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YANKEE GAS CONSTRUCTION SPECIFICATIONS

(Adapted from Yankee Gas Services Company's Construction Design & Application Standard)

1. MAINS & SERVICES

1.1 Location & Identification

1.1.1 A minimum vertical clearance of 1' shall be maintained between the gas facilities and any other underground facility.

1.1.2 A minimum horizontal clearance of 4' shall be maintained between the gas facilities and any other underground facilities and/or aboveground facilities.

1.1.3 Where practical, services should run straight from main to meter location. Diagonal installations which "wander" should be avoided. Facilities will be installed in straight lines with right angle corners.

1.1.4 If a sleeve is to be installed, tracing wire (provided by Yankee Gas) shall be installed along the *outside* of the sleeve.

1.1.5 An identification tape shall be buried approximately 1' above the top of all gas mains, services and sleeves.

1.2 Trenching (Excavating)

1.2.1 All excavation work will be in accordance with the direction of the Company and in compliance with the regulations of the authorities having jurisdiction over the streets, alleys, right-of-ways, or properties where the work is to be executed.

1.2.2 The gas main trench shall be a minimum of 18" wide. Minimum depths are as follows: 42" for 2" pipe, 44" for 4"pipe, and 46" for 6"pipe.

1.2.3 The gas service trench shall be a minimum of 1' wide and 30" deep.

1.2.4 The bottom of the trench shall be free of clods, rocks or other sharp objects.

1.2.4.1 Prior to the installation of the pipe, sand padding shall be a installed a minimum of 4" (measured after compaction.)

1.3 Backfill

1.3.1 Sand padding above the gas pipe shall be a minimum of 6" (measured after compaction).

1.3.1.1 Sand shall consist of clean, hard, durable, uncoated particles of quartz or other rock. It shall be free of lumps of clay, loam, soft or flaky material, vegetable or other decaying substances and meet the gradation requirements of the State of Connecticut Department of Transportation, Form 813, 1985, Section M.11.04 - Grading "A".

1.3.2 Backfill shall be free of large stones (6" diameter) within 1' of the pipe. If the material removed from the trench is not suitable for backfilling, *replacement fill* shall be used.

1.3.2.1 Replacement Fill shall be bank-run gravel consisting of sound, tough, durable particles of crushed gravel, free from soft, thin elongated or laminated pieces and vegetable or other decaying substances. It shall meet all requirements of the State of Connecticut Department of Transportation, Form 813, 1985, Sections M.02.02 and M.02.06 - Grading "B".

1.3.3 In order to reduce trench settlement, backfill shall be uniformly compacted by use of compaction equipment in lifts not to exceed 6" after compaction.

1.4 Cover

1.4.1 There shall be a minimum of 36" cover from the top of the gas main to the finished grade.

1.4.2 There shall be a minimum of 24" cover from the top of the gas service to the finished grade.

1.5 Exceptions to the Above

1.5.1 If the main/service can not be installed with the stated minimum depth/cover due to rock or unexpected underground facilities encountered, the main/service may be installed with less cover if it is provided with extra protection, such as casings, to withstand anticipated external loads.

1.5.2 Exceptions shall be approved by Yankee Gas or its representative.

2. **METER SETS**

2.1 No electrical equipment shall be located within 3' of the meters, regulators and/or regulator vent terminations.

2.2 No forced or mechanically induced draft air intake for heating, cooling or ventilating systems shall be located within 10' of the meters, regulators and/or regulator vent terminations.

SECTION 02140

DEWATERING

PART 1 GENERAL

1.01 SUMMARY

A. Dewatering specified in this section is applicable to utilities and all other structures. For the purposes of this section, the Licenses Environmental Professional (LEP) is BETA Group, Inc.

B. Section Includes

1. Requirements for designing, furnishing, installing, maintaining, operating and removal of temporary dewatering systems required to lower and control water levels and hydrostatic pressures during construction.
2. Requirements for disposing of pumped water.

C. Related Sections

1.

1.02 DEFINITIONS

A. Dewatering: Lowering the zone of saturation and intercepting groundwater seepage which would otherwise emerge from the slopes or bottom of the excavations. The purposes of dewatering are to increase the stability of excavated slopes; prevent loss of material from beneath the slopes or bottom of the excavation; improve the excavating and hauling characteristics of on site soil; prevent rupture or heaving of the bottom of an excavation; and dispose of pumped water. In addition, dewatering is required to place and compact structural fill.

1.03 DESIGN REQUIREMENTS

A. The Contractor is responsible for the adequacy of the dewatering system.

B. Design dewatering systems to:

1. Effectively reduce the hydrostatic pressure and lower the groundwater levels to a minimum of 2 feet below excavation in soil.
2. Develop a substantially dry and stable subgrade for the protection of subsequent operations.
3. Result in no damage to adjacent buildings, structures, utilities and other work, included in this contract.

4. Depressurize stratified layers of sand that may be confined by silt layers so that a stable excavation bottom is maintained.

C. Methods may include sump pumping, single or multiple stage well point or jet educator well point systems, deep wells, or combinations thereof.

D. Locate dewatering facilities where they will not interfere with existing utilities, facilities and/or construction work to be done under this Contract.

1.04 SUBMITTALS

A. Shop Drawings

1. In accordance with Section 01300 submit the following prior to dewatering system installation:

a. Proposed system components.
b. Operational plan to include locations and depth of components.
c. Method of disposal of pumped water, including method of insuring proper sediment removal should upset in dewatering system occur.

B. Quality Assurance/Control Submittals

1. In accordance with Section 01300 submit the following:

a. Dewatering systems to be designed under the direct supervision of a professional Civil Engineer registered in the state which the work is to be done.
b. Complete Certificate of Design at the end of this section.
c. Provide documentation demonstrating ability and experience of installing contractor for the type of conditions under this contract.
d. Names, addresses and telephone numbers of supervisory personnel actively involved in at least five successful projects requiring dewatering.

1.05 PROJECT/SITE CONDITIONS

A. Environmental Requirements

1. Dispose of all pumped water in accordance with all applicable U.S. Environmental Protection Agency, Connecticut Department of Energy & Environmental Protection (CTDEEP), and Town of South Windsor requirements.

B. Existing Conditions

1. Groundwater Measurements were taken during environmental investigations at the site (see Appendix A to the Specifications).
2. Groundwater surface is subject to fluctuations during periods of heavy precipitation.

3. Laboratory analysis of groundwater samples has indicated the presence of Extractable Petroleum Hydrocarbons above the CTDEEP GA Groundwater Criteria (see Appendix A to the Specifications).

PART 2 PRODUCTS

NOT USED

PART 3 EXECUTION

3.01 PERMITTING

A. Discharge of contaminated groundwater should be directed to on-site stormwater management areas. The LEP will be responsible for sampling and testing groundwater, and registering under the CTDEEP's General Permit for the "Discharge of Groundwater Remediation Wastewater Directly to Surface Water" for the discharge of construction dewatering effluent. The Contractor will be responsible for installing and maintaining any required treatment system, and for complying with the CTDEEP's discharge limits. Discharge limits are included as Appendix B to the Specifications.

B. Contractor will be responsible for any other local, state, or federal permitting for the dewatering system.

3.02 SITE PREPARATION

A. Surface Drainage

1. Construct dikes, ditches, pipe lines, sumps or other means to intercept and divert precipitation and surface water away from excavations.

B. Drainage of Excavated Areas

1. Construct dikes, ditches, pipe lines, sumps or other means to collect surface and seepage water which may enter the excavation.
2. Discharge water through settling basins or method approved by Engineer when water is to be deposited into an existing watercourse.

3.03 INSTALLATION

A. Advise Engineer of changes made to Operation Plan as submitted under article 1.05 of this section, made to accommodate field conditions.

3.04 MONITORING

A. Observe and record daily the elevation of the groundwater during the length of the dewatering operation and provide data to Engineer on daily basis.

B. The LEP will be responsible for the sampling requirements detailed in CTDEEP's General Permit for the "Discharge of Groundwater Remediation Wastewater Directly to Surface Water."

3.05 OPERATION

A. Operate dewatering systems to lower the groundwater level in excavations allowing all subsequent work to be done on a stable dry subgrade.

B. Modify dewatering procedures which cause, or threaten to cause, damage to new or existing facilities, to prevent further damage. Modifications made at no additional expense to the Owner.

C. Maintain the water level a minimum of two (2) feet below subgrade or at lower elevation to eliminate hydrostatic pressure on structures.

D. Prevent disturbance of foundation soils and loss of ground as water is removed.

E. Notify the Engineer of disturbance to the foundation soils caused by an interruption or inadequacy of the dewatering system.

F. Maintain on site, auxiliary equipment to operate the dewatering system continuously while excavations are opened below elevation of final grade.

3.06 TREATMENT OF WATER

A. Provide treatment methods to meet or exceed all applicable local, state, and federal discharge standards.

B. As discussed above, the potential for groundwater contamination exists, including but not limited to petroleum and pesticides. Contractor will provide appropriate treatment systems to address these contaminants and meet the appropriate discharge standards.

C. The Contractor will dispose of all appropriately treated discharge water into the on-site stormwater management area. Water must meet all applicable discharge limits and be sediment free prior to being discharged. Discharge limits are included as Appendix B to the Specifications. If it is determine that the effluent is not meeting the discharge limits or is not free of sediment, the Contractor will be responsible for making modifications to the treatment system(s) until the limits are met and/or the discharge is free of sediment.

3.07 DISPOSAL OF WATER

A. Discharge water in a manner that will not cause erosion, flooding, damage to existing facilities, completed Work or adjacent property, improved or otherwise.

B. In order to minimize sampling requirements under CTDEEP's General Permit for the "Discharge of Groundwater Remediation Wastewater Directly to Surface Water" discharge of dewatering effluent through one discharge point. Numerous collection conduits may be combined into one discharge point.

3.08 DISPOSAL OF ACCUMULATED SEDIMENT

A. When possible, accumulated sediment will be combined with polluted soils stockpiled in the Phase III area of the Site for re-use in that area.

B. If sediment cannot be re-used in the Phase III area of the Site, the Contractor will be responsible for disposal of the sediment at an appropriate off-site location. If required, the Contractor will be responsible for laboratory testing of the sediment as per the receiving facilities requirements.

3.09 REMOVAL

A. Remove all material and equipment from the site upon completion of dewatering operations.

B. Seal all dewatering wells upon completion of the dewatering by pressure injecting a grout capable of sealing the wells and preventing leakage.

END OF SECTION

CERTIFICATE OF DESIGN

Re: Contract Between

OWNER: _____
(Name)
and
CONTRACTOR: _____
(Name)
on
CONTRACT: _____
(Title)

_____ Dated:_____
(Number)

Contractor hereby certifies that_____
(Designer)

1. Is licensed or registered to perform professional engineering work in the state of

_____
(Location of Project)

2. Is qualified to design the_____
(Item)
specified in Section_____ of the subject contract;

3. Has designed_____before;

4. Has prepared the design in full compliance with the applications and requirements of Section_____ of subject contract including all applicable laws, regulations, rules and codes; and

5. The work has been signed and sealed pursuant to the applicable state law.

FOR: _____
(Contractor)

BY: _____
(Signature)

_____ Dated:_____
(Name and Title)

End of Section

Table 1
Groundwater Analytical Results
South Windsor, Connecticut

Monitoring Well	MW-1		MW-2		MW-3		MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	GWPC	SWPC
Sampling Date	8/24/2011	10/18/2011	8/24/2011	10/18/2011	8/24/2011	10/18/2011	10/18/2011	10/18/2011	10/18/2011	10/18/2011	10/18/2011	10/18/2011	10/18/2011		
Depth to Groundwater	7.15	4.10	11.82	8.02	12.11	8.70	5.11	10.64	9.95	13.10	14.40	12.50	14.11		
General Chemistry (mg/L)															
Total Pesticides	ND	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE
Total Metals (mg/L)															
Lead, Total	0.005 U	NA	0.005 U	NA	0.005 U	NA	NA	NA	NA	NA	NA	NA	NA	0.15	0.13
Semivolatile Organic Compounds (µg/L)															
Total SVOCs	ND	NA	ND	NA	ND	NA	NA	NA	NA	NA	NA	NA	NA	NE	NE
CT Extractable Total Petroleum Hydrocarbons (mg/L)															
ETPH-CT	0.094	0.075 U	**0.16**	0.091	**0.21**	0.075 U	0.075 U	0.075 U	**0.14**	0.087	0.075 U	0.075 U	**0.11**	0.1	NE

Notes:
NE - Criteria has not been established
U - Not detected above reported laboratory detection limit
SWPC - Surface Water Protection Criteria

Attachment A: Toxic and Hazardous Pollutants and Their Maximum Concentrations

All methodologies shall be approved in accordance with Title 40 Part 136 of the Code of Federal Regulations (40 CFR 136) and shall be capable of quantifying pollutant levels below the limits specified in Section 5(d) and this Attachment of this general permit and limits specified in an Approval of Registration issued pursuant to Section 3 of this general permit.

Volatile Organic Compounds

Combined Total of All Individual Compounds Shall Not Exceed 10 µg/l for all Discharges to Receiving Waters with a Water Quality Classification or Goal of A or SA
Combined Total of All Individual Compounds Shall Not Exceed 50 µg/l, **and** 1,1,2 Trichloroethane shall not exceed 42 µg/l for all Discharges to Receiving Waters with a Water Quality Classification or Goal of B or SB
MTBE Shall Not Exceed 70 µg/l

Total Petroleum Hydrocarbons

The Total Petroleum Hydrocarbons Shall Not Exceed 5.0 mg/l

Solids

Total Suspended or Settleable Solids – No Limit

Phthalate Esters

Phthalate Ester	Maximum Concentration
Bis(2-ethylhexyl)phthalate	**Bis(2-ethylhexyl)phthalate 5.9 µg/l** **Combined Total of All Phthalates Shall Not Exceed 100 µg/l**
Benzyl butyl phthalate	
Di-n-butyl phthalate	
Diethyl phthalate	
Dimethyl phthalate	
Di-n-octyl phthalate	

Base Neutral and Acid Extractables (BNA)

The Combined Total of All BNAs, Including Tentatively Identified Compounds, but Excluding Phenols* and PAHs* Shall Not Exceed 10.0 µg/l.

* Excluded Compounds Referenced Below

In addition, the following compounds shall not exceed:

BNA's (Excludes Phenol and PAHs)	Maximum Concentration (µg/l)
Benzidine	0.00054 µg/l
3,3 dichlorobenzidine	0.077 µg/l
Hexachlorobenzene	0.00077 µg/l

Phenols

Phenol	Maximum Concentration
2-sec-Butyl-4, 6-dinitrophenol (DNBP)	**Combined Total of All Phenols Shall Not Exceed 5.0 µg/l**
4-Chloro-3-methylphenol	
2-Chlorophenol	
Cresols (methyl phenols)	
2-Cyclohexyl-4, 6-dinitrophenol	
2,4-Dichlorophenol	
2,6-Dichlorophenol	
2,4-Dimethylphenol	
2,4-Dinitrophenol	
2-Methyl-4, 6-dinitrophenol	
2-Nitrophenol	
4-Nitrophenol	
Pentachlorophenol	
Phenol	
Tetrachlorophenols	
Trichlorophenols	
2,4,6-Trichlorophenol	

Polynuclear Aromatic Hydrocarbons (PAHs)

The Combined Total of All PAHs Shall Not Exceed 5.0 µg/l and the Specified Concentration Shall Not Be Exceeded.

PAH	Maximum Concentration
Acenaphthene	
Acenaphthylene	
Anthracene	
Benzo(a)anthracene	0.49 µg/l
Benzo(a)pyrene	0.49 µg/l
Benzo(b)fluoranthene	
Benzo(j)fluoranthene	
Benzo(k)fluoranthene	0.49 µg/l
Benzo(ghi)perylene	
Chrysene	
Dibenzo(a,h)acridine	
Dibenzo(a,j)acridine	
Dibenzo(a,h)anthracene	0.01 µg/l
H-Dibenzo(c,g)carbazole	
Dibenzo(a,e)pyrene	
Dibenzo(a,h)pyrene	
Dibenzo(a,i)pyrene	
Fluoranthene	
Fluorene	
Indeno(1,2,3-cd)pyrene	0.49 µg/l
3-Methylcholanthrene	
Naphthalene	
Phenanthrene	
Pyrene	

Organochlorine Pesticides

(For any maximum concentration that is below the method detection limit of the approved methodology, the maximum concentration shall be "below method detection")

Pesticide	Maximum Concentration (µg/l)
Aldrin	0.00014 µg/l
Alpha-BHC	0.013 µg/l
Beta-BHC	0.046 µg/l
Delta-BHC	1.0 µg/l
Gamma-BHC (Lindane)	0.06 µg/l
Chlordane (technical)	0.0022 µg/l
4,4'-DDD	0.00084 µg/l
4,4'-DDE	0.00059 µg/l
4,4'-DDT	0.00059 µg/l
Dieldrin	0.0042 µg/l
Endosulfan I	0.456 µg/l
Endosulfan II	0.456 µg/l
Endosulfan sulfate	0.50 µg/l
Endrin	0.002 µg/l
Endrin aldehyde	1.0 µg/l
Heptachlor	0.0063 µg/l
Heptachlor epoxide	0.003 µg/l

Chlorinated Herbicides

Herbicide	Maximum Concentration
2,4,-D	**Combined Total of 2,4-D plus 2,4-DB Shall Not Exceed 70 µg/l**
2,4-DB	
2,4,5-T	1.0 µg/l
2,4,5-TP (Silvex)	1.0 µg/l
Dicamba	1.0 µg/l

PCBs

PCB	Maximum Concentration
PCB-1016	**Combined Total of All PCBs Shall Not Exceed 0.1 µg/l and no individual compound shall exceed 0.00017 µg/l**
PCB-1221	
PCB-1232	
PCB-1242	
PCB-1248	
PCB-1254	
PCB-1260	
OTHER PCB's	

If other PCBs have been used or stored on-site or there is reason to believe they may be present, analyze each compound (congener) in addition to the seven listed PCB mixtures.

Metals analysis shall be conducted using methodologies approved in accordance with 40 CFR 136 which, whenever possible are capable of achieving limits of detection below the levels established below.

Metals	Maximum Concentration	
	10 to 1 Dilution	100 to 1 Dilution
Arsenic	0.021 µg/l	0.021 µg/l
Beryllium	2.6 µg/l	24.8 µg/l
Cadmium	10.0 µg/l	95.9 µg/l
Chromium	342 µg/l	1000 µg/l
Copper	48 µg/l	480 µg/l
Lead	9.8 µg/l	93.6 µg/l
Hexavalent Chromium	79.4 µg/l	79.4 µg/l

Metals	Maximum Concentration	
	10 to 1 Dilution	100 to 1 Dilution
Mercury	1.0 µg/l	9.7 µg/l
Nickel	235 µg/l	1000 µg/l
Selenium	40 µg/l	390 µg/l
Silver	5.0 µg/l	48 µg/l
Zinc	322 µg/l	1000 µg/l

Other Substances:

All analysis shall be conducted using methodologies approved in accordance with 40 CFR 136 which are capable of achieving limits of detection below the levels established below:

Pollutant	Maximum Concentration	
	10 to 1 Dilution	100 to 1 Dilution
Ammonia	1.5 mg/l	1.5 mg/l
Chlorine	0.9 mg/l	0.8 mg/l
Cyanide	43 µg/l	406 µg/l
Amenable Cyanide	43 µg/l	100 µg/l

Radioactivity:

Except as authorized in an Approval of Registration issued pursuant to Section 3(b)(1)(B)(iii) of this general permit, the concentration of radon in the discharge shall not exceed naturally occurring background concentration.

Discharge of wastewater impacted by any other radiological sources, or from sites specified in Section 3(b)(1)(B)(iii) of this general permit shall be conducted as authorized by an Approval of Registration issued pursuant to Section 3(b)(1)(B)(iii) of this general permit *and* with the applicable 10 CFR 50.36a "Technical specifications on effluents from nuclear power reactors" plus 10 CFR 20 Appendix B "Standards for Protection Against Radiation" and 40 CFR 190, "Environmental Radiation Protection Standards For Nuclear Power Operations".

Remedial Action Plan

14.5-acre portion of Map 7 Lot 1
625 Chapel Road
South Windsor, Connecticut

January 18, 2012

Prepared for:

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Project Manager
Capital Region Education Council
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Prepared by:

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Table of Contents

1. Executive Summary

This report outlines the Remedial Action Plan (RAP) that BETA Group, Inc. (BETA) has developed, and which the Capitol Region Education Council (CREC) will implement to address soil and groundwater contamination on a 14.5-acre portion of Map 7 Lot 1 in South Windsor, Connecticut (the Site, see Figure 1). The Site is located on the western side of Long Hill Road and the southern side of Chapel Road. Interstate 291 is just beyond the southern Site boundary. This property will soon be subdivided and addressed as 625 Chapel Road. Currently, the Site is undeveloped and consists of wooded and overgrown areas; a new school will be constructed at the Site beginning in 2012.

Investigations performed to date have identified five areas of soil with exceedances of the Connecticut Department of Energy & Environmental Protection's (CTDEEP's) Residential Direct Exposure Criteria (RDEC). Additionally, soils in an historically farmed area of the Site contain chlordane above the CTDEEP's Pollutant Mobility Criteria (PMC). Finally, extractable petroleum hydrocarbons (ETPH) in excess of the CTDEEP's GA Criteria have been identified in samples from four groundwater monitoring wells at the Site. Figure 2 depicts these areas and Section 3 details the investigations and contaminants found at the Site. Additionally, Tables 1 through 4 detail the laboratory analytical results from the investigations conducted at the Site. In January 2012, CREC entered into Voluntary Remediation program by submitting an Environmental Condition Assessment Form (ECAF) to CTDEEP in accordance with Section 22a-133x. This RAP has been developed to address the conditions presented in the ECAF.

In order to address the contaminants at the Site and in accordance with CTDEEP's regulations, this RAP includes the following elements:

- Excavation and off-site disposal of soil with concentrations of contaminants above the CTDEEP's RDEC;
- Excavation and on-site re-use of soil with concentrations of contaminants above the CTDEEP's PMC; and,
- No further action for the ETPH in groundwater since the contamination appears to be from an upgradient source.

Upon completion of the remedial activities at the Site, an LEP verification and report will be submitted to CTDEEP documenting that the parcel has been investigated in accordance with prevailing standards and guidelines and the remediation of the parcel has been performed in accordance with the RSRs.

2. Project Overview

BETA has prepared this RAP to present the plan for addressing contaminated soil and groundwater identified at the property on Long Hill Road in South Windsor, Connecticut (the Site, see Figure 1). BETA prepared this RAP following CTDEEP's regulations and industry standard practices. All aspects of this RAP have been and will be overseen by BETA's Connecticut Licensed Environmental Professional (LEP), Mr. Joseph R. McLoughlin II.

2.1 Limitations and Exceptions

While measures were taken to assess historical, surficial, and subsurface conditions at the Site it should be noted that subsurface soil and groundwater conditions are subject to natural processes that can vary over relatively short distances. Therefore, information pertaining to conditions at the Site are relative solely to the locations sampled during this investigation. Information relevant to the RAP is therefore based on conditions encountered in the field during the investigation as well as data compiled through analysis of soil samples. This report does not document compliance by present or past Site owners with federal, state, or local laws and regulations, nor does it claim that all environmental problems past, present, or otherwise have been detected.

2.2 Special Terms and Conditions

The accuracy of this RAP is based solely on the accuracy and completeness of the information reported. If additional information becomes available concerning the site that is not included in this report or the previous investigations at the Site, it should be made available to BETA so that the RAP can be re-examined and modified where applicable.

This RAP has been prepared on behalf of, and for the exclusive use of the Capital Region Education Council (CREC). BETA has retained a copy of this report. No additions or deletions are permitted without the written consent of BETA. This report herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of BETA.

3. Conceptual Site Model

Throughout the investigation of the Site, BETA has used the Conceptual Site Model (CSM) initially developed at the conclusion of the Phase I Environmental Site Assessment (ESA) and further refined using the results of the Phase II and Phase III ESAs. The initial CSM used the results of the Phase I ESA to identify Areas of Concern (AOCs) requiring further investigation. The following presents a summary of the findings from Phases I, II, and III.

3.1 Phase I Environmental Site Assessment

In June 2011, BETA conducted a Phase I ESA for the Site. The following summarizes the pertinent findings of the Phase I ESA:

- According to the historical information reviewed for this assessment, the southeastern portion of the Site was historically used for tobacco farming. BETA reviewed a "Phase IB Archaeological Reconnaissance Survey" report by Archaeological and Historical Services, Inc. (AHS) that included the Site area. This report indicated that a tenant house associated with the former tobacco farm formerly existed along Long Hill Road. AHS indicated the presence of foundation remnants approximately 100 feet west of Long Hill Road.

  According to AHS, this tenant house was constructed circa 1870 and reportedly burned prior to 1934. AHS excavated test pits in the vicinity of the observed foundation remnants and stated, "Coal, coal ash, and brick fragments were present in all artifact-bearing sediments around the foundation, but were not collected. A number of the artifacts were burned or melted, confirming that a serious fire had occurred, and supporting the local memory that the tenant house burned down."
- BETA observed foundation remnants consistent with the AHS report approximately 100 feet west of Long Hill Road (likely associated with the former tenant house) and approximately 500 feet west of Long Hill Road (likely associated with the former barn).
- BETA observed piles of dumped solid waste including an abandoned automobile gasoline tank, a pile of roofing shingles and asphalt, a pile of drain tiles, several piles of yard waste (dumped leaves and grass), and an area of automobile parts.
- BETA observed mounded soils in the western portion of the Site. It appeared, but could not be confirmed, that the mounds were constructed for drainage purposes.

In the Phase I ESA, BETA made the following conclusions and recommendations:

- The presence of solid waste at the Site including an automobile gasoline tank and car parts may pose a threat of release. Additionally, the reported presence of ash in soils near the former tenant house may indicate the potential for contaminants to exist in soils in this area.
- The former use of the southeast portion of the property for agricultural purposes may have involved the use of pesticides and/or herbicides. BETA did not encounter any information to confirm or refute this during the course of this Phase I ESA.
- A limited subsurface investigation should be performed to characterize the condition of surficial soils in the areas of solid waste dumping, the former tenant house and barn, in areas formerly used for agricultural purposes, and at the mounds observed in the western portion of the Site.
- Solid waste that BETA observed should be removed and properly disposed.

3.2 Phase II Environmental Site Assessment

In July 2011, BETA conducted a Phase II ESA of the Site that included the collection of seven surficial (0 to 2 feet or less) soil samples and two soil samples from test pits at the AOCs. Nine soil samples were submitted for laboratory analysis. Laboratory analysis of these soil samples did not identify concentrations of any contaminants that required immediate reporting to CTDEEP. However, five of the soil samples contained contaminants at concentrations above criteria established by CTDEEP in the Remediation Standard Regulations (RSRs):

- One soil sample (SS-1D) contained lead (760 milligrams per kilogram [mg/kg]) above the CTDEEP's Residential Direct Exposure Criteria (RDEC) of 500 mg/kg.
- One soil sample (SS-7) contained benzo(a)anthracene (1.0 mg/kg) equal to the CTDEEP's RDEC of 1 mg/kg.
- Two soil samples (SS-2A and SS-7) contained benzo(b)fluoranthene (both at 1.1 mg/kg) above the CTDEEP's RDEC of 1 mg/kg.
- Two soil samples (SS-3 and SS-4) contained chlordane (0.090 and 0.10 mg/kg, respectively) above the CTDEEP's GA Pollutant Mobility Criteria (PMC) of 0.066 mg/kg.

In addition to the above results, two soil samples contained concentrations of contaminants above the laboratory method detection limits but below the CTDEEP standards. The CTDEEP standards are used to differentiate between natural, polluted, and contaminated soils. CTDEEP defines "polluted" soil as "soil affected by a release of a substance at a concentration above the analytical detection limit [but below the applicable CTDEEP standards] for such substance." Contaminated soil is soil containing concentrations of contaminants above the applicable CTDEEP standards. As such, five of the sample locations indicate the presence of contaminated soil and two of the sample locations indicate the presence of polluted soils.

Based on the results of the Phase II ESA, BETA recommended a Phase III ESA to further evaluate the presence of contaminants (chlordane, lead, and PAHs) at the Site that exceed the CTDEEP standards.

3.3 Phase III Environmental Site Assessment

In August 2011, BETA conducted a Phase III ESA of the Site that included the collection 36 surficial (0 to 2 feet or less) soil samples, three soil samples from the soil borings, and three groundwater samples at the AOCs. Chlordane was detected in the samples from SS-23, SS-24, SS-25, SS-26, SS-27, SS-28, SS-29, SS-30, SS-31, SS-32, SS-33, SS-34, SS-35, SS-36, SS-37, SS-38, SS-39, SS-40, and SS-41 at concentrations ranging from 0.011 to 0.22 mg/kg. The RDEC for chlordane is 0.49 mg/kg and the GA PMC is 0.066 mg/kg; thus, the results from 15 of these samples exceed the GA PMC (the samples from SS-23, SS-29, SS-35, and SS-37 were below the GA PMC).

Laboratory analysis identified Extractable Petroleum Hydrocarbons CTETPH above the above the CTDEEP Groundwater Protection Criteria (GWPC) of 100 µg/L in the samples from MW-2 and MW-3.

Based on the results of the Phase III ESA, BETA recommended a Supplemental Phase III ESA to further evaluate the presence of contaminants (chlordane in soils and CTETPH in groundwater) at the Site that exceed the CTDEEP standards.

3.4 Supplemental Phase III Environmental Site Assessment

In October 2011, BETA conducted a Supplemental Phase III ESA of the Site that included the collection of surficial soil samples at sixteen locations (0-1 feet and 1-2 feet) for a total of 32 surficial samples, four soil samples from the soil borings, and ten groundwater samples. Laboratory analysis of these soil samples did not identify any concentrations of any contaminants or conditions that would trigger reporting under the CTDEEP's Significant Environmental Hazard Thresholds. Chlordane was detected in the samples from SS-25A 0-1', SS-31A, SS-38A, SS-42 0-1', SS-43, SS-45 0-1', SS-46 0-1', SS-47 0-1', SS-48 0-1', SS-49 0-1', SS-50 0-1', SS-51 0-1', SS-52, SS-53 0-1', and SS-54 0-1' at concentrations ranging from 0.028 mg/kg to 0.73 mg/kg. The GA PMC for chlordane is 0.066 mg/kg; thus, the results from 11 of these samples exceed the GA PMC (the samples from SS-25A 1-2', SS-42 1-2', SS-42 1-2', SS-43 1-2', SS-44 0-1', SS-44 1-2', SS-45 1-2', SS-46 1-2', SS-47 1-2', SS-48 1-2', SS-49 1-2', SS-50 1-2', SS-51 1-2', SS-53 1-2', SS-54 0-1', SS-54 1-2', MW-6 2-4', MW-7 2-4' and MW-10 2-4' were below the GA PMC). The chlordane results from SS-52 0-1' (0.51 mg/kg) and SS-55 1-2' (0.73 mg/kg) exceed the RDEC standard for chlordane (0.49 mg/kg). In the SS-52 1-2' sample the concentration of heptachlor epoxide (0.029 mg/kg) exceeds the GA PMC (0.02 mg/kg).

Laboratory analysis identified CTETPH above the above the CTDEEP GWPC of 100 µg/L in the samples from MW-6 and MW-10.

3.5 Areas of Concern

Over the course of the Phase II, Phase III, and the Supplemental Phase III ESAs, BETA collected a total of 75 surficial (0 to 2 feet or less) soil samples, two soil samples from test pits, seven soil samples from soil borings, and thirteen groundwater samples at the AOCs. Laboratory analysis of these soil samples did not identify any concentrations of any contaminants or conditions that would trigger reporting under the CTDEEP's Significant Environmental Hazard Thresholds. The following summarizes the nature and extent of contaminants identified by AOC:

- AOC-1: Historic farmed area in the southeastern portion of the Site. Two soil samples collected during the Phase II (SS-3 and SS-4) from this area contained chlordane (0.090 and 0.10 mg/kg, respectively) above the CTDEEP's GA PMC of 0.066 mg/kg. Additionally, one of the soil samples from this area (SS-4) contained lead (380 mg/kg) above the laboratory method detection limit. During the Phase III, BETA collected nineteen additional surficial samples and a 2-4 foot sample at sample location SS-4. Of these samples, fifteen of the nineteen surficial samples contained Chlordane above the GA PMC standard. The 2-4 foot sample did not contain chlordane above the laboratory method detection limit. As part of the Supplemental Phase III ESA, BETA collected surficial samples at sixteen locations. At each location a sample was collected from 0-1 foot and from 1-2 foot. Eleven of the 0-1 foot samples and one of the 1-2 foot sample exceeded the GA PMC criteria for chlordane. The 0-1 foot and 1-2 foot samples from SS-52 exceeded the RDEC of 0.49 mg/kg. Of the sixteen 1-2 foot samples submitted only three samples had results above laboratory detection limits. Based on these results, it appears that the historically farmed area (approximately 5.5 acres of the Site) has been impacted by chlordane in the upper one foot of soil with limited areas having been impacted to a depth of 2 feet.
- AOC-3: Former tenant house foundation area. A soil sample (SS-5) collected during the Phase II from this location contained lead and CTETPH above the laboratory method detection limits. During the Phase III, an approximately 400 square foot, 1 foot thick area of ash was identified west of the former tenant house. A sample of this ash, contained lead and PAHs above the laboratory method detection limits. Based on these results, approximately 12 cubic yards of polluted soil (ash) exists in this area.
- AOC-4: Former barn foundation area. A soil sample (SS-6) collected during the Phase II from this location contained CTETPH above the laboratory method detection limits. During the Phase III, BETA collected one additional surficial sample in the vicinity of SS-6. This sample contained CTETPH above the laboratory method detection limits.
- AOC-5: Abandoned gasoline tank location. A soil sample collected during the Phase II (SS-1D) from this location (beneath the tank) contained lead (760 milligrams per kilogram [mg/kg]) above the CTDEEP's RDEC of 500 mg/kg. During the Phase III, BETA collected six additional surficial samples in the vicinity of SS-1D and one 2-4 foot sample at SS-1D (MW-1 2-4'). The highest concentration of lead

from these seven samples was 75 mg/kg. Thus, based on this data, it appears that the lead impacted soil is limited to the immediate vicinity of the abandoned gasoline tank and does not extend deeper than 2 feet at this location.

- AOC-6: Automobile parts location. A soil sample (SS-2A) collected during the Phase II from this location contained benzo(b)fluoranthene (1.1 mg/kg) above the CTDEEP's RDEC of 1 mg/kg. During the Phase III, BETA collected four additional surficial samples in the vicinity of SS-2A and one 2-4 foot sample at MW-2. None of these samples contained benzo(b)fluoranthene above the laboratory method detection limit. Thus, based on this data, it appears that the benzo(b)fluoranthene impacted soil is limited to the immediate vicinity of the automobile parts.
- AOC-7: Urban fill pile. A soil sample (SS-7) collected during the Phase II from this location contained benzo(a)anthracene (1.0 mg/kg) equal to the CTDEEP's RDEC of 1 mg/kg and benzo(b)fluoranthene (1.1 mg/kg) above the CTDEEP's RDEC of 1 mg/kg. During the Phase III, BETA collected five additional surficial samples in the vicinity of SS-7A and one 2-4 foot sample at MW-2. None of these samples contained benzo(a)anthracene or benzo(b)fluoranthene above the laboratory method detection limit. Thus, based on this data, it appears that the benzo(a)anthracene or benzo(b)fluoranthene impacted soil is limited to the immediate vicinity of the urban fill pile..
- AOC-8: As part of the Phase III ESA, BETA identified Site groundwater as AOC-8. Laboratory analysis identified CTETPH above the laboratory method detection limits in all three groundwater samples and above the CTDEEP Groundwater Protection Criteria of 100 micrograms per liter (µg/L) in the samples from MW-2 (160 µg/L) and MW-3 (210 µg/L). During the Supplemental Phase III, ESA seven additional monitoring wells were installed. The seven new wells and the three previously installed wells were sampled for CTETPH. Laboratory analysis identified CTETPH above the laboratory method detection limits in four of the ten groundwater samples. Two of the samples were above the CTDEEP Groundwater Protection Criteria of 100 micrograms per liter (µg/L) in the samples from MW-6 (140 µg/L) and MW-10 (110 µg/L). No potential source area was identified at the Site during the Supplemental Phase III ESA. Since the concentrations of CTETPH identified in Site soils were well below the CTDEEP standards, the concentrations of CTETPH in the Site groundwater may be due to stormwater infiltration from the adjacent Interstate 290 or an off-site release of petroleum.

Tables 1 through 4 detail the laboratory analytical results from the investigations conducted at the Site. Based on these results, contaminated soil exists at AOCs 1, 5, 6, and 7. Polluted soil exists at AOCs 3 and 4. Contaminated groundwater exists at monitoring wells MW-2, MW-3, MW-6, and MW-10.

4. Soil Remediation

4.1 Planning and Preparation

As of the date of this RAP, a contractor has not been selected to conduct the remedial activities at the Site. The activities in this RAP will be included in the bidding documents for the construction project.

In order to ensure the safety of workers at the Site, BETA and the selected contractor will each prepare and adhere to separate but site-specific Health and Safety Plans (HASPs). Each HASP will address the identified contaminants of concern for the excavation work and will conform to the requirements of OSHA 1910.120 and all other applicable federal, state, and local laws, regulations, ordinances, and procedures. Each HASP will be revised, as needed, whenever new information about Site hazards is obtained. Appendix A contains BETA's HASP for the Site. The selected contractor will be responsible for preparing a HASP to cover their workers and activities at the Site.

All personnel performing Work in contaminated or hazardous areas will be fully trained in accordance with the OSHA 1910.120 and the HASPs. Both BETA and the selected contractor will thoroughly brief their on-site staff on anticipated hazards, safety equipment to be employed, safety practices to be followed, and emergency procedures and communications. The selected contractor shall have a medical monitoring surveillance program in place for all personnel in accordance with all applicable laws and regulations.

4.2 Remedial Objectives

Since a school will soon be constructed on the Site, the primary objective for soil remediation is compliance with CTDEEP's RDEC standards. The RDEC standards are protective of direct exposure to soils in a residential setting. Since students and staff would be at the Site for less time than they would at a residence, the RDEC provides a conservative protective standard for remediation of Site soils.

Additionally, since the Site is within a GA area, the CTDEEP's PMC has also been considered in the design of this RAP. As such, BETA has compared Site conditions to Section 22a-133k-2(c)(2)(C) which allows soils with pesticides above the GA PMC to be remediated to a level at which "the results of a mass analysis of such soil for a substance does not exceed the pollutant mobility criterion for such substance multiplied by ten" provided that "(aa) the release area and any portion thereof is located at least twenty-five feet from the nearest legal boundary of the parcel in the down gradient direction, (bb) no non-aqueous phase liquids are present in the release area" and "(cc) the water table is at least fifteen feet above the surface of the bedrock." With the exception of soil samples SS-52 0-1' and 1-2', none of the remaining chlordane results are greater than ten times the PMC. Based on investigations conducted at the Site, it is BETA's

opinion that the Site meets the three criteria listed above, and therefore, that remediation of the soils that contain chlordane above the GA PMC is not required.

4.3 Off-Site Soil Disposal – Contaminated Soil

Based on the results of the investigation at the Site, the following five areas of contaminated soil will be excavated and disposed of off-site. Figure 3 depicts these areas.

- AOC-1: For the area proximate to sample location SS-52, the excavation of approximately 20 cubic yards of chlordane impacted soil (greater than the RDEC) with confirmatory sampling will be required.
- AOC-3: Excavation of approximately 12 cubic yards of ash with confirmatory sampling.
- AOC-5: Excavation of approximately 3 cubic yards of lead-impacted soil with confirmatory sampling.
- AOC-6: Excavation of approximately 2 cubic yards of PAH-impacted soil with confirmatory sampling.
- AOC-7: Excavation of approximately 2 cubic yards of PAH-impacted soil with confirmatory sampling.

The following items detail the steps to be taken during the excavation in these five areas.

4.3.1 Preparation

BETA will pre-mark the five areas to be excavated. The Site contractor (to be selected during the forthcoming bidding process) will be responsible for contacting Call Before You Dig prior to initiating excavation activities.

4.3.2 Excavation

Each area will be excavated to the indicated depth. Since the ash is visually different from the surrounding soils, the extent of ash removal from AOC-3 will be guided by visual observations. Once native soils are reached in this area, excavation in this area will cease.

Care will be taken to prevent the loss or movement of contaminated soil at the Site. Equipment coming in contact with the impacted soils will be decontaminated before moving to the next area to be excavated. However, since each of the five areas of contaminated soil to be excavated is relatively small, the contractor will not be required to drive equipment through the contaminated areas, thus mitigating the likelihood of significant equipment decontamination. Decontamination will consist of, at a minimum, the physical removal of soil residue from the equipment. If contaminated soil residue remains after the physical removal, a washing process may be required to prevent contaminated soil from being moved to other portions of the Site.

4.3.3 Confirmatory Sampling

Upon reaching the limits of excavation at each area, BETA will collect confirmatory soil samples from each area. Samples will be collected as follows at each area:

- AOC-1: One sample from each sidewall and one bottom sample will be submitted for laboratory analysis of pesticides by EPA Method 8081.
- AOC-3: Samples from the sidewalls and bottom of the excavation will be collected and submitted for analysis of ETPH by the CTDEEP method and PAHs by EPA Method 8270. The number of samples will be dependent on the size and shape of the excavation; however, BETA anticipates a minimum of seven samples will be collected and analyzed from this area.
- AOC-5: One sample from each sidewall and one bottom sample will be submitted for laboratory analysis of total lead by EPA Method 6010.
- AOC-6: One sample from each sidewall and one bottom sample will be submitted for laboratory analysis of PAHs by EPA Method 8270.
- AOC-7: One sample from each sidewall and one bottom sample will be submitted for laboratory analysis of PAHs by EPA Method 8270.

The sample results will dictate the need for further excavation of soils. If needed, further excavation will proceed and sampling will be conducted in a manner similar to the above until sample results meet the remedial objectives (RDEC).

4.3.4 Stockpiling

The need for temporary on-Site stockpiling of contaminated soil will be dependent upon Site conditions and construction sequencing. However, if temporary stockpiling is necessary, the following provisions will apply:

- Excavated contaminated soil will be stockpiled out of the immediate work area in the designated location indicated on Figure 3, on 6-mil polyethylene sheeting. All stockpiled soils will be covered with 6-mil polyethylene sheeting at the end of every working day. Sheeting shall be properly secured such that it remains fully intact during inclement weather conditions. Additionally, stockpiles that will remain at the Site for an extended period of time (greater than one week) will be surrounded by silt fence.

- If necessary, contaminated soils will be segregated into separate stockpile areas to facilitate separate characterization, and subsequent off-site management. At this time and if necessary, excavated soil from AOCs 3, 5, 6, and 7 would be combined into one stockpile and excavated soil from AOC-1 would be stockpiled separately.

- All stockpiled soil shall be transported from the Site as soon as possible. In no case shall excavated contaminated soil remain stockpiled at the Site for more than 120 days from its excavation. In no event shall the volume of on-site stockpiled soil exceed 500 cubic yards.

4.3.5 Disposal of Contaminated Soil

Disposal of the contaminated soil from AOCs 1, 3, 5, 6, and 7 will be at a licensed facility that can accept soil with the concentrations of contaminants that have been detected. Selection of the disposal facility will be made in conjunction with the construction contractor to provide the most cost-effective option for the Site.

Contaminated soil will be containerized in DOT-approved containers and/or transported in DOT-approved vehicles. Containers or transport vehicles will be provided with appropriately sized polyethylene bladder bags and/or polyethylene liners that can be secured by duct tape or other appropriate means, prior to leaving the Site. In addition, loose soil, dusts and other deleterious materials shall be removed from containers and transport vehicles after loading and prior to leaving the Site.

Vehicles used for transportation of contaminated soil will be properly labeled and placarded as required for off-site transportation for conformance with federal, state, and local laws, regulations, ordinances, and procedures. Transporter vehicles used for the transportation of soil shall be covered, substance compatible, licensed, insured, and permitted pursuant to federal, state, and local laws, regulations, ordinances, and procedures. Vehicles departing the Site shall be properly logged to show the vehicle identification, driver's name, time of departure, destination, and approximate volume and content of material carried.

No contaminated materials shall leave the Site until the designated receiving facility has agreed in writing to accept the type and quantity of waste/soil to be shipped.

The contractor shall complete required manifests and other pertinent forms for proper transportation and disposal; BETA will review and CREC will sign all manifests. Signatures from the receiving location of materials transported off-site are required. The contractor will be held accountable for ensuring that requirements of the transporter and receiving disposal facility(ies) and federal, state, and local laws, regulations, ordinances, and procedures are complied with and properly documented.

Documentation will be included in the final report indicating that applicable laws have been satisfied and that contaminated soil has been successfully transported and received at the disposal facility(ies).

4.4 On-Site Soil Management

Based on the results of the investigation at the Site, soils containing chlordane above the PMC (AOC-1) and the polluted soils with ETPH above the laboratory method detection limit (AOC-4) will be managed and re-used on-site. The following items detail the steps to be taken during the excavation and on-site re-use of soil from this area.

4.4.1 Preparation

BETA will pre-mark the areas to be excavated. The Site contractor (to be selected during the forthcoming bidding process) will be responsible for contacting Call Before You Dig prior to initiating excavation activities.

Prior to the start of excavation of the chlordane-impacted or polluted soils, BETA will prepare for submission to CTDEEP by the Site owner a General Permit Registration Form for Contaminated Soil and/or Sediment Management (DEP-SW-GP-001). This form will be submitted prior to initiating the excavation of any of the polluted soils.

4.4.2 Excavation

Each area will be excavated to the indicated depth. Since the area to be excavated is large (5+ acres), it is anticipated that the excavation will take place in three phases (see Figure 3). During each phase, the top 12 to 18 inches (dependent upon the investigation analytical results) will be stripped from the area and stockpiled (see Section 4.4.4 below). Once confirmatory samples indicate the impacted soils have been removed, Site work can commence in the sampled area.

Care will be taken to prevent the loss or movement of polluted soil at the Site. Equipment coming in contact with the impacted soils will be decontaminated before moving to the next area to be excavated. Decontamination will consist of, at a minimum, the physical removal of soil residue from the equipment.

If polluted soil residue remains after the physical removal, a washing process may be required to prevent polluted soil from being moved to other portions of the Site. Where possible, washing activities will occur within AOC-1 and water will be allowed to infiltrate into the ground surface. If washing cannot occur within AOC-1 or wash water is expected to runoff out of AOC-1, a wash water collection system will be required. This system shall consist of a layer of 6-mil polyethylene sheeting on the ground surface configured with polyethylene sheeting covered berms to capture wash water direct it to a lower area. Upon collection in the lower area, the washwater shall then be pumped and allowed to infiltrate into the ground surface within AOC-1.

4.4.3 Confirmatory Sampling

Upon reaching the limits of excavation at each area, BETA will collect confirmatory soil samples from each area. Samples will be collected on an approximately 100 by 100 foot grid laid over each of the excavated areas. These dimensions have been determined to provide sample results at an approximate ratio of one sample per 500 cubic yards (assumed at a 12 to 18 inch depth). Samples will be submitted for laboratory analysis of pesticides by EPA Method 8081.

The sample results will dictate the need for further excavation of soils. If needed, further excavation will proceed and sampling will be conducted in a manner similar to the above until sample results meet the remedial objectives.

4.4.4 Stockpiling

To the extent possible, excavated polluted soil will be stockpiled within the limits of AOC-1 (see Figure 3). Soil stockpiled within this area will not require to be placed on or covered with polyethylene sheeting. Since these stockpiles may remain in AOC-1 for extended periods of time, they will be surrounded with silt fence and seeded with annual rye grass seed to prevent erosion of the pile(s). Stockpiles will be constructed with a maximum slope of 2:1.

If excavated polluted soils cannot be stockpiled within AOC-1 then these soils will be stockpiled on 6-mil polyethylene sheeting. These stockpiled soils will be covered with 6-mil polyethylene sheeting at the end of every working day. Sheeting shall be properly secured such that it remains fully intact during inclement weather conditions. Additionally, these stockpiles will be surrounded with silt fence.

4.4.5 On-Site Re-use

Polluted soil from AOCs 1 and 4 will be re-used as topsoil for sports fields within the areas that the soil originated from. Per CTDEEP policy, the soil will not be re-used in areas of the Site that have not contained similar or higher concentrations of the detected contaminants.

5. Groundwater

As part of the Phase III ESA, BETA identified Site groundwater as AOC-8. Laboratory analysis identified CTETPH above the laboratory method detection limits in all three groundwater samples and above the CTDEEP Groundwater Protection Criteria of 100 micrograms per liter (µg/L) in the samples from MW-2 (160 µg/L) and MW-3 (210 µg/L). During the Supplemental Phase III ESA, seven additional monitoring wells were installed. The seven new wells and the three previously installed wells were sampled for CTETPH. Laboratory analysis identified CTETPH above the laboratory method detection limits in four of the ten groundwater samples. Two of the samples were above the CTDEEP Groundwater Protection Criteria of 100 micrograms per liter (µg/L) in the samples from MW-6 (140 µg/L) and MW-10 (110 µg/L). No potential source area was identified at the Site during the Supplemental Phase III ESA. Since the concentrations of CTETPH identified in Site soils were well below the CTDEEP standards and no on-site source has been identified, the concentrations of CTETPH in the Site groundwater appear to be from an upgradient source.

The Supplemental Phase III ESA did not identify evidence of a significant release of petroleum to soils at the Site. Additionally, the water supply well receptor survey conducted in accordance with the CTDEEP guidance did not identify any drinking water wells within 500 feet down gradient of the Site. As such, it appears that an off-site source has caused the groundwater contamination at the Site. Therefore, pursuant to CTDEEP's August 1997 Policy on Upgradient Contamination, "a down gradient property owner is not responsible for remediating groundwater contamination flowing onto his or her property from another site, as long as the contamination is present solely as a result of the off-site source(s)."

6. Documentation and Closure

During all remedial activities at the Site, field notes will be made and a log will be kept to document the activities. BETA's LEP will direct all activities and make modifications as necessary.

Upon completion of the remedial activities at the Site including receipt of laboratory analytical results that meet the remedial objectives, an LEP verification and report will be prepared for submission to CTDEEP documenting that the parcel has been investigated in accordance with prevailing standards and guidelines and the remediation of the parcel has been performed in accordance with the RSRs. The report will document the remedial activities conducted at the Site and the results of confirmatory and disposal samples collected and analyzed. Certified weight slips for soil disposed of off-site will be included as an appendix.