	U	U	--
2,4-Dinitrotoluene	U	U	U	U	U	U	U	U	--
Diethylphthalate	U	U	U	U	U	U	U	U	--
4-Chlorophenyl-Phenylether	U	U	U	U	U	U	U	U	--
Fluorene	U	U	U	U	U	U	U	U	30000
4-Nitroaniline	U	U	U	U	U	U	U	U	--
4,6-Dinitro-2-Methylphenol	U	U	U	U	U	U	U	U	--
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	U	--
4-Bromophenyl-Phenylether	U	U	U	U	U	U	U	U	--
Hexachlorobenzene	U	U	U	U	U	U	U	U	--
Pentachlorophenol	U	U	U	U	U	U	U	U	800
Phenanthrene	U	U	U	U	U	U	U	U	100000
Anthracene	U	U	U	U	U	U	U	U	100000
Carbazole	U	U	U	U	U	U	U	U	--
Di-n-Butylphthalate	39 J	76 J	48 J	52 J	49 J	50 J	63 J	49 J	--
Fluoranthene	U	U	U	U	U	U	U	U	100000
Pyrene	U	U	U	U	U	U	U	U	100000
Butylbenzylphthalate	U	U	U	U	U	U	U	U	--
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	U	--
Benzo(a)anthracene	U	U	U	U	U	U	U	U	1000
Chrysene	U	U	U	U	U	U	U	U	1000
Bis(2-Ethylhexyl) Phthalate	UJ	110 J	UJ	UJ	UJ	UJ	UJ	UJ	--
Di-n-octylphthalate	UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	--
Benzo(b) Fluoranthene	U	U	U	U	U	U	U	U	1000
Benzo(k) Fluoranthene	U	U	U	U	U	U	U	U	800
Benzo(a) Pyrene	U	U	U	U	U	U	U	U	1000
Indeno (1,2,3-cd) Pyrene	U	U	U	U	U	U	U	U	500
Dibenzo(a,h) Anthracene	U	U	U	U	U	U	U	U	330
Benzo (g,h,i) Perylene	U	U	U	U	U	U	U	U	100000

Qualifiers:

U: Constituent analyzed for but not detected.

J: Compound detected at a concentration below CRDL, value estimated

UJ: Constituent not detected but detection limit estimated.

Notes:

--: Cleanup criteria does not exist.

TABLE 3-2 (CONTINUED)
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
SEMI-VOLATILE ORGANIC COMPOUNDS

SAMPLE ID	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	
SAMPLE DEPTH (FT)	0-4	0-4	0-4	0-4	0-3	0-4	0-4	
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	
PERCENT MOISTURE	6	4	7	4	8	5	4	
DILUTION FACTOR	1	1	1	1	1	1	1	6 NYCRR Part 375 Unrestricted Use Criteria
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
SVOCs								
Phenol	U	U	U	U	U	U	U	330
Bis(2-Chloroethyl) Ether	U	U	U	U	U	U	U	–
2-Chlorophenol	U	U	U	U	U	U	U	–
1,3-Dichlorobenzene	U	U	U	U	U	U	U	–
1,4-Dichlorobenzene	U	U	U	U	U	U	U	–
1,2-Dichlorobenzene	U	U	U	U	U	U	U	–
2-Methylphenol	U	U	U	U	U	U	U	–
2,2'-Oxybis (1-Chloropropane)	U	U	U	U	U	U	U	–
4-Methylphenol	U	U	U	U	U	U	U	–
N-Nitroso-di-n-Propylamine	U	U	U	U	U	U	U	–
Hexachloroethane	U	U	U	U	U	U	U	–
Nitrobenzene	U	U	U	U	U	U	U	–
Isophorone	U	U	U	U	U	U	U	–
2-Nitrophenol	U	U	U	U	U	U	U	–
2,4-Dimethylphenol	U	U	U	U	U	U	U	–
2-4-Dichlorophenol	U	U	U	U	U	U	U	–
1,2,4-Trichlorobenzene	U	U	U	U	U	U	U	–
Napthalene	U	U	U	U	U	U	U	12000
4-Chloroaniline	U	U	U	U	U	U	U	–
Bis(2-Chloroethoxy) Methane	U	U	U	U	U	U	U	–
Hexachlorobutadiene	U	U	U	U	U	U	U	–
4-Chloro-3-Methylphenol	U	U	U	U	U	U	U	–
2-Methylnaphthalene	U	U	U	U	U	U	U	–
Hexachlorocyclopentadiene	U	U	U	U	U	U	U	–
2,4,6-Trichlorophenol	U	U	U	U	U	U	U	–
2,4,5-Trichlorophenol	U	U	U	U	U	U	U	–
2-Chloronaphthalene	U	U	U	U	U	U	U	–
2-Nitroaniline	U	U	U	U	U	U	U	–
Dimethylphthalate	U	U	U	U	U	U	U	–
Acenaphthylene	U	U	U	U	U	U	U	100000
2,6-Dinitrotoluene	U	U	U	U	U	U	U	–
3-Nitroaniline	U	U	U	U	U	U	U	–
Acenaphthene	U	U	U	U	U	U	U	20000
2,4-Dinitrophenol	U	U	U	U	U	U	U	–
4-Nitrophenol	U	U	U	U	U	U	U	–
Dibenzofuran	U	U	U	U	U	U	U	–
2,4-Dinitrotoluene	U	U	U	U	U	U	U	–
Diethylphthalate	U	U	U	U	U	U	U	–
4-Chlorophenyl-Phenylether	U	U	U	U	U	U	U	–
Fluorene	U	U	U	U	U	U	U	30000
4-Nitroaniline	U	U	U	U	U	U	U	–
4,6-Dinitro-2-Methylphenol	U	U	U	U	U	U	U	–
N-Nitrosodiphenylamine	U	U	U	U	U	U	U	–
4-Bromophenyl-Phenylether	U	U	U	U	U	U	U	–
Hexachlorobenzene	U	U	U	U	U	U	U	–
Pentachlorophenol	U	U	U	U	U	U	U	800
Phenanthrene	U	U	U	U	U	U	U	100000
Anthracene	U	U	U	U	U	U	U	100000
Carbazole	U	U	U	U	U	U	U	–
Di-n-Butylphthalate	62 J	62 J	92 J	81 J	110 J	69 J	110 J	–
Fluoranthene	U	U	46 J	U	U	U	U	100000
Pyrene	U	U	37 J	U	U	U	U	100000
Butylbenzylphthalate	U	U	82 J	U	U	35 J	U	–
3,3'-Dichlorobenzidine	U	U	U	U	U	U	U	–
Benzo(a)anthracene	U	U	U	U	U	U	U	1000
Chrysene	U	U	U	U	U	U	U	1000
Bis(2-Ethylhexyl) Phthalate	U	U	U	U	U	U	U	–
Di-n-octylphthalate	U	U	U	U	U	U	U	–
Benzo(b) Fluoranthene	U	U	U	U	U	U	U	1000
Benzo(k) Fluoranthene	U	U	U	U	U	U	U	800
Benzo(a) Pyrene	U	U	U	U	U	U	U	1000
Indeno (1,2,3-od) Pyrene	U	U	U	U	U	U	U	500
Dibenzo(a,h) Anthracene	U	U	U	U	U	U	U	330
Benzo (g,h,i) Perylene	U	U	U	U	U	U	U	100000

Qualifiers:

U: Constituent analyzed for but not detected.

J: Compound detected at a concentration below CRDL, value estimated

UJ: Constituent not detected but detection limit estimated.

Notes:

–: Cleanup criteria does not exist.

TABLE 3-3
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
PESTICIDES

SAMPLE ID	HA-01	HA-02	HA-03	HA-04	HA-05	HA-06	HA-07	HA-08	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria
SAMPLE DEPTH (FT)	4	4	4	3	3.5	4	4	4		
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface		
PERCENT MOISTURE	6	6	6	8	7	5	5	5		
DILUTION FACTOR	1	1	1	1	1	1	1	1		
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009		
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Pesticides										
Alpha-BHC	U	U	U	U	U	U	U	U	20	97
Beta-BHC	U	U	U	U	U	U	U	U	36	72
Delta-BHC	U	U	U	U	U	U	U	U	40	100000
Gamma-BHC (Lindane)	U	U	U	U	U	U	U	U	100	280
Heptachlor	U	U	U	U	U	U	U	U	420	420
Aldrin	U	U	U	U	U	U	U	U	5.0	19
Heptachlor Epoxide	U	U	U	U	U	U	U	U	--	--
Endosulfan I	U	U	U	U	U	U	U	U	2400	4800
Dieldrin	U	U	U	U	U	U	U	U	5.0	39
4,4'- DDE	UJ	12 J	4.7 J	4.8 J	4.4 PJ	UJ	UJ	UJ	3.3	1800
Endrin	U	U	U	U	U	U	U	U	140	2200
Endosulfan II	U	U	U	U	U	U	U	U	2400	4800
4,4'- DDD	U	U	U	U	15	U	U	U	3.3	2600
Endosulfan Sulfate	5.2	5.5	U	U	U	U	U	U	2400	4800
4,4'- DDT	U	35	24	15	17	4.9	U	U	3.3	1700
Methoxychlor	U	U	U	U	U	U	U	U	--	--
Endrin Ketone	U	U	U	U	U	U	U	U	--	--
Endrin Aldehyde	U	U	U	U	U	U	U	U	--	--
Alpha-Chlordane	UJ	2.0 PJ	UJ	3.0 PJ	14 PJ	2.1 PJ	UJ	UJ	94	910
Gamma-Chlordane	U	U	U	3.2	17	2.5	U	U	--	--
Toxaphene	U	U	U	U	U	U	U	U	--	--

Qualifiers:

U: Constituent analyzed for but not detected.

P: Percent difference between the primary column and the concentration column is greater than 25 percent; lower value reported.

J: Estimated value.

Notes:

--: Cleanup criteria does not exist.

TABLE 3-3 (CONTINUED)
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
PESTICIDES

SAMPLE ID	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria
SAMPLE DEPTH (FT)	4	4	4	4	3	4	4		
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface		
PERCENT MOISTURE	6	4	7	4	8	5	4		
DILUTION FACTOR	1	1	1	1	1	1	1		
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009		
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
Pesticides									
Alpha-BHC	U	U	U	U	U	U	U	20	97
Beta-BHC	U	U	U	U	U	U	U	36	72
Delta-BHC	U	U	U	U	U	U	U	40	100000
Gamma-BHC (Lindane)	U	U	U	U	U	U	U	100	280
Heptachlor	U	U	U	U	U	U	U	420	420
Aldrin	U	U	U	U	U	U	U	5.0	19
Heptachlor Epoxide	U	U	U	U	U	U	U	--	--
Endosulfan I	U	U	U	U	U	U	U	2400	4800
Dieldrin	U	U	U	U	U	U	U	5.0	39
4,4'- DDE	**5.7 J**	**4.2 J**	UJ	UJ	**8.6 J**	UJ	UJ	3.3	1800
Endrin	U	U	U	U	U	U	U	140	2200
Endosulfan II	U	U	U	U	U	U	U	2400	4800
4,4'- DDD	U	U	U	U	U	U	U	3.3	2600
Endosulfan Sulfate	U	U	U	U	U	U	U	2400	4800
4,4'- DDT	**13**	**8.4**	U	U	**17**	U	U	3.3	1700
Methoxychlor	U	U	U	U	U	U	U	--	--
Endrin Ketone	U	U	U	U	U	U	U	--	--
Endrin Aldehyde	U	U	U	U	U	U	U	--	--
Alpha-Chlordane	UJ	UJ	77 PJ	UJ	UJ	UJ	UJ	94	910
Gamma-Chlordane	U	U	62	U	U	U	U	--	--
Toxaphene	U	U	U	U	U	U	U	--	--

Qualifiers:

U: Constituent analyzed for but not detected.

P: Percent difference between the primary column and the concentration column is greater than 25 percent; lower value reported.

J: Estimated value.

Notes:

--: Clean up criteria does not exist.

TABLE 3-4
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
PCBS

SAMPLE ID	HA-01	HA-02	HA-03	HA-04	HA-05	HA-06	HA-07	HA-08	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria
SAMPLE DEPTH (FT)	4	4	4	3	3.5	4	4	4		
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface		
PERCENT MOISTURE	6	6	6	8	7	5	5	5		
DILUTION FACTOR	1	1	1	1	1	1	1	1		
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009		
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
PCBs										
Aroclor 1016	U	U	U	U	U	U	U	U	100	1000
Aroclor 1221	U	U	U	U	U	U	U	U	100	1000
Aroclor 1232	U	U	U	U	U	U	U	U	100	1000
Aroclor 1242	U	U	U	U	U	U	U	U	100	1000
Aroclor 1248	U	U	U	U	U	U	U	U	100	1000
Aroclor 1254	U	U	U	U	230 PJ	U	U	U	100	1000
Aroclor 1260	U	U	U	U	U	U	U	U	100	1000

SAMPLE ID	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria
SAMPLE DEPTH (FT)	4	4	4	3	3.5	4	4		
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface		
PERCENT MOISTURE	6	4	7	4	8	5	4		
DILUTION FACTOR	1	1	1	1	1	1	1		
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009		
UNITS	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)	(ug/kg)
PCBs									
Aroclor 1016	U	U	U	U	U	U	U	100	1000
Aroclor 1221	U	U	U	U	U	U	U	100	1000
Aroclor 1232	U	U	U	U	U	U	U	100	1000
Aroclor 1242	U	U	U	U	U	U	U	100	1000
Aroclor 1248	U	U	U	U	U	U	U	100	1000
Aroclor 1254	U	U	170 PJ	U	U	U	U	100	1000
Aroclor 1260	U	U	U	U	U	U	U	100	1000

Qualifiers:

U: Constituent analyzed for but not detected.

P: Percent difference between the primary column and the concentration column is greater than 25 percent; lower value reported.

J: Estimated value.

TABLE 3-5
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
METALS

SAMPLE ID	HA-01	HA-02	HA-03	HA-04	HA-05	HA-06	HA-07	HA-08	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria	Eastern USA/New York State* Background Concentration
SAMPLE DEPTH (FT)	4	4	4	3	3.5	4	4	4			
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface			
PERCENT SOLIDS	94	94	94	92	93	95	95	95			
DILUTION FACTOR	1	1	1	1	1	1	1	1			
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Metals											
Aluminum	1710	1570	2220	2870	2880	1680	2260	1470	--	--	33000
Antimony	UJ	UJ	UJ	UJ	UJ	UJ	UJ	UJ	--	--	n/a
Arsenic	0.82 B	0.61	0.76 B	0.81	1.0	0.57 B	0.92	0.54 B	13	16	3-12*
Barium	4.3 B	14.3	11.5	14.4	8.3	4.9 B	4.8 B	4.3 B	350	350	15-600
Beryllium	U	U	U	U	U	0.0051 B	U	U	7.2	14	0-1.75
Cadmium	UJ	0.081 BJ	0.097 BJ	0.19 J	0.050 BJ	UJ	UJ	UJ	2.5	2.5	0.1-1
Calcium	212	1040	1310	622	6880	414	314	98.5	--	--	130-35000*
Chromium	2.9	3.8	3.8	5.1	4.0	3.0	3.6	2.9	30	36	1.5-40*
Cobalt	1.0 B	0.77 B	0.81 B	0.94 B	0.76 B	0.76 B	0.68 B	0.77 B	--	--	2.5-60*
Copper	2.1	8.4	4.0	13.0	8.0	2.9	6.7	3.8	50	270	1-50
Iron	2570	2340	3130	6650	2970	2280	2600	1940	--	--	2000-550000
Lead	5.0	32.1	35.1	40.0	14.3	11.8	9.0	3.8	63	400	**
Magnesium	251	642	763	328	4200	317	336	245	--	--	100-5000
Manganese	33.7	29.0	38.4	48.6	21.6	29.5	20.8	25.0	1600	2000	50-5000
Mercury	U	0.026 B	0.013 B	0.056	0.017 B	0.0060 B	U	U	0.18	0.81	0.001 - 0.2
Nickel	1.7 B	1.9 B	2.2 B	2.5	2.4	1.7	1.5 B	2.0	30	140	0.5 - 25
Potassium	83.9	77.3	91.9	90.8	122	70.9	83.7	70.4	--	--	8500 - 43000*
Selenium	U	U	U	0.48 B	U	U	U	U	3.9	36	0.1 - 3.9
Silver	U	U	U	U	U	U	U	U	2	36	n/a
Sodium	U	U	U	U	U	U	U	U	--	--	6000 - 8000
Thallium	0.30 B	U	0.35 B	0.21 B	U	0.26 B	U	0.38 B	--	--	n/a
Vanadium	4.4	5.5	6.7	6.5	6.3	4.4	5.1	3.8	--	--	1 - 300
Zinc	9.4 J	197 J	107 J	65.6 J	31.6 J	10.5 J	6.9 J	9.8 J	109	2200	9 - 50
Cyanide	U	U	U	U	U	U	U	U	27	27	n/a

Qualifiers:

U: Constituent analyzed for but not detected.

B: Concentration is between instrument detection limit and contract required detection limit.

J: Estimated value.

UJ: Constituent not detected but detection limit estimated.

Notes:

n/a: Background concentrations not available.

--: Cleanup criteria does not exist.

*: New York State background.

**: Background concentration varies between urban (200-500ppm) and rural areas (4-61ppm).

TABLE 3-5 (CONTINUED)
SUBSURFACE SOIL SAMPLE RESULTS
DAMASCUS ROAD SITE, E. QUOGUE, NY
METALS

SAMPLE ID	HA-09	HA-10	HA-11	HA-12	HA-13	HA-14	HA-15	6 NYCRR Part 375 Unrestricted Use Criteria	6 NYCRR Part 375 Restricted Residential Use Criteria	Eastern USA/New York State* Background Concentration
SAMPLE DEPTH (FT)	4	4	4	4	3	4	4			
SAMPLE TYPE	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface	Subsurface			
PERCENT SOLIDS	94	96	93	96	92	95	96			
DILUTION FACTOR	1	1	1	1	1	1	1			
DATE OF COLLECTION	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009	11/19/2009			
UNITS	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
Metals										
Aluminum	2010	1100	4650	1160	2840	1420	1170	--	--	33000
Antimony	UJ	UJ	UJ	UJ	UJ	UJ	UJ	--	--	n/a
Arsenic	1.1	0.89	1.1	0.50 B	1.2	0.42 B	0.95	13	16	3-12*
Barium	21.4	2.2 B	12.7	3.6 B	19.9	4.0 B	3.4 B	350	350	15-600
Beryllium	U	U	U	U	U	U	U	7.2	14	0-1.75
Cadmium	0.046 BJ	UJ	0.081 BJ	UJ	0.27 J	UJ	UJ	2.5	2.5	0.1-1
Calcium	141	85.8	911	88.6	402	2570	102	--	--	130-35000*
Chromium	3.1	3.1	5.4	2.6	3.9	3.5	2.0	30	36	1.5-40*
Cobalt	0.67 B	0.55 B	0.92 B	0.90 B	0.66 B	0.58 B	0.55 B	--	--	2.5-60*
Copper	10.2	1.8	9.0	1.3	4.4	1.4	2.4	50	270	1-50
Iron	2380	1770	4800	1790	3100	1650	1510	--	--	2000-550000
Lead	11.0	3.6	24.3	2.2	48.5	4.4	4.3	63	400	**
Magnesium	219	151	385	164	388	1570	156	--	--	100-5000
Manganese	23.5	19.0	36.9	23.4	32.0	25.9	19.1	1600	2000	50-5000
Mercury	0.022 B	U	0.026 B	U	0.018 B	U	U	0.18	0.81	0.001 - 0.2
Nickel	1.5 B	1.2 B	2.9	1.4 B	2.1	1.8	1.2 B	30	140	0.5 - 25
Potassium	80.8	66.4	141	69.5	113	71.8	67.3	--	--	8500 - 43000*
Selenium	U	U	U	U	U	U	U	3.9	36	0.1 - 3.9
Silver	U	U	U	U	U	U	U	2	36	n/a
Sodium	U	U	U	U	U	U	U	--	--	6000 - 8000
Thallium	0.34 B	U	0.36 B	0.18 B	0.32 B	U	0.15 B	--	--	n/a
Vanadium	4.6	3.2	8.7	3.5	6.0	3.7	3.1	--	--	1 - 300
Zinc	33.2 J	UJ	40.3 J	UJ	249 J	10.4 J	9.6 J	109	2200	9 - 50
Cyanide	U	U	U	U	U	U	U	27	27	n/a

Qualifiers:

U: Constituent analyzed for but not detected.

B: Concentration is between instrument detection limit and contract required detection limit.

J: Estimated value.

UJ: Constituent not detected but detection limit estimated.

Notes:

n/a: Background concentrations not available.

--: Cleanup criteria does not exist.

**: New York State background.

***: Background concentration varies between urban (200-500ppm) and rural areas (4-61ppm).

Samples analysis was performed by Mitkem Corporation Inc., a subcontractor to Dvirka and Bartilucci Consulting Engineers. The samples were analyzed in accordance with New York State Department of Environmental Conservation (NYSDEC) 6/00 Analytical Services Protocol (ASP) methods.

The data package: SH2379 was submitted by Mitkem have been reviewed to determine if the sample analyses were performed in accordance with the specified methods and Quality Assurance/Quality Control (QA/QC) requirements. The findings of the review process are summarized below.

All samples were analyzed within the method specified holding times and qualification of data based on this review is discussed below:

- Numerous VOCs percent recoveries were below QC limits in the MS and/or MSD and/or relative percent differences above QC limit and were qualified as estimated.
- Numerous VOCs percent differences were above QC limits in the continuing calibration and were qualified as estimated.
- Di-n-octylphthalate and bis(2-ethylhexyl)phthalate percent recoveries were above QC limits in the MS and/or MSD and were qualified as estimated.
- Duel column confirmation percent differences between runs were greater than QC limits and were qualified as estimated.
- Antimony, sodium and zinc were detected in preparation blank and detected in the samples at concentration less than ten times the concentration found in the blanks and were qualified as non-detect.
- The spike sample percent recoveries were below QC limits of 75% for antimony and zinc and were qualified as estimated.
- The cadmium and zinc relative percent differences were above the QC limit of 20 % for the laboratory duplicate and were qualified as estimated.

No other deviations were found with the data and all results are deemed usable for environmental assessment purposes as qualified above.

4.0 CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

Pesticides and PCBs

As stated in Section 3.2, the concentration of DDT, DDE, and DDD that exceeded the unrestricted use RSCOs ranged from 4.2 to 36.0 ug/kg. However, these concentrations are far below the restricted residential RSCOs, 7,900 ug/kg, 8,900 mg/kg, and 13,000 ug/kg, respectively.

DDT is an organochlorine insecticide that was extensively used in Suffolk County between 1951 and 1966, by mosquito control programs along wetlands, grasslands and in agriculture. In 1966, the Suffolk County Vector Control terminated DDT usage. When applied to soil, DDT absorbs very strongly with surficial sediments. DDT may undergo microbial degradation in flooded soils or under anaerobic conditions. If biodegradation does occur, the degradation products, including DDE and DDD can be produced. The low solubility of DDT and subsequent daughter compounds DDE and DDD contributes to their persistence in the Long Island environment. Therefore, the detection of low concentrations of these compounds in soils in eastern Long Island is not unexpected.

It should also be noted that disturbance and screening of soils containing the above mentioned concentrations of DDT would not be expected to result in concentrations exceeding the Occupational Safety and Health Administration's (OSHA) Permissible Exposure Limit (PEL) for DDT of 1,000 ug/m^3. There are no PELs for the "daughter" compounds of DDE and DDD.

As stated in Section 3.2, the PCB Arochlor 254 (a.k.a. Chlorodiphenyl 54% Chlorine) was detected in concentrations exceeding the RSCO for the unrestricted use criteria (100 ug/kg) in sample HA-5 (230 ug/kg) and HA-11 (170 ug/kg). However, neither sample exceeded the RSCO for the restricted residential use criteria (1,000 ug/kg). These two samples are

approximately 340 feet apart, so there is no indication of any "concentration" of this PCB at the Site.

Polychlorinated biphenyls (PCBs) are synthetic chemicals which are no longer produced in the United States, but are still found in the environment. PCBs have been used as coolants and lubricants in transformers, capacitors, and other electrical equipment because they do not burn easily and are good insulators. The manufacture of PCBs was stopped in the U.S. in 1977, because of evidence they build up in the environment and can cause adverse health effects. Products made before 1977 that may contain PCBs include old fluorescent lighting fixtures and electrical devices containing PCB capacitors and hydraulic oils. Workers exposed to high levels of PCBs on the job have documented skin and eye irritation.

Disturbance and screening of soils containing the above concentrations of PCBs would not be expected to result in concentrations exceeding the OSHA Permissible Exposure Limit (PEL) for PCBs of 500 ug/m^3 (Chlorodiphenyl 54%).

The low levels of the abovementioned pesticides and PCBs detected at the Site would not be expected to pose any adverse impact to the environmental or any health risk for either workers removing debris and screening soils on Site or individuals in the future who would use the proposed athletic fields, given the barrier of clean fill discussed below in Section 4.2.

Metals

As stated in 3.2, Zinc was detected at a concentration exceeding the unrestricted use RSCO (109 mg/kg) in samples HA-2 (197 mg/kg) and HA-13 (249 mg/kg). However, neither sample exceeded the restricted residential RSCO for zinc (10,000 mg/kg).

Metals for which RSCOs have not been established in Part 375 (i.e., Aluminum, Antimony, Calcium, Cobalt, Iron, Magnesium, Potassium, Sodium, Thallium and Vanadium) were compared to Eastern USA or New York State Background Concentrations. None of these metals exceeded the background concentrations.

4.2 Recommendations

Based on the findings of the Phase I, Phase II and Supplemental Phase II ESAs, it has been determined that soils at the Damascus Road Site can be safely screened on-site as part of the debris removal program, and reused as part of development of athletic fields. Furthermore, based on the lack of significant contamination in samples collected from 6 surface and 4 subsurface borings in the Phase II ESA and the 15 subsurface samples analyzed as part of the Supplemental Phase II ESA, neither remediation or additional soil sampling at the Site are warranted.

Nevertheless, as a sensible, conservative, precaution, and to protect workers at the Site and the environment, standard construction safety measures and dust suppression techniques should be undertaken by construction crews doing soil screening and debris removal, and ultimately, Site preparation and grading for the proposed athletic fields re-development. Such measures include use of protective head gear, gloves, boots and dust suppression equipment to minimize potential exposure to soils and dust.

For many development projects for which environmental site assessments are completed, a conservative precaution, or recommendation is to top the site with a layer of clean fill after final grading to serve as a "barrier" to any low-level contamination that might have been detected in the soil. Given that there were no contaminants detected at the Damascus Road Site above the RSCOs for the restricted residential criteria, this approach is not necessary. However, in should be noted that the proposed use of the Site as athletic fields would require, after final grading, a layer of topsoil over virtually the entire Site to promote grass growth. This layer of topsoil would provide equivalent, conservative protection in any event, as would asphalt or gravel over any small, ancillary parking or other appurtenant facilities that might be associated with the athletic fields.