



## ecology and environment engineering, p.c.

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### **BUFFALO CORPORATE CENTER**

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February 22, 2013

Mr. David Chiusano, Senior Project Manager  
New York State Department of Environmental Conservation  
Division of Environmental Remediation  
Remedial Bureau E  
625 Broadway, Albany, New York 12233-7016

Re: Final Engineering Report - BB&S Treated Lumber Corporation Site, Town of  
Southampton, Suffolk County, New York (NYSDEC Site No. 152123)

Dear Mr. Chiusano:

Ecology and Environment Engineering, P.C. (EEEPC) is pleased to provide the Final Engineering Report (FER) for the remedial construction at the BB&S Treated Lumber Site, Town of Southampton, Suffolk County, New York.

Enclosed are four hard copies of the final report and one electronic copy per your request. A copy has also been posted on EEEPC's FTP site. Access to the FTP site is at: <ftp://ftp.ene.com>. The user name is: **BBSLumberFTP** and password is: **Ns49Cc**.

If you have comments or questions regarding the FER, please contact me at 716-684-8060.

Very Truly Yours,  
**Ecology and Environment Engineering, P. C.**

Michael G. Steffan  
Project Manager

cc: T. Heins, EEEPC – Buffalo, w/o attachments  
CTF- EN-003074-0005-03TTO

**BB&S Treated Lumber Corporation Site  
Town of Southampton  
Suffolk County, New York**

**Final Engineering Report**

**Remedial Action Contract D007631  
NYSDEC Superfund Standby Contract  
NYSDEC Site Number: 152123**

**February 2013**

**Prepared for:**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION**  
Division of Environmental Remediation  
Remedial Bureau E  
625 Broadway  
Albany, New York 12233-7017

**Prepared by:**

**ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.**  
368 Pleasant View Drive  
Lancaster, New York 14086

# ENGINEER'S CONSTRUCTION CERTIFICATION

I, Gerald A. Strobel, certify that I am currently a New York State-registered professional engineer. I had primary, direct responsibility for the implementation of the subject construction program and certify that the Remedial Action of the BB&S Treated Lumber Site (NYSDEC Contract Number D007631) was completed in substantial compliance, as described in this report, with the approved plans and Remedial Construction Contract Documents entitled *BB&S Treated Lumber Corporation Site, Number 1-52-123, Town of Southampton, Suffolk County, New York, prepared by AECOM Technical Services Northeast, Inc.*, dated November 2009, and Addendum Number 1, entitled *BB&S Treated Lumber Corporation Site Remedial Construction Addendum Number 1*, dated January 19, 2010. A minor amount of remediation remains to be completed as described in Section 7.7.1 of this report.

Signature: \_\_\_\_\_



Gerald A. Strobel, P.E.  
Program Director

Date: \_\_\_\_\_

2-22-13

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## List of Abbreviations and Acronyms

AECOM	AECOM Technical Services Northeast, Inc.
ALTA	American Land Transfer Association
AOC	Area of Concern
Amended ROD	Amended Record of Decision
BB&S	Best Building and Supply Treated Lumber Site
BGS	Below Ground Surface
CAMP	Community Air Monitoring Program
CAP	Contractor's Application for Payment
CCA	Chromated Copper Arsenate
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Change Order
COC	Contaminants of Concern
CPM	Critical Path Method
CRZ	Contamination Reduction Zone
DER	Division of Environmental Remediation (NYSDEC)
DOR	Daily Observation Report
DUSR	Data Usability Summary Report
EEEP	Ecology and Environment Engineering, P.C.
ELAP	Environmental Laboratory Accreditation Program
EQNE	EQ Northeast., Inc.
ERP	Environmental Restoration Program
ESD	Explanation of Significant Differences
ETNE	Earth Tech Northeast, Inc.
EnviroTrac	EnviroTrac Ltd.
FER	Final Engineering Report
GC/MS	Gas Chromatography/Mass Spectroscopy

## List of Abbreviations and Acronyms (cont.)

gal	gallons (US)
gpm	gallons per minute
GTI	Groundwater Technology, Inc.
HDPE	High-density polyethylene
HAZWOPER	Hazardous Waste Operations and Emergency Response
IRM	Interim Remedial Measure
KW	Kilowatt
LF	Linear Feet
MBE/WBE	minority-/women-owned business enterprise
mg/kg	milligrams/kilogram
MPI	Malcolm Pirnie, Inc.
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NIOSH	National Institute for Occupational Safety and Health
NTP	Notice to Proceed
NYCRR	New York Codes Rules and Regulations
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
NYSDOT	New York State Department of Transportation
NYSERP	New York State Environmental Restoration Program
NYSOSC	New York State Office of State Comptroller
OSHA	Occupational Safety and Health Administration
PAH	Polycyclic Aromatic Hydrocarbon
PCB	Poly Chlorinated Biphenyl
PCO	Proposed Change Order
pdf	personal document file
PDI	Pre Design Investigation
pH	power of hydrogen
PM	Project Manager
ppb	parts per billion
PPE	Personal Protective Equipment
ppm	parts per million

## List of Abbreviations and Acronyms (cont.)

ppt	parts per trillion
psi	pounds per square inch
QA	Quality Assurance
QC	Quality Control
QAO	Quality Assurance Officer
QAPP	Quality Assurance Project Plan
RAO	Remedial Action Objective
RAP	Remedial Action Plan
RDWP	Remedial Design Work Plan
RFA	RCRA Facility Assessment
RCRA	Resource Conservation and Recovery Act
RFI	Request for Further Information
RI	Remedial Investigation
RI/RFI	Remedial Investigation/RCRA Facility Investigation
RO	Reverse Osmosis
ROD	Record of Decision
SAP	Sampling and Analysis Plan
SCDHS	Suffolk County Department of Health Services
SCO	Soil Cleanup Objective
SGC	Standards, Criteria and Guidance
sHASP	Site-specific Health and Safety Plan
SPDES	State Pollution Discharge Elimination System
SSO	Site Safety Officer
SVOC	Semi-Volatile Organic Compound
SWMF	Solid Waste Management Facility
SWMU	Solid Waste Management Unit
T&M	Time and Material
TAL	Target Analyte List
TAGM	Technical and Administrative Guidance Memorandum
TAT	Turnaround Time
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	Treatment, Storage, and Disposal Facility
TSCA	Toxic Substances Control Act

## **List of Abbreviations and Acronyms (cont.)**

ULSD	Ultra-Low-Sulfur Diesel
USEPA	U.S. Environmental Protection Agency
USGS	United States Geological Survey
VOC	Volatile Organic Compound
VRQ	Vendor Responsibility Questionnaire

# 1

## Background and Site Description

This Final Engineering Report (FER) provides information and details on the completion of the remedial construction work performed by EQ Northeast, Inc. (EQNE) and EnviroTrac, Ltd. (EnviroTrac) at the Best Building and Supply (BB&S) Treated Lumber Corporation site, New York State Department of Environmental Conservation (NYSDEC) Site No. 152123. The work was completed under Remedial Action Contract D007631 between NYSDEC and EQNE. Additional Standby Callout support services for remedial work beyond the Remedial Action Contract were provided by EnviroTrac. Ecology and Environment Engineering, P.C. (EEEEPC) provided engineering services during remedial construction for this work from February 2010 to April 2012.

### 1.1 Site Location and Description

The BB&S site is located at 1348 Speonk-Riverhead Road, in the Town of Southampton in eastern Suffolk County, Long Island, New York; approximately 1.5 miles north of the Hamlet of Speonk (see Figure 1-1). The site is located in a rural area that is part of the Central Pine Barrens Preserve (Pine Barrens).

Homes and businesses are located within a half-mile of the site, including south of the site in the general direction of groundwater flow (see General Location Map Figure 1-2). Some homes and businesses downgradient of the site still use groundwater from private wells, which is obtained primarily from the Upper Glacial Aquifer, a highly transmissive sand and gravel aquifer. The Upper Glacial Aquifer is underlain by the Gardiners Clay unit to the south of the site, generally at depths of approximately 130 to 150 feet below ground surface (bgs) or greater.

From the early 1980s to 1996, the BB&S site operated as a lumber treatment and storage facility. Lumber was pressure treated on-site using a chromated copper arsenate (CCA) solution. A flame-proofing solution containing zinc oxide was also used for a time at the site to treat lumber. In May 2009, the lumberyard ceased operations and filed for Chapter 11 bankruptcy. Prior to remediation, the approximately 10-acre site was leased by the property owner to store construction office trailers.

CCA is listed as a hazardous waste under 6 NYCRR Part 371 when the solution is spent or disposed of without treatment (waste code number F035). Releases of CCA to groundwater resulted from leakage from the collection sumps and surface spills. Spills penetrating through cracks in the concrete pad floors and foundation

walls most likely account for the contamination present in soils in the vicinity of the former Treatment and Drip Pad Buildings and in the on-site drainage ditch. Soil contamination had been previously identified by sampling and analysis by previous consultant investigations (see Section 1.2). CCA-derived contaminants were detected off-site on the west side of Speonk-Riverhead Road, within the Pine Barrens, across from a site drainage culvert. The presence of contamination in off-site soils indicates that surface discharges or spills had occurred in the past. Drippings from the storage of freshly treated lumber most likely account for soil contamination in the area east of the former CCA Treatment and Drip Pad Buildings in the on-site lumberyard storage area.

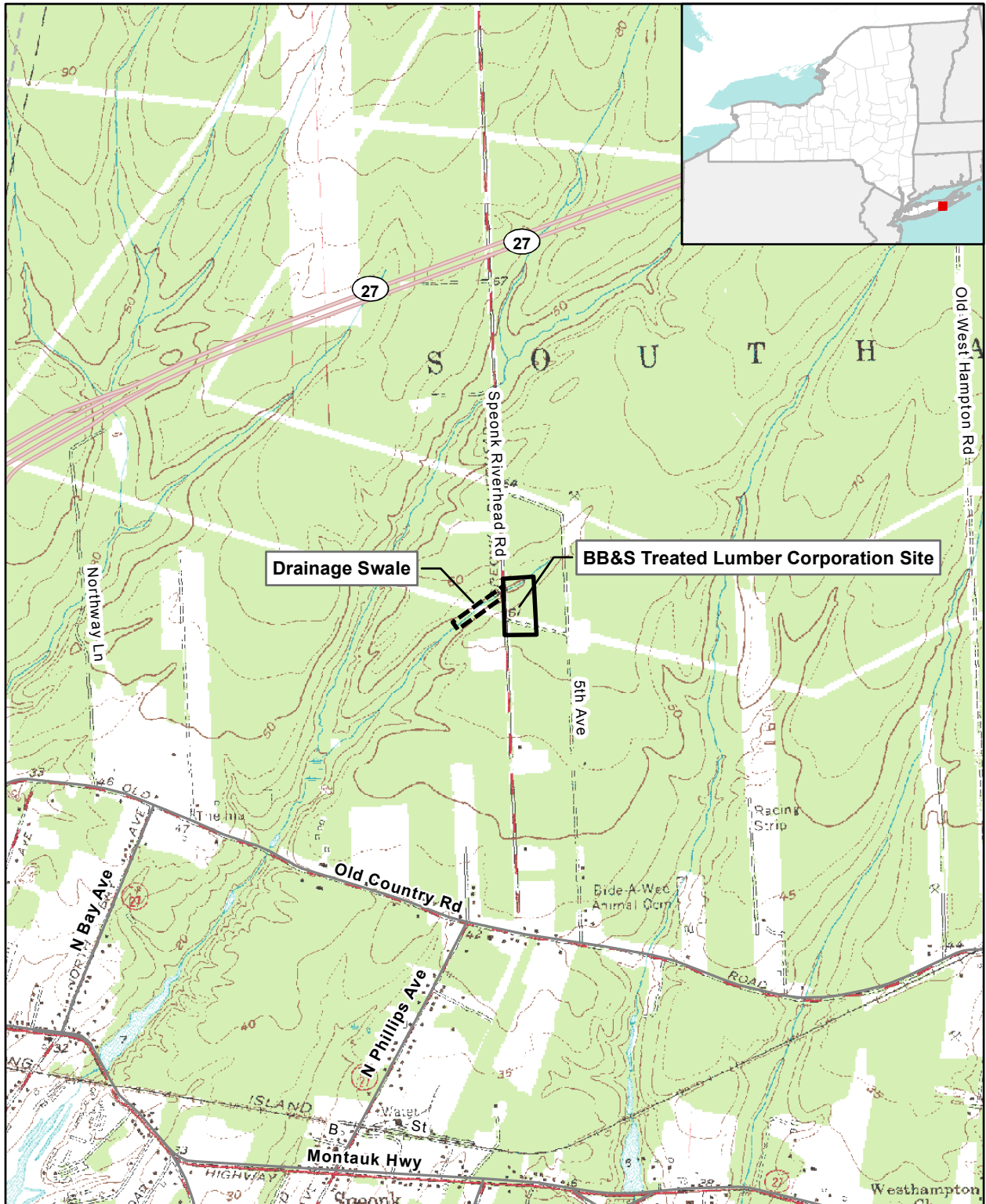
## **1.2 Site Investigations and Remedial History**

In April 1985, the Suffolk County Department of Health Services (SCDHS) sampled water supply wells at the BB&S site. The analytical results for these samples indicated that arsenic and chromium levels in the groundwater exceeded the New York State Drinking Water Standards (SCDHS 1985; NYSDOH 2011). Subsequently, BB&S hired Groundwater Technology, Inc. (GTI) in July 1985 to investigate and remediate the site. Numerous progress reports were generated by GTI for the investigation, but no official report was released.

Based on the results of its investigation, GTI installed a network of on-site and off-site groundwater monitoring wells and performed groundwater monitoring from July 1985 to August 1987. GTI then installed groundwater extraction wells and used the wells to pump and treat groundwater at the site from 1987 to 1996. GTI also installed a pilot-scale reverse osmosis (RO) treatment system at the site, which began operating in August 1987. The treatment system required continual maintenance due to the buildup of bacteria on the membranes, and the system's effluent chronically exceeded the State Pollution Discharge Elimination System (SPDES) discharge limit for hexavalent chromium. Consequently, the RO treatment system was shut down in 1995. NYSDEC revoked BB&S's SPDES discharge permit in February 1996 due to noncompliance with the permit's effluent discharge limits.

Based on the levels of soil and groundwater contamination present at the site, NYSDEC placed the BB&S Site on the New York State Registry of Inactive Hazardous Waste Disposal Sites in 1993.

NYSDEC initially negotiated with BB&S to have the company fund and perform a Remedial Investigation/Feasibility Study (RI/FS), but BB&S declined to perform additional investigations. Therefore, Malcolm Pirnie, Inc. (MPI) was contracted by NYSDEC under Work Assignment No. D002852-15 to perform an RI/FS to develop remedial alternatives for the BB&S site. MPI prepared and issued a work plan in 1996, and the RI report was prepared and issued to NYSDEC in June 1998 (MPI 1998).







-  BB&S Treated Lumber Site
-  Drainage Swale
-  Secondary Road
-  Local Road

Figure 1-1  
**Site Location Map**  
 BB&S Treated Lumber Corporation Site  
 Suffolk County, New York

NYSDEC Site # 152123



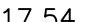

0 0.125 0.25 0.5  
 Miles







LEGEND:

-  MONITORING WELL LOCATION
-  19 GROUNDWATER CONTOUR
-  17.54 GROUNDWATER ELEVATION
-  GROUNDWATER FLOW DIRECTION

 BB&S TREATED LUMBER SITE

LEGEND:

THE ATTACHED AERIAL PHOTOGRAPHY WAS OBTAINED FROM THE NEW YORK STATE OFFICE OF CYBER SECURITY. THE FLYOVER WAS COMPLETED IN 2010. (SUFFOLK COUNTY ORTHO-IMAGERY 4BAND6inch).

SOURCE: ECOLOGY AND ENVIRONMENT ENGINEERING, P.C.  
BB&S MONITORING EVENT #1, APRIL 2012.

APPROXIMATE  
SCALE IN FEET

0 600 1200 1800

FIGURE 1-2

GENERAL LOCATION MAP  
BB&S TREATED LUMBER CORPORATION SITE  
TOWN OF SOUTHAMPTON, SUFFOLK COUNTY, NY



## **1 Background and Site Description**

During the course of its RI field investigations, MPI developed approaches to the remediation of contaminated groundwater and surface soils and long-term monitoring of the BB&S site. The FS was performed to evaluate feasible remedial alternatives that would provide reliable, long-term protection of human health and the environment in a cost-effective manner. The FS report was issued to NYSDEC in August 1999 (MPI 1999) and recommended surface soil and groundwater remediation.

After public comments on the proposed remedial plans for the BB&S Site were considered, a remedial action plan (RAP) was selected and documented in a Record of Decision (ROD), which was issued on February 25, 2000 (NYSDEC 2000). The ROD selected the following:

- Installation of extraction wells on- and off-site to capture the plume of contaminated groundwater. The collected groundwater would be piped back to the BB&S Site, where a treatment system in a new building would be constructed.
- Excavation of soil on-site and off-site within the drainage swale extending southwest of Speonk-Riverhead Road contaminated above the limits protective of groundwater. Excavated soils would be brought into the lumberyard and treated on-site in a temporary plant by solidification / stabilization. Treated residues would be placed on site and covered with clean soil and/or the new building or pavement. The excavated areas would be backfilled with clean soil and re-seeded.
- A long-term monitoring program would be instituted. The program would consist chiefly of periodic sampling of existing on-site monitoring wells and new off-site sentinel wells.
- As a contingency plan, any existing household or business in the vicinity of the site whose water supply becomes impacted by chromium or other contaminants shown to have originated from this site would have water treatment installed at the point of use.

A detailed description of the remedy selected in the original ROD is provided in Section 2.1.

In 2000, a preliminary design investigations (PDI) work assignment was issued by NYSDEC to Earth Tech Northeast, Inc. (ETNE). The purpose of the PDI was to gather additional data and information necessary to complete the design of the selected remedial actions to address soil and groundwater contamination at the site. The PDI was performed in accordance with the approved Pre-design Study Work Plan and the approved Pre-design Study Work Plan – Amendment 1. The initial field work was performed from April 2001 through April 2003 and included shallow soil sampling and profiling of the groundwater chromium plume.

In the summer of 2003, work was suspended while NYSDEC negotiated with BB&S after the company expressed an interest in implementing a remedy at the site. The negotiations failed, and in February 2005, NYSDEC resumed its plan to design and implement the remedy. A majority of the ETNE PDI field work was completed between September 2005 and April 2006. AECOM Technical Services, Inc. (AECOM, formerly Earth Tech Northeast, Inc.) issued the PDI report to NYSDEC in March 2007 (AECOM 2007). The PDI report described investigation activities conducted along with the data necessary to complete a remedial design (RD).

In November 2007, AECOM was issued a work assignment from NYSDEC to prepare a remedial design work plan (RDWP) for supplemental PDI work needed to complete the RD. The supplemental PDI activities included an assessment of the existing groundwater treatment system installed by GTI in 1987, sampling of on-site and off-site soils, installation and sampling of four sentinel multi-level groundwater monitoring wells, surveying and sampling of existing private water supplies, a literature review to identify available technologies suitable for treating contaminated soil on-site, bench-scale testing of the selected treatment options, and development of plans and specifications required for competitive bidding on the cleanup remedy. The additional pre-design activities were completed between May and September 2008. AECOM's supplemental PDI report was issued to NYSDEC in July 2009 (AECOM 2009a).

### **1.3 Selection of the Site Remedy**

Based on the results of the supplemental PDI, AECOM, in conjunction with NYSDEC, evaluated the proposed revised remedial alternatives and an amended remedy for the site was selected in the February 2000 ROD.

In July 2009, a public meeting and comment period was announced to propose amendments to the previously approved ROD of February 2000. Public comments proposed changes to the original ROD in the form of (1) removal of additional impacted soils, (2) development of a long-term site management plan, and (3) the imposition of an institutional control in the form of an environmental easement to control soil contamination remaining adjacent to and beneath site buildings. Based on the results of the second FS and PDI, as well as the public comments, the original ROD was officially amended in October 2009 (NYSDEC 2009). Details regarding the differences between the remedy presented in the original ROD and the remedy presented in the Amended ROD are provided in Section 2.2 of this FER.

Subsequently, the final evaluation of the selected site remedy was completed as a Supplemental FS, and a report was issued to NYSDEC in October 2009 (AECOM 2009b). Upon issuance of the supplemental FS report, AECOM was directed to prepare the final design specifications and contractor bid documents. The completed set of Contract Documents, including plans, specifications, limited site da-

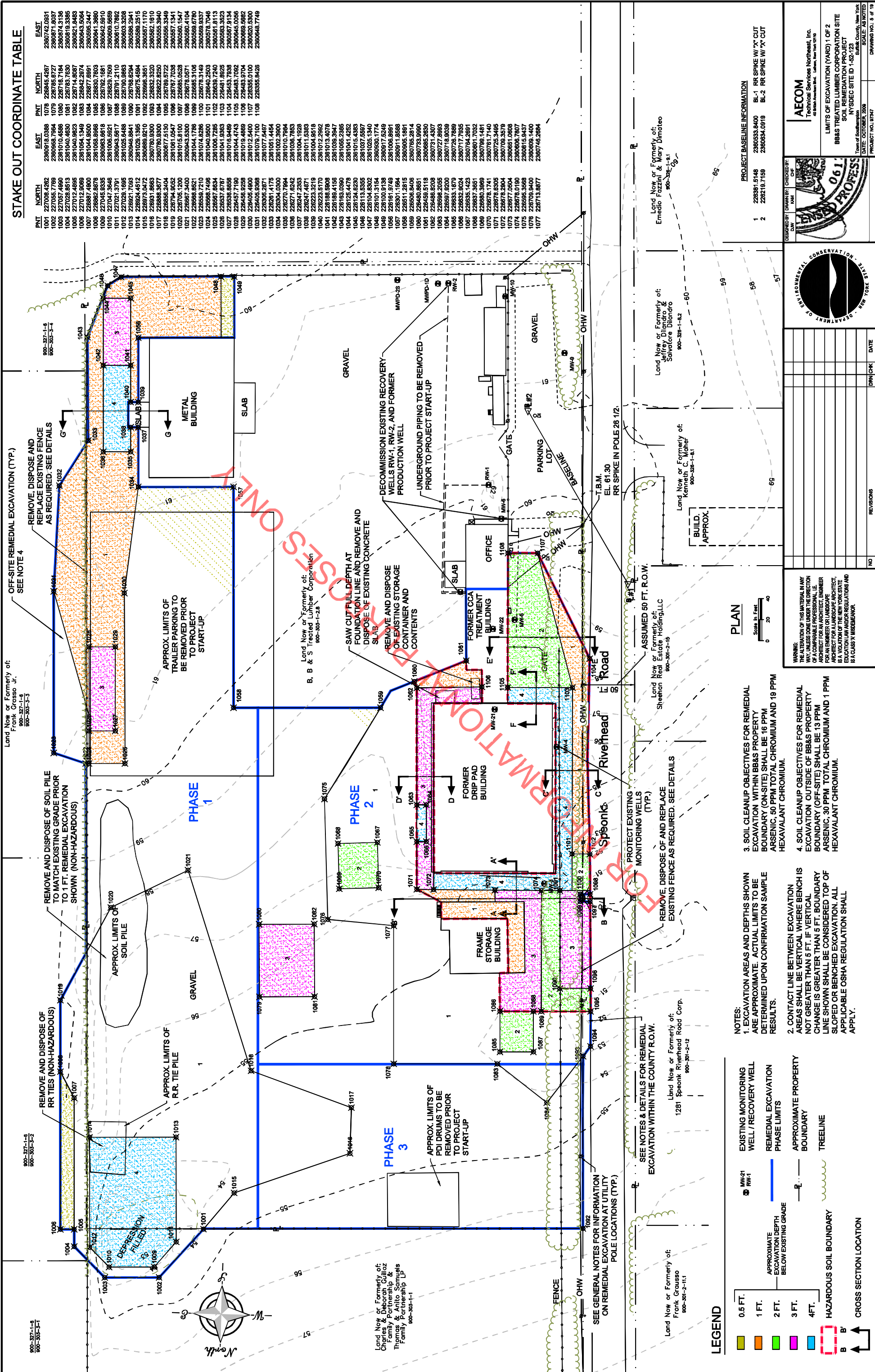
ta, and bidding and contract requirements, were delivered to NYSDEC in November 2009 (AECOM 2009c). A part of those deliverable documents included the design engineer's estimate of construction. A copy of the engineer's estimate is included in Appendix A. The bid package was used by NYSDEC to competitively select a contractor to complete the remedial construction in accordance with the Amended ROD.

#### **1.4 Remedial Design and Contract Documents**

The RD for the BB&S Treated Lumber Corporation Site remedial project subsequently developed by AECOM for NYSDEC detailed the size, scope, and character of the site remediation. The RD combined information from the ROD and Amended ROD, the RI/FS, and additional data gathered during PDIs into a set of construction documents suitable for the competitive bidding process. Identification of the on-site and off-site boundaries and the limits of the proposed remedial work phases are shown on Figure 1-3 (AECOM Contract Drawing 5 of 19) and Figure 1-4 (AECOM Contract Drawing 6 of 19).

The services required for the remedial contract included the excavation and off-site disposal of approximately 10,400 cubic yards of non-hazardous soils and 8,000 cubic yards of hazardous soils contaminated with inorganic compounds from the BB&S site, a road-crossing culvert, and a downgradient drainage ditch. Clean backfill and restoration elements completed the balance of the scope of work. In addition, remediation and improvements were required of the three on-site buildings to immobilize the contamination beneath each.





STAKE OUT COORDINATE TABLE

PNT	NORTH	EAST	PNT	NORTH	EAST
1001	227008.4262	2380918.0388	1076	228845.4267	2380742.0831
1002	227008.4262	2380968.7964	1077	228795.6727	2380971.8037
1003	227008.4262	2381010.4596	1080	228716.7184	2380974.3136
1004	227008.4262	2381040.4630	1081	228783.7630	2380974.3136
1005	227012.4886	2381040.4630	1082	228714.8087	2380971.8037
1006	227012.4886	2381054.1349	1083	228642.2874	2380971.8037
1007	227012.4886	2381054.1349	1084	228642.2874	2380971.8037
1008	227012.4886	2381054.1349	1085	228642.2874	2380971.8037
1009	227012.4886	2381054.1349	1086	228642.2874	2380971.8037
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1011	227012.4886	2381054.1349	1088	228642.2874	2380971.8037
1012	227012.4886	2381054.1349	1089	228642.2874	2380971.8037
1013	227012.4886	2381054.1349	1090	228642.2874	2380971.8037
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1016	228924.4512	2381025.1395	1093	228675.4584	2380988.2515
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1121	228924.4512	2381025.1395	1198	228675.4584	2380988.2515
1122	228924.4512	2381025.1395	1199	228675.4584	2380988.2515
1123	228924.4512	2381025.1395	1200	228675.4584	2380988.2515

PROJECT BASELINE INFORMATION			
1	22891.5148	2380533.8400	BL-1 RR SPIKE W/ "X" CUT
2	228216.7159	2380534.0919	BL-2 RR SPIKE W/ "X" CUT

**AECOM**  
Technical Services Northeast, Inc.  
Civil/Environmental - Remediation  
LIMITS OF EXCAVATION (VAR) 1 OF 2  
BBAS TREATED LUMBER CORPORATION SITE  
SOIL REMEDIATION PROJECT  
NYSDEC SITE ID - 452-123  
Town of Southampton  
Suffolk County, New York  
DATE: OCTOBER, 2008  
SCALE: AS NOTED  
PROJECT NO. 9747  
DRAWING NO. 6 OF 19

**DESIGNED BY:** **DRAWN BY:** **CHECKED BY:**

**NO.** **REVISIONS** **DATE**

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- NOTES:**
- EXCAVATION AREAS AND DEPTHS SHOWN ARE APPROXIMATE. ACTUAL LIMITS TO BE DETERMINED UPON CONFIRMATION SAMPLE RESULTS.
  - CONTACT LINE BETWEEN EXCAVATION AREAS SHALL BE VERTICAL WHERE BENCH IS NOT GREATER THAN 5 FT. IF VERTICAL CHANGE IS GREATER THAN 5 FT. BOUNDARY LINE SHOWN SHALL BE CONSIDERED TOP OF SLOPED OR BENCHMARK EXCAVATION. ALL APPLICABLE OSHA REGULATION SHALL APPLY.
  - SOIL CLEANUP OBJECTIVES FOR REMEDIAL EXCAVATION WITHIN BBAS PROPERTY BOUNDARY (ON-SITE) SHALL BE 16 PPM ARSENIC, 50 PPM TOTAL CHROMIUM AND 19 PPM HEXAVALENT CHROMIUM.
  - SOIL CLEANUP OBJECTIVES FOR REMEDIAL EXCAVATION OUTSIDE OF BBAS PROPERTY BOUNDARY (OFF-SITE) SHALL BE 13 PPM ARSENIC, 30 PPM TOTAL CHROMIUM AND 1 PPM HEXAVALENT CHROMIUM.

**LEGEND**

0.5 FT.

1 FT.

2 FT.

3 FT.

4 FT.

HAZARDOUS SOIL BOUNDARY

B

B'

CROSS SECTION LOCATION

EXISTING MONITORING WELL / RECOVERY WELL

REMEDIAL EXCAVATION PHASE LIMITS

APPROXIMATE PROPERTY BOUNDARY

TREELINE

MW-21

RW-1

APPROXIMATE EXCAVATION DEPTH BELOW EXISTING GRADE

Figure 1-3 Work Zones - On-site Remedial Area (AECOM Drawing 5 of 19)

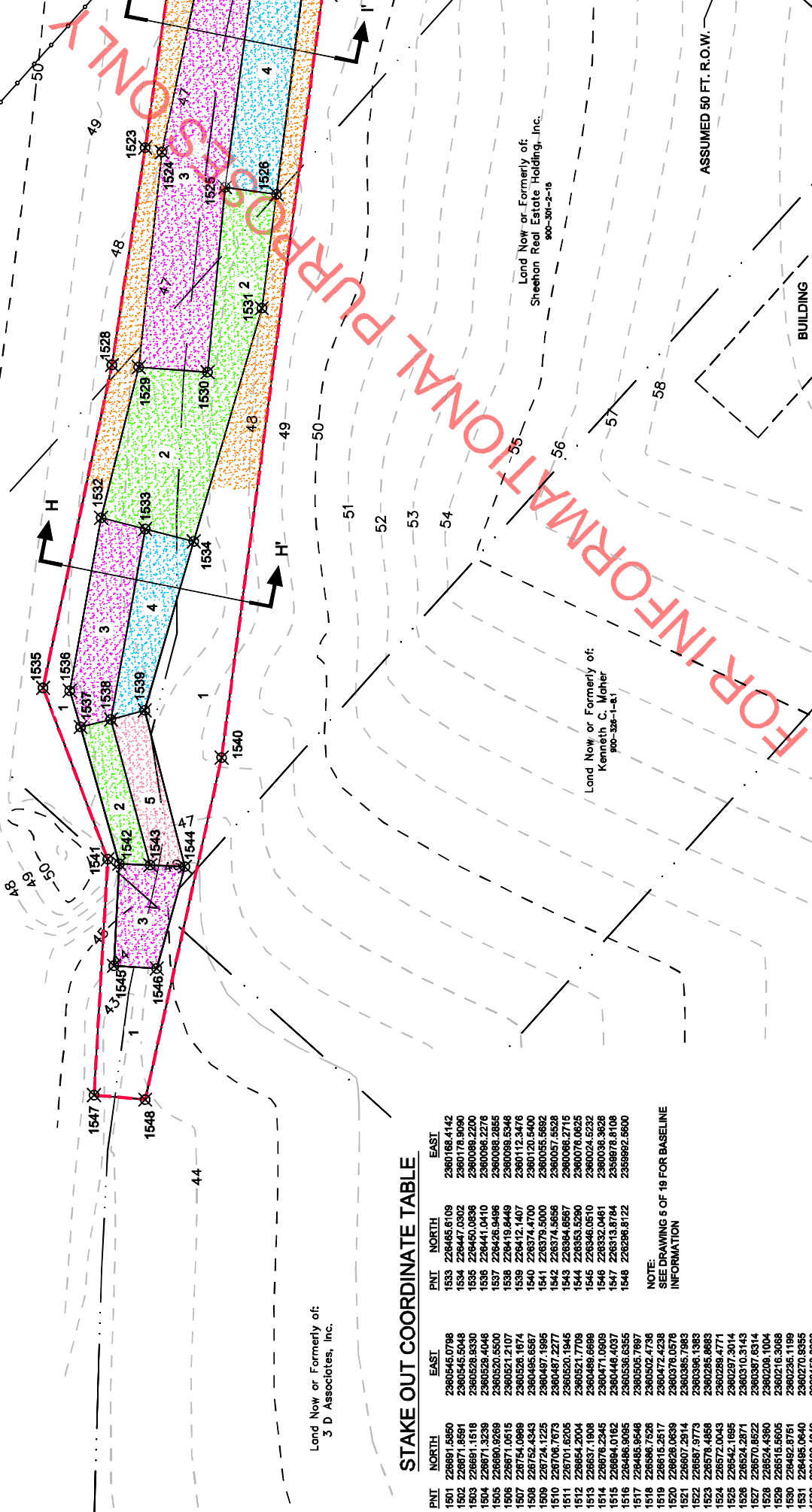


900-326-1-6



Land Now or Formerly of:  
1281 Speok Riverhead Road Corp.  
900-301-3-12

Lot Cleared for Development "2008"



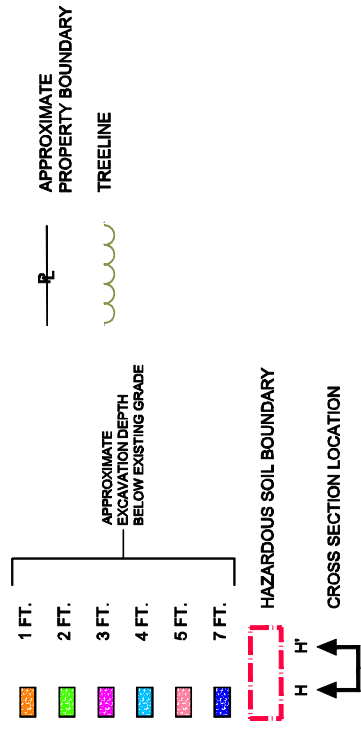
Land Now or Formerly of:  
3 D Associates, Inc.

STAKE OUT COORDINATE TABLE

PNT	NORTH	EAST	PNT	NORTH	EAST
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1502	226671.8591	2360546.5048	1534	226447.0302	2360178.9090
1503	226691.1518	2360528.9330	1535	226450.0336	2360069.2200
1504	226671.3239	2360528.9330	1536	226450.0336	2360069.2200
1505	226671.3239	2360528.9330	1537	226450.0336	2360069.2200
1506	226671.3239	2360528.9330	1538	226450.0336	2360069.2200
1507	226671.3239	2360528.9330	1539	226450.0336	2360069.2200
1508	226671.3239	2360528.9330	1540	226450.0336	2360069.2200
1509	226671.3239	2360528.9330	1541	226450.0336	2360069.2200
1510	226671.3239	2360528.9330	1542	226450.0336	2360069.2200
1511	226671.3239	2360528.9330	1543	226450.0336	2360069.2200
1512	226671.3239	2360528.9330	1544	226450.0336	2360069.2200
1513	226671.3239	2360528.9330	1545	226450.0336	2360069.2200
1514	226671.3239	2360528.9330	1546	226450.0336	2360069.2200
1515	226671.3239	2360528.9330	1547	226450.0336	2360069.2200
1516	226671.3239	2360528.9330	1548	226450.0336	2360069.2200
1517	226671.3239	2360528.9330	1549	226450.0336	2360069.2200
1518	226671.3239	2360528.9330	1550	226450.0336	2360069.2200
1519	226671.3239	2360528.9330	1551	226450.0336	2360069.2200
1520	226671.3239	2360528.9330	1552	226450.0336	2360069.2200
1521	226671.3239	2360528.9330	1553	226450.0336	2360069.2200
1522	226671.3239	2360528.9330	1554	226450.0336	2360069.2200
1523	226671.3239	2360528.9330	1555	226450.0336	2360069.2200
1524	226671.3239	2360528.9330	1556	226450.0336	2360069.2200
1525	226671.3239	2360528.9330	1557	226450.0336	2360069.2200
1526	226671.3239	2360528.9330	1558	226450.0336	2360069.2200
1527	226671.3239	2360528.9330	1559	226450.0336	2360069.2200
1528	226671.3239	2360528.9330	1560	226450.0336	2360069.2200
1529	226671.3239	2360528.9330	1561	226450.0336	2360069.2200
1530	226671.3239	2360528.9330	1562	226450.0336	2360069.2200
1531	226671.3239	2360528.9330	1563	226450.0336	2360069.2200
1532	226671.3239	2360528.9330	1564	226450.0336	2360069.2200

NOTE:  
SEE DRAWING 5 OF 19 FOR BASELINE  
INFORMATION

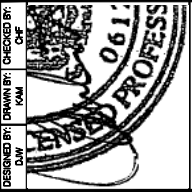
LEGEND



- NOTES:
- EXCAVATION AREAS AND DEPTHS SHOWN ARE APPROXIMATE. ACTUAL LIMITS TO BE DETERMINED UPON CONFIRMATION SAMPLE RESULTS.
  - CONTACT LINE BETWEEN EXCAVATION AREAS SHALL BE VERTICAL WHERE BENCH IS NOT GREATER THAN 5 FT. IF VERTICAL CHANGE IS GREATER THAN 5 FT. BOUNDARY LINE SHOWN SHALL BE CONSIDERED TOP OF SLOPED OR BENCHMARK EXCAVATION. ALL APPLICABLE OSHA REGULATION SHALL APPLY.
  - SOIL CLEANUP OBJECTIVES FOR EXCAVATION OUTSIDE OF BB&S PROPERTY BOUNDARY (OFF-SITE) SHALL BE 13 PPM ARSENIC, 30 PPM TOTAL CHROMIUM AND 1 PPM HEXAVALANT CHROMIUM.

WARNING:  
THE ALTERATION OF THIS MATERIAL IN ANY MANNER WITHOUT THE WRITTEN PERMISSION OF AECOM PROFESSIONAL ENGINEER OR ARCHITECT FOR AN ARCHITECT, ENGINEER, ARCHITECT FOR A LANDSCAPE ARCHITECT, OR ARCHITECT FOR A LANDSCAPE ARCHITECT, IS A VIOLATION OF THE NEW YORK STATE E&A CLASS IV MASTER ENGINEER.

PLAN  
Scale in Feet  
0 15 30



NO	REVISIONS	DATE

DESIGNED BY: [blank]  
DRAWN BY: [blank]  
CHECKED BY: [blank]  
DATE: OCTOBER, 2009  
PROJECT NO: 97047  
SCALE: AS NOTED  
DRAWING NO: 6 OF 19

Figure 1-4 Work Zones - Off-site Remedial Area  
(AECOM Drawing 6 of 19)

# 2

## Summary of the Site Remedy

### 2.1 Original ROD - Description of the Selected Remedy

Based on the results of the original FS (MPI 1999) for the BB&S Treated Lumber Site and the criteria identified for evaluation of alternatives, NYSDEC selected excavation and off-site disposal of the contaminated soil as the site remedy.

The original ROD for the BB&S Treated Lumber Site was issued on February 25, 2000 (NYSDEC 2000). The major components of the remedy selected to eliminate or mitigate environmental and public health threats included the following:

- Installation of extraction wells on- and off-site to capture the plume of contaminated groundwater. The collected groundwater would be piped back to the BB&S site, where a treatment system in a new building would be constructed.
- A long-term groundwater monitoring program would be instituted. The program would consist chiefly of periodic sampling of existing on-site monitoring wells and new off-site sentinel wells.
- As a contingency plan, any existing household or business in the vicinity of the site whose water supply becomes impacted by chromium or other contaminants shown to have originated from this site would have water treatment installed at the point of use.
- Excavation of soil on-site and off-site within the drainage swale extending southwest of Speonk Riverhead Road contaminated above the limits protective of groundwater. The excavated soils would be brought into the lumberyard and treated on-site in a temporary plant by solidification / stabilization. Treated residues would be placed on site and covered with clean soil and/or the new building or pavement. The excavated areas would be backfilled with clean soil and re-seeded.

The principal detail components of the initial remedy as presented in the original ROD were as follows:

## **2 Summary of the Site Remedy**

1. A remedial design program to provide the details necessary for the construction and long-term operation, maintenance, and monitoring of the remedial program.
2. A provision to fund an alternative water supply (AWS) to authorized homes and businesses as determined by NYSDEC and the New York State Department of Health (NYSDOH).
3. Excavation of on-site soils exceeding the groundwater protection soil cleanup objectives (SCOs) for arsenic and hexavalent chromium set forth in 6 NYCRR Part 375, dated December 14, 2006 (Part 375) and NYSDEC's Technical and Administrative Guidance Memorandum (TAGM) 4046 SCO for total chromium.
4. Transport, off-site pretreatment (as necessary), and disposal of soil determined to be a hazardous waste in a Resource Conservation Recovery Act (RCRA) Subtitle C landfill permitted to accept hazardous waste.
5. Contaminated soil characterized as nonhazardous would be transported off-site for disposal in a RCRA Subtitle D landfill permitted to accept nonhazardous solid waste.
6. Clean fill meeting the requirements of Part 375 would be used as backfill to replace the excavated soil and establish the designed grades at the site.
7. The excavation of off-site soil exceeding unrestricted use SCOs for arsenic, hexavalent chromium, and trivalent chromium set forth in Part 375. The soil excavated from the off-site drainage swale would be considered an F035-listed hazardous waste, which would require transport, off-site pretreatment (as necessary), and disposal in a RCRA Subtitle C landfill permitted to accept hazardous waste. Clean fill meeting the requirements of Part 375 would be used as backfill to replace the excavated soil and establish the designed grades at the site.
8. Installation of additional off-site groundwater wells to monitor plume attenuation and migration. The new off-site wells would include sentinel groundwater monitoring wells between the contaminant plume and downgradient water supply wells. A select number of groundwater wells and downgradient private potable water supply wells would be sampled to monitor plume attenuation.
9. Development of a site management plan (SMP) to address remaining on-site soils contaminated above unrestricted use levels and provide for long-term monitoring of groundwater. The SMP was also to include controls to: (a) address residual contaminated soil adjacent to and below the former CCA treatment area and the former drip pad area. These soils are located along the

western perimeter of the site that may be excavated during future redevelopment. The plan was to require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; (b) identify any use restrictions; and (c) provide for the operation and maintenance of the components of the remedy.

10. The imposition of an institutional control on-site in the form of an environmental easement that (a) facilitated compliance with the approved SMP; (b) limited the use and development of the property for commercial and industrial purposes only; (c) restricted the use of groundwater as a source of potable water unless the groundwater was first treated in accordance with NYSDOH and/or the Suffolk County Department of Health Services (SCDHS) guidelines; (d) allow NYSDEC access to the site; and (e) required the site property owner to complete and submit to NYSDEC a periodic review report (PRR) and certification. The PRR was to be prepared and submitted by a professional engineer or such other expert acceptable to NYSDEC, until NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal would certify that the institutional controls (ICs) and engineering controls (ECs) are still in place and functioning as designed. The certification would state that nothing has occurred on-site that would impair the ability of the controls to protect public health and the environment or constitute a violation of, or failure to comply with, the SMP.
11. Site ECs (i.e., fencing) that would be repaired and maintained to restrict access and protect remedial components.

## **2.2 Amended ROD - Explanation of Significant Differences**

The October 2009 Amended Record of Decision (Amended ROD; NYSDEC 2009) lists the significant differences between the original remedy as stated in the February 2000 ROD and the selected remedy.

Early in the Supplemental PDI process, some on-site and off-site areas were resampled to better define the nature and extent of impacted soil and groundwater requiring remediation. PDI groundwater data collected in the summer of 2008 by AECOM showed that the contaminant plume had attenuated since the issuance of the initial ROD in 2000. The highest contaminant concentrations were found in the downgradient groundwater monitoring wells and appeared to have migrated vertically to depths of at least 130 feet or more below ground surface (bgs). Remaining private water supply wells nearest the site and within the plume were sampled by NYSDEC in July 2008, March 2009, and June 2009. Hexavalent chromium was detected in two of the wells sampled in June 2008, but at levels below the NYSDOH water quality standard of 50 parts per billion (ppb).

Furthermore, since the issuance of the initial ROD, a public water line was installed by the Suffolk County Water Authority (SCWA) in June 2001 along Old



## 2 Summary of the Site Remedy

Country Road and Speonk-Riverhead Road, making public water available to residents and businesses located immediately downgradient of the site.

The Amended ROD also included taking necessary actions to offer, fund, and provide an alternative water supply (AWS) in accordance with NYSDEC program policy *Assistance for Contaminated Water Supplies (DER-24)*, dated July 2008. The alternative water supply was available to authorized homes and businesses as identified by NYSDEC and the NYSDOH.

Based on subsequent soil data gathered and evaluated from the Supplemental PDI (AECOM 2009a), the planned on-site and off-site excavation limits were redefined and expanded from those identified in the original ROD. Specifically, the total estimated volume of on-site and off-site soil determined to require excavation and off-site disposal was increased from 5,300 cubic yards (CY) to 18,400 cubic yard, or an increase of 247% in volume. In addition, the amount of on-site soil contamination located adjacent to and beneath the former CCA treatment area and concrete drip pad was estimated to be 14,000 CY, for a total of volume of 32,400 CY contaminated soils to be removed.

Following issuance of the original ROD in 2000, NYSDEC and the New York State Office of the Attorney General initiated negotiations with the owner of an adjacent property located immediately south of the BB&S Site in order to obtain access. The access was needed to sample the existing groundwater recovery wells on the property that had been previously installed by BB&S and to install new groundwater recovery wells required by the original ROD. The property owner continued to deny NYSDEC access to the property to carry out the ROD remedy. The adjacent property owner's actions required NYSDEC to evaluate other remedial activities for the groundwater and delayed completion of remedial design activities.

Consequently, the groundwater extraction and treatment remedial alternative selected for the site in the original ROD was eliminated and replaced with a groundwater monitoring program.

The summary of the Amended ROD remedy elements are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction and long-term operation, maintenance, and monitoring of the remedial program.
2. To immediately fund and provide an AWS to authorized homes and businesses as determined by NYSDEC and the NYSDOH.
3. Excavation of on-site soil exceeding the groundwater protection SCOs for arsenic and hexavalent chromium set forth in Part 375 and the TAGM 4046 SCO for total chromium (50 ppm). Transportation, pre-treatment (as-

necessary) off-site and disposal of soil determined to be hazardous waste into a RCRA Subtitle C landfill permitted to accept hazardous waste. Contaminated soil characterized as non-hazardous to be transported off-site for disposal into a RCRA Subtitle D landfill permitted to accept non-hazardous, solid waste. Clean fill meeting the requirements of Part 375 will be used as backfill to replace the excavated soil and establish the design grades at the site.

4. Excavation of off-site soil exceeding unrestricted use SCOs for arsenic (13 ppm), trivalent chromium (30 ppm) and hexavalent chrome (1 ppm) set forth in Part 375. The off-site soil excavated within the drainage swale will be considered a F035 listed hazardous waste which will require transportation, pre-treatment (as necessary) off-site disposal into a RCRA Subtitle C landfill permitted to accept hazardous waste. Clean fill meeting the requirements of Part 375 will be used as backfill to replace the excavated soil and establish the design grades at the site.
5. Installation of additional off-site groundwater wells to monitor plume attenuation. The new off-site wells will include sentinel groundwater monitoring wells between the contaminant plume and downgradient water supply wells. Sampling of a select number of groundwater wells and downgradient private water supply wells to continue to monitor plume migration.
6. Development of a SMP since the amended remedy results in contamination above unrestricted levels remaining on-site. The SMP will include the following controls: (a) address residual contaminated soils adjacent to and below the former CCA treatment area and the former drip pad area located along the western perimeter of the site that may be excavated during future development. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with NYSDEC regulations; (b) identify any use restrictions; (c) provide for the operation and maintenance of the components of the remedy; and (d) long-term monitoring of groundwater.
7. The imposition of an institutional control on-site in the form of an environmental easement that will (a) require compliance with the approved SMP; (b) limit the use and development of the property to commercial or industrial; (c) restrict the use of groundwater as a source of potable water, without necessary water quality treatment as determined by NYSDOH and/or the SCDHS; and (d) require the site property owner to complete and submit to NYSDEC a periodic certification. The property owner shall provide a periodic certification, prepared and submitted by a professional engineer or other such expert acceptable to NYSDEC, until NYSDEC notifies the property owner in writing that this certification is no longer needed. This submittal will contain certification that the institutional controls and engineering controls, are still in place, allow NYSDEC access to the site, and that nothing has occurred that will impair the ability of the control to protect public health or the environment, or constitute a violation or failure to comply with the site management plan.

8. Site engineering control measures (i.e., fencing) will be repaired and/or replaced and maintained to restrict access and protect remedial components.

### **2.3 General Summary of Work**

Based on Remedial Contract D007631, soils impacted with CCA-derived arsenic and chromium to be excavated and disposed of off-site at permitted landfill facilities included the following:

1. **The approximately 10-acre former lumberyard site:** Excavation of on-site soils exceeding Part 375, Subpart 375-6 – Remedial Program Soil cleanup Objectives (SCOs) for arsenic, chromium, and hexavalent chromium. For excavated soils characterized as hazardous waste, transportation off-site for pretreatment (if necessary) and disposal in a RCRA Subtitle C landfill permitted to accept hazardous waste. For excavated soils characterized as nonhazardous waste, transportation off-site for disposal at a RCRA Subtitle D permitted landfill.
2. **Buildings and structures remaining at the site that required remedial improvements:** According to the Amended ROD, buildings and substructures at the BB&S site were to remain intact. The CCA-contaminated soils remaining beneath the former Drip Pad Building, Framed Storage Building, and CCA Treatment Building will remain in place with future maintenance, monitoring, and management. However, improvements were made on the existing floor slabs and foundation walls of these buildings, creating an impervious cap over the residual contamination. In addition, drainage improvements were made to drain surface water and roof runoff away from these structures.
3. **The off-site area** (comprising the approximately 7-acre drainage swale area located west of Speonk-Riverhead Road and the storm water crossing on Speonk Riverhead Road): Excavation of the off-site soils exceeding Part 375 unrestricted use SCOs for arsenic and chromium. For the off-site soils excavated from the drainage ditch area that was previously determined to be F035-listed waste, transportation off-site for pretreatment (if necessary) and disposal in a RCRA Subtitle C landfill permitted to accept hazardous waste. For off-site soils excavated from the areas that extend north and east beyond the property line boundaries of the lumberyard site that were characterized as nonhazardous, transportation off-site for disposal at a RCRA Subtitle D permitted landfill.

Based on the Contract Documents bid item quantities (nonhazardous and hazardous), a total of approximately 18,400 cubic yards of CCA impacted soil required remediation. The Contract Documents required the transportation and off-site disposal of approximately 16,275 tons of nonhazardous material and approximately 12,400 tons of hazardous material.

Clean backfill material that met the requirements of DER-10 Technical Guidance, Appendix 5, was to be used to backfill the on-site and off-site excavations and established the final design grades at the site.

## **2.4 Soil Cleanup Objectives and Remedial Performance Criteria**

In accordance with the ROD and Amended ROD, the analytical results from throughout the site and off-site areas were evaluated against the SCOs in Table 375-6.8(b), which is contained in 6 NYCRR Part 375.

Table 2-1 presents a list of SCOs covering the contaminants of concern (COCs) for the project. The SCOs specified reflect the minimum SCOs, (i.e., for restricted residential) for on-site sampling locations, and SCOs for “unrestricted residential” for off-site sampling locations.

**Table 2-1 BB&S Treated Lumber Project Site Soil Cleanup Objectives (mg/kg)<sup>1</sup>**

<b>Contaminant</b>	<b>On-Site Sampling Locations<sup>2</sup></b>	<b>Off-Site Sampling Locations<sup>3</sup></b>
Arsenic	16	13
Chromium	50	30
Hexavalent Chromium	19	1

<sup>1</sup> Amended ROD (NYSDEC 2009).

<sup>2</sup> Residential, Restricted Residential, Commercial or Industrial Use guidance in accordance with Part 375.6 – Table b.

<sup>3</sup> Unrestricted Use guidance in accordance with NYSDEC Part 375.6 – Table a.

# 3

## Summary of Pre-Remedial Activities

### 3.1 Project Bidding Information and Award

Contract Documents were prepared by AECOM in November 2009 (AECOM 2009c). The public advertisement announcing the availability of the Contract Documents for the public to bid on the remedial project was published in newspapers in the local area (Southampton Press) and the Capital District (Albany Times Union and Newsday) on December 1, 2009. Electronic copies of the advertisement were also published in the various statewide plan houses (Reed Construction Data; Syracuse Builders Exchange; Project Research, Inc.; Construction Exchange of Buffalo and Western New York; and McGraw-Hill Companies - Dodge Report), and the New York State Contract Reporter for inclusion in the December 14, 2009, issue.

A mandatory pre-bid meeting was held by NYSDEC and AECOM at the project site on January 5, 2010, for the potential bidders to view existing conditions and to discuss the requirements for bidding the project. They included the technical requirements of the New York State Superfund Contract Documents and the administrative protocol to be used during performance of the work. Potential bidders that attended were required to sign an attendance sheet to document their presence at the mandatory meeting. A walk-through of the site and a question-and-answer period were held with those in attendance.

Based on the results of the pre-bid meeting and walkover, an addendum (Addendum No. 1) to the Contract Documents was issued during the public bidding phase to the plan holders of record on January 19, 2010 (AECOM 2010). The contents of Addendum No. 1 included revised bid forms, pre-bid meeting minutes, a site walkover attendance list, a plan holders list, the M/WBE Handbook of Procedures, pre- and post-bid meeting questions and answers, additional limited site data, and Contract Drawing Cut Sheets CS-1 and CS-2, which related to new information obtained on the underground extraction well piping.

Thirteen bids were received by NYSDEC on January 26, 2010. Appendix B provides a summary of the bids received during the public bid period. The apparent low bidder for the project was EQ Northeast, Inc. (EQNE) of Wrentham, Massachusetts, at \$4,981,500.

Following a review of additional post-bid information obtained from EQNE, a Notice of Intent to Award letter was issued by NYSDEC to EQNE on February 11, 2010. Copies of the agreement for the project were signed by EQNE and transmitted to NYSDEC on February 22, 2010. The Department of Audit and Control for the New York State Comptroller approved the agreement on July 14, 2010 (NYSDEC 2010a). The Notice to Proceed date for the BB&S remedial project was officially established as September 13, 2010 (NYSDEC 2010b).

EEEPC was issued Work Assignment Nos. D004442-22 and D007631-05, to provide engineering services during remedial construction for the BB&S project after AECOM's Standby Contract with NYSDEC expired. EEEPC began work on February 5, 2010. Initial efforts performed by EEEPC included a project background review, a site visit and reconnaissance (performed on August 11, 2010), and an initial review of EQNE's 5-day and 14-day submittal requirements according to Section III of the Contract Documents. The project Quality Assurance/Quality Control (QA/QC) Plan and Data Usability Summary Report (DUSR) requirements were the first submittals received for review from EQNE. These are discussed further in Sections 3.3 and 3.4, respectively.

The EEEPC site reconnaissance report is provided as Appendix C. Section 5 discusses EEEPC's construction management and inspection services for the project.

### **3.2 Scope of Work – Major Elements of Remediation**

The Remedial Scope of Work in the Contract Documents included the following major work elements:

- Mobilization of personnel, equipment, and materials to the site;
- Remedial site services;
- Health and safety site services;
- Preconstruction waste characterization sampling;
- A preconstruction topographic site survey;
- Site access improvements;
- Construction of an on-site water treatment system, if necessary;
- Clearing and minor grubbing at the exclusion work zones;
- Demolition of lumber treatment process equipment and debris removal in and around the former CCA Treatment Building;

### **3 Summary of Pre-Remedial Activities**

- Cleaning, decontamination, and sealing of the floor in the former CCA Treatment Building;
- Stabilizing the roof support columns in the former Drip Pad Building;
- Installation of a waterproofing membrane, drainage line, and pavement in the former Drip Pad Building;
- Installation of a geo-membrane liner around each of the on-site buildings in the Hazardous Water Boundary Area;
- Demolition of selected areas in the former Frame Storage Building to improve access;
- Excavation, transport, and off-site disposal of contaminated on-site (nonhazardous and hazardous) soils exceeding the groundwater-protective SCOs;
- Excavation of contaminated (hazardous) soils and replacement of the existing culvert under Speonk-Riverhead Road;
- Excavation, transport, and off-site disposal of contaminated off-site soils (hazardous) exceeding the groundwater protection SCOs;
- End-point / Confirmation and Documentation sampling after excavation and analysis to verify that SCOs have been achieved;
- A survey of post-confirmation sampling points and site improvements;
- Backfilling with imported materials and compaction of excavated areas, and regrading to pre-existing contours;
- Installation of new wells and decommissioning of designated old groundwater monitoring wells;
- Vegetate with topsoil and seed limited areas of the site;
- A post-backfill and restoration survey;
- Installation of site fencing; and
- Site restoration, cleanup, and demobilization.

#### **3.3 Quality Assurance/Quality Control (QA/QC) Plan**

The Contract Documents Supplementary Specifications, Section XI, Division 1 – Section 01400 – Quality Control, outlined specific requirements of the QA/QC Plan for the project. Included in this section are requirements for QA/QC of in-



stallations, references and standards, tolerances, field sampling, inspection and testing services, testing by the Contractor, and manufacturers' field services and reports.

A QA/QC Plan for project control and analytical work was developed by EQNE and submitted to EEEPC on February 10, 2010. This submittal was part of EQNE's Work Plan, which was included with their five-day submittal package. EEEPC rejected the QA/QC plan on March 3, 2010. EQNE re-submitted the plan on August 30, 2010. The QA/QC plan was reviewed and accepted by EEEPC on September 3, 2010, prior to the issuance of a Notice to Proceed (NTP) by NYSDEC on September 13, 2010. This submittal briefly described the QA protocols for each separate work task. The firms selected by EQNE for analytical services included; York Analytical Laboratories, Inc. (Stratford, Connecticut) – waste characterization analyses, ChemTech (Mountainside, New Jersey) – soils end-point documentation analyses, Galson Laboratories (East Syracuse, New York) – air analyses.

### **3.4 Data Usability Summary Report (DUSR) Requirements**

The Contract Documents Supplementary Specifications, Section XI, Division 1, Section 01425 – Sampling, included NYSDEC Data Usability Summary Report (DUSR) requirements for environmental samples collected by the Contractor. This process was a part of the QC procedures established by NYSDEC to verify the accuracy of laboratory analysis of samples collected by the Contractor.

EQNE submitted details for compliance with the DUSR requirements to EEEPC as part of the Sampling and QA/QC Plan. At the time of the initial submittal, EQNE had selected Preferred Environmental Services, Inc., and Nancy J. Potak, independent subcontracted firms independent of the analytical laboratories to complete the data usability from the project. Additional discussion on the validation of the project analytical data is presented in Section 6.3.



# 4

## Description of Remedial Actions Performed

### 4.1 Governing Documents

The Contract Documents under Contract Number D007631, consisted of the technical specifications, contract drawings, and limited site data document, which were issued for bids by NYSDEC in November 2009 with the assistance of AECOM (AECOM 2009c). These documents were based on the ROD issued by NYSDEC in February 2000 and the Amended ROD issued by NYSDEC in October 2009.

### 4.2 Project Schedule

Based on Contract Document D007631, Section VI, Article 6, the length of the remediation project from Notice to Proceed until Substantial Completion was established as 300 calendar days, with 30 additional days allowed for Final Completion, for a total of 330 calendar days.

### 4.3 Contractors and Consultants

The successful low and responsible bidder for the BB&S Treated Lumber Corporation site project was EQ Northeast, Inc. (EQNE), located in Wrentham, Massachusetts.

The company responsible for engineering services during remedial construction was Ecology and Environment Engineering, P.C. (EEEPC) of Lancaster, New York.

### 4.4 Contractors and Subcontractors

EQNE provided a list of subcontractors to be utilized throughout the duration of the project. Major subcontractors (i.e., with costs over \$10,000) were required by the Contract to submit a Vendor Responsibility Questionnaire (VRQ). Firms that were subcontracted to provide professional services for the project were not required to submit a VRQ.

The following subcontractors were utilized during the project. The estimated dollar value of the work performed by each subcontractor is listed in parentheses; the estimate is based on EQNE's Contract Schedule of Values breakdown and

#### **4 Description of Remedial Actions Performed**

Change Orders. Subcontractors certified in New York State as minority- or women-owned business enterprises (MBE/WBE) are listed in bold.

- **Coastal Environmental Group, Inc. - MBE (Central Islip, New York): silt fence installation (\$25,000);**
- **Preferred Environmental Services, Inc. - WBE (North Merrick, New York): community air monitoring, and soil sampling (\$140,000);**
- **Chenango Contracting - MBE (Johnson City, New York): geo-membrane liner installation and culvert replacement work (\$100,000);**
- National Construction Rentals, Inc. (Mission Hills, California); temporary site security fencing (\$25,000)
- **Double Nickel Contracting, Inc. – WBE (Hicksville, New York): non-hazardous waste transportation (\$140,000);**
- **Page E.T.C., Inc. – WBE (Weedsport, New York): hazardous waste transportation (\$100,000);**
- EQNE, Inc. (Wrentham, Massachusetts): decon/liquid waste transportation (\$20,000);
- Goulet Trucking, Inc. (South Deerfield, Massachusetts): hazardous waste transportation (\$20,000);
- Crown Recycling (Calverton, New York): metal debris disposal (\$30,000);
- Brookhaven Landfill (Brookhaven, New York): non-hazardous soil disposal (\$467,906);
- Waste Management (Model City, New York): hazardous soil disposal (\$802,900);
- DuPont (Chamber Works facility, Deepwater, New Jersey): dewatering and decontamination fluid disposal (\$40,000);
- L.K. McLean Associates, P.C. (Brookhaven, New York): site survey services (\$95,000);
- **Delta Well and Pump Co., Inc. – WBE (Ronkonkoma, New York): well installation and decommissioning (\$11,200);**
- Terry Contracting and Materials, Inc. (Riverhead, New York): excavation support and topsoil (\$400,000);

## 4 Description of Remedial Actions Performed

- Autochem Corporation (Southampton, New York): potable water and site dust-control water (\$5,550);
- Ocean Electric (Southampton, New York): electrical hookup (\$9,000);
- **Chemtech – MBE (Mountainside, New Jersey): analytical services - confirmation analyses (\$50,000);**
- Galson Laboratories, Inc. (East Syracuse, New York): analytical services – air (\$25,000);
- **Nancy J. Potak – WBE (Greensboro, Vermont): data validation (\$3,150);**
- York Analytical Laboratories (Stratford, Connecticut): analytical services - waste characterization (\$7,068);
- **Sagaponack Sand and Gravel – WBE (Montauk, New York): backfill materials (\$183,600);**
- Keith Grimm, Inc. (Montauk, New York): backfill transportation (\$10,000);
- U.S. Bulk Transport, Inc. (Erie, Pennsylvania): hazardous waste transportation (\$200,000);
- **Double Nickel Contracting, Inc., - WBE (Hicksville, New York): non-hazardous waste transportation (\$140,000);**
- Soil Mechanics Drilling Corp. (Seaford, New York): compaction and concrete testing (\$7,500); and
- Triton Builders, Inc. (Glen Cove, New York): permanent fencing and hydroseeding (\$53,550).

## 4.5 Construction Monitoring and Project Plan Submittals

### 4.5.1 Initial Preconstruction Meeting

On Thursday, September 8, 2010, an initial pre-construction meeting was held with NYSDEC, EQNE, and EEEPC representatives. The meeting was held in NYSDEC's offices at 625 Broadway, Albany, New York. The purpose of the preconstruction meeting was to introduce the administrative and field staff of the project parties and to establish the construction parameters for successful completion of the project. A copy of the preconstruction agenda and meeting minutes for the EQNE Contract work is provided in Appendix D-1.

Discussions included the general introduction of project staff and responsibilities, review of the contract time and liquidated damages, coordination efforts with lo-

## **4 Description of Remedial Actions Performed**

cal officials, and review of the contract general and supplementary conditions. Also, discussed were individual task schedules, project submittals (work plans and shop drawings), transport and disposal concerns, and field coordination by the prime contractor.

During the September 8, 2010, meeting, Supplementary Specifications Section XI, Division 1, Section 01011 - Project Submittals, was reviewed to identify requirements for the preparation and submittal of the materials, equipment, and methods related to the Contract Documents. Following the September 8, 2010 meeting, EQNE prepared and submitted project plans and shop drawings in general compliance with these requirements. Submittals were reviewed for conformance with the Contract Documents, including plans, technical specifications, and addendums. Submittals that were found to be deficient were revised and resubmitted. Copies of the submittals and a submittal log were maintained by EEEPC throughout the course of the project. The submittal log for the EQNE Contract work is presented in Appendix E-1. The EQNE project submittals and shop drawings are discussed further in the following sections.

### **4.5.2 Initial Contractor Plan Submittals**

In accordance with the Contract Document's administrative and technical requirements, EQNE submitted pre-project plans and shop drawings. The submission process was recorded by EEEPC.

Project submittal requirements were included in the Contract Documents, primarily in Bidding Information Requirements (Section III), Standard Specifications (Section X), Supplementary Specifications (Section XI), and Measurement for Payment (Section XII).

The log of the project submissions associated with the Contract Documents is presented in Appendix E-1. Major project plans and submissions are discussed below.

#### **4.5.2.1 Contractor Operations Work Plan**

According to the Contract Documents, Section III – Bidding Information and Requirements, the Work or Operations Plan submittal is part of the Contract requirements in the original 5-day and 14-day bid information submittal. The EQNE Work or Operations Plan provided descriptions of methods, procedures, and equipment to be used to complete the project. The plan detailed EQNE's understanding of and proposed methods for executing the major and minor work items to be performed and linked to a critical path method (CPM) milestone schedule. The major elements of the EQNE's Work or Operations Plan included:

- Site mobilization and establishment of project support zones;
- Installation and maintenance of the temporary access roads and security fencing;

## **4 Description of Remedial Actions Performed**

- Establishment of exclusion and contamination reduction zones;
- Clearing and grubbing;
- Equipment demolition, removal and transport of scrap metal and debris from the site buildings;
- Excavation and transport of hazardous and nonhazardous contaminated soils, including handling and storage;
- Site improvements to the CCA, Drip Pad, and Frame Storage Buildings;
- Excavation and removal of off-site hazardous contaminated materials and replacement at the road crossing;
- Site backfilling, topsoil, and restoration;
- Monitoring well installation, well revitalization, and decommissioning; and
- Site cleanup and demobilization.

Additional details of specific tasks were provided in related project plans, as discussed below. The work plan from EQNE was initially found acceptable by EEEPC (EEEPC Submittal 2) on September 28, 2010. Resubmission or revisions to the work plan were required based on change orders or changes on to EQNE's means and methods. The final version of the EQNE Work/Operation Plan and amendments for excavation work on the Speonk Riverhead Road crossing was approved on May 11, 2011. EQNE's project work plan submittal milestones and schedule revisions were placed in the project submittal log provided in Appendix E-1.

### **4.5.2.2 EQNE Progress Schedule**

EQNE submitted, in CPM format, a Progress Schedule with estimated durations and milestones for major work elements. The submitted schedule followed the requirements of Contract Documents Section X (Standard Specification, Section 00001 – Progress Schedule). The construction schedule provided details regarding priority, sequencing, and interdependence of activities, as well as the sequence in which the work was to be performed. The schedule also identified how EQNE was going to comply with the contract time, named allowances, and the sequences of work indicated or required by the Contract Documents. The schedule also provided information on how EQNE would anticipate foreseeable events that could affect cost, progress, performance, and completion of the work.

The Contract Documents required regular progress schedule updates, or as necessary, to evaluate the progress and performance of EQNE's work. EEEPC re-

requested monthly schedule updates to review progress and to facilitate discussion of tasks and weather delays at progress meetings. The original progress schedule was submitted by EQNE on February 10, 2010. The initial master schedule was accepted by EEEPC (EEEEPC Submittal 12) on September 28, 2010. Revisions to the schedule were provided on a monthly basis. The last schedule revision was provided and approved on July 12, 2011. EQNE's progress schedule submittal milestones and the schedule revisions were placed in the project submittal log provided in Appendix E-1.

#### **4.5.2.3 Sampling and Analysis Plan**

The Contract Documents Supplementary Specifications, Section XI, Division 1, Section 01425 - Sampling, outlined specific requirements of the project-specific Sampling and Analysis Plan (SAP). EQNE submitted a project SAP on February 10, 2010. The SAP provided detailed information regarding sample matrices, analytical parameters, sample preservation, logging and shipment, and the method and frequency of sampling required for the completion of the project.

EQNE utilized four analytical laboratories to perform the work required by the Contract Documents: York Analytical Laboratories, Inc. (Stratford, Connecticut) for waste characterization and clean soils analyses; ChemTech (Mountainside, New Jersey) for soil endpoint/confirmation analyses; Galson Laboratories, Inc. (East Syracuse, New York) for air analyses; and Preferred Environmental Services, Inc. (North Merrick, New York) for data validation services. H2M Labs, Inc. (Melville, New York) was and currently is a NYSDEC Standby Contract Laboratory whose services were used for soil endpoint/confirmation analyses. Each of the laboratories utilized by EQNE and the NYSDEC were certified under the New York State Department of Health (NYSDOH) Environmental Laboratory Approval Program (ELAP) for their respective analytical services performed on the project.

EEEEPC accepted and approved the second revision of the SAP (EEEEPC Submittal 4) on September 28, 2010. The project SAP submittal milestones and plan revisions are included in the project submittal log provided in Appendix E-1.

#### **4.5.2.4 Storm Water Pollution Prevention Plan**

Pursuant to the requirements of the Contract Documents Supplementary Specifications, Section XI –Division 1, Section 01560 - Erosion and Surface Water Control of the Contract Documents, EQNE submitted a Storm Water Pollution Prevention Plan (SWPPP) on September 2, 2010. The plan included a description of practices and temporary measures to prevent erosion on the site, including the use of drainage control structures, silt fencing, straw bales, and erosion control blankets. The SWPPP also included procedures for inspection, maintenance and repair of temporary controls. EEEPC reviewed and accepted the first revision of the document (EEEEPC Submittal 31) on September 28, 2010. The project SWPPP submittal milestones and plan revisions are included in the project submittal log provided in Appendix E-1.

**4.5.2.5 Transportation and Disposal Plan**

Per the requirements of Supplementary Specifications Section XI, Division 1, Specification 01560 of the Contract Documents, the project-specific Transportation and Disposal Plan contained proposed vehicle decontamination procedures, truck weighing requirements, handling procedures for hazardous and nonhazardous wastes, haul routes and instructions, information on alternative disposal facilities and transporters, vehicle loading procedures, emergency spill/contingency response procedures, placarding, and preparation of shipping documents (manifests).

The initial Transportation and Disposal Plan was submitted to EEEPC by EQNE on October 22, 2010. The Non-hazardous Waste Transportation and Disposal Plan was approved by EEEPC on October 27, 2010 (EEEPC Submittal 1B), and the Hazardous Waste Transportation and Disposal Plan was approved by EEEPC on December 13, 2010 (EEEPC Submittal 1D). During the course of the project, additional trucking firms were submitted for approval due to difficulties in maintaining a transporter over the entire schedule of the project (EEEPC Submittal Responses 1E through 1H). The final submittal was approved on August 9, 2011. The project Transportation and Disposal submittals and plan revisions are provided in the project submittal log provided in Appendix E-1.

On May 4, 2011, EQNE submitted an amendment to the Transportation and Disposal Plan (EEEPC Submittal 1E) for the transport of decontamination and dewatering fluids by EQNE Trucking to DuPont's Chamber Works waste treatment plant in Deepwater, New Jersey. Acceptance was provided by EEEPC on May 5, 2011. The project transportation and disposal submittal milestones and the plan revisions are provided in Appendix E-1.

**4.5.3 Contractor Shop Drawing Submittals**

Shop drawing submittals for the project were listed in the Supplementary Specifications, Section XI, Division 1, Section 01011 – Project Submittals, of the BB&S Contract Documents. EQNE submitted 31 individual sets of shop drawings (noted as Contractor transmittal numbers 18 through 48 in the project submittal log) related to the project work for review and approval by EEEPC. After reviewing each submission, EEEPC determined whether to reject the shop drawings or approve them, with or without conditions. The shop drawings included a list of administrative submissions, materials, procedures, and products to be used in the completion of the project. Copies of the shop drawings from the construction were maintained by EEEPC throughout the course of the project and are listed in the submittal log and provided in Appendix E-1.

**4.5.4 Contractor Post-Construction Project Submittals**

Post-construction or closeout submittal requirements for the project were listed in the Supplementary Specifications, Section XI, Division 1, Section 01011 – Project Submittals, of the BB&S Contract Documents. Closeout documents and



submittals included a list of administrative and technical documents to verify the completion of the project in accordance with the technical specification and administrative requirements of the Contract Documents. EQNE submitted the post-construction submittals for EEEPC's review and approval. EEEPC determined whether to reject the post-construction submittals or approve them, with or without conditions.

The project closeout submittal list and the revisions for finalization the BB&S project are provided in Appendix E-1.

## **4.6 Health and Safety Submittals**

### **4.6.1 Site-Specific Health and Safety Plan**

Project Standard Specification, Section X - 00003 includes Minimum Requirements for Health and Safety. These requirements are based on (a) OSHA Standards and Regulations contained in Title 29, CFR Parts 1910 and 1926, (b) applicable sections of the New York State Labor Law, (c) the EPA's Office of Emergency and Remedial Response Program, and (d) the National Institute for Occupation Safety and Health's (NIOSH's) procedures to provide safe operations at abandoned hazardous waste disposal sites. These requirements included:

- Project Health and Safety Responsibilities and Organization;
- A Project-specific Health and Safety Plan (sHASP) and Hazard Assessment;
- Training and Medical Surveillance documentation;
- Personnel and equipment decontamination procedures;
- A Community Air Monitoring and Protection Program;
- Emergency and first aid requirements; and
- Logs, reports, and recordkeeping.

In response to these requirements, EQNE issued a sHASP to EEEPC for review as a part of their 5-day and 14-day submittal package requirement of the Contract Documents on August 30, 2010. EEEPC's review of the sHASP (EEEPC Submittal 3) verified that the Contractor had a site-specific plan and that the components were in compliance with the Contract Document requirements on September 16, 2010. EQNE provided EEEPC with copies of medical surveillance examinations and 40-hour HAZWOPER and refresher training certifications for the individual EQNE and subcontracted personnel working near or within exclusion zones. The sHASP submittal milestones and the plan revisions are provided in project submittal log provided in Appendix E-1. EEEPC has included the plan submittals in Appendix E.



In addition, NYSDEC and EEEPC provided copies of annual health and HAZWOPER refresher training certifications for their respective personnel to EQNE for on-site record keeping purposes.

#### **4.6.2 Decontamination of Personnel and Equipment**

EQNE's sHASP provided detailed decontamination procedures for project personnel and equipment, including construction equipment, entering and exiting the exclusion zones. The sHASP detailed the use of portable boot-wash stations, provided guidelines for the disposal of used personal protective equipment (PPE), contained descriptions of the equipment required and the proposed location of the decontamination station, and identified the requirements covering the movement of equipment between contaminated and non-contaminated work zones.

#### **4.6.3 Contingency Measures**

EQNE's Emergency Response and Contingency Plan was submitted as a part of their sHASP. The plan included chain-of-command, communication, and evacuation procedures to be followed in the event of an emergency at the site; the locations of first aid equipment; and standard operating procedures and specific procedures to be followed in the event of an accident. A pre-designated route to a nearby medical facility was established, and a road map documenting the route was posted in the Contractor's site operations office.

EQNE compiled a comprehensive list of emergency contact information, including the names and telephone numbers of the responsible personnel involved with the BB&S project. The list was distributed to the Town of Southampton Police, Fire, and Engineering offices; NYSDEC; EEEPC; and the Suffolk County Department of Environmental Planning (DEP). This list was periodically reviewed for accuracy during regularly scheduled progress meetings at the site and was re-distributed to the responsible personnel whenever revisions were made.

#### **4.6.4 Community Air Monitoring**

EQNE's sHASP included provisions for a community air monitoring program (CAMP) to comply with the requirements set forth in Standard Specifications, Section X –Section 00003 – Minimum Requirements for Health and Safety, of the Contract Documents. The CAMP and on-site related air monitoring work was performed by EQNE's subcontractor, Preferred Analytical, Inc. The Contractor's sHASP called for up to four real-time dust monitors located outside the exclusion zones for control of dust emissions during intrusive work. Each monitor was equipped with data logging capabilities, and the data were downloaded and reviewed by the Site Safety Officer (SSO) on a daily basis. Audible alarms were included with each unit in case emissions exceeded regulatory levels. The Community Air Monitoring program was suspended during rain and snow events. The EEEPC site representatives also spot-checked each monitor during the course of each workday. During the excavation and sampling work, a hand-held PID was carried by the SSO to monitor VOC/SVOC levels in the work area. Fugitive dust emissions that could have an impact on areas outside the site, such as those

## **4 Description of Remedial Actions Performed**

caused by the movement of trucks and equipment, were visually monitored. Whenever dust emanated from remedial operations, water was applied to the roadway surfaces as a recommended engineering control and correction action if elevated dust problems were encountered. During the remedial operations, no elevated air contaminant readings were encountered. Copies of EQNE's submittal of the CAMP Daily Air Monitoring results are presented in Appendix F-1.

### **4.6.5 On-Site Air Monitoring Program**

EQNE's SSO documented the air sampling and real-time air monitoring upwind and downwind of intrusive activities and for "at-risk" personnel working in the exclusion zones. Real-time air monitoring for dust was performed using Dust-Trak dust meters. Action levels for airborne contaminants were established per applicable regulatory guidelines and per the Standard Specifications, Section X, Section 00003 – Minimum Requirements for Health and Safety, Section 1.15 – Air Monitoring Program of the Contract Documents.

Real-time data recorded by the meteorological station in the Contractor's trailer was reported to EEEPC and included in each Daily Observation Report (DOR). EQNE personnel and Preferred Environmental Services, Inc., personnel monitored real-time readouts on the DustTrak meters on a consistent basis and provided the EEEPC site representative with printouts of the air monitoring data at the end of each day. EEEPC maintained a log of the downloaded data for each day that intrusive operations were performed on the project site. EQNE personnel downloaded and submitted air monitoring results from DustTrak meters to EEEPC as part of their Substantial Completion submittal process. Air monitoring was normally suspended during days with significant rain or snow events.

Before the beginning of intrusive activities, EQNE's Site Safety Officer (SSO) conducted baseline air sampling for fugitive dust emissions, both upwind and downwind of the exclusion zones, to determine ambient air quality. The SSO also conducted daily real-time air sampling for total dust, lead, and chromium at the air sampling locations upwind and downwind of exclusion zones throughout the duration of intrusive activities. The results for air samples collected during remedial operations at the BB&S site indicated that emissions guidelines established in the technical specifications were maintained. The on-site air monitoring was performed by Preferred Analytical, Inc. The analytical work associated with the on-site air monitoring program was performed by Galson Laboratories, Inc. The reporting and analytical results from the on-site air monitoring program are presented in Appendix F-2.

### **4.7 Contractor Site Mobilization Activities**

EQNE mobilized to the BB&S site on Monday, September 20, 2010. EQNE mobilization equipment included hydraulic excavators, a smooth drum roller, a bulldozer, a backhoe, an off-road dump truck, and other equipment necessary to initiate the work. EQNE established an operations and equipment staging area and support zone near the southern access gate of the site. Development of the opera-

## **4 Description of Remedial Actions Performed**

tions/support zone area included installation of geotextile and crushed stone to serve as a parking area for site personnel and to provide a base for office trailers. The staging and support areas are shown in the initial preconstruction survey drawings performed and prepared by L.K. McLean Associates P.C. (L.K. McLean). A copy of the preconstruction topographic site survey mapping performed by L.K. McLean is provided in Appendix G-1.

Prior to site mobilization, EQNE performed preconstruction sampling in the areas of support zone activities to obtain background analytical data. Site waste characterization sampling was also performed, and the analytical results were used for waste profiling, which was reviewed by the disposal firms prior to accepting excavated wastes. The waste characterization sampling work was performed from September 29 to October 1, 2010. The site mobilization and waste characterization samples were analyzed by York Analytical Laboratories, Inc. The analytical results were submitted to EEEPC on October 8, 2010. Background and waste characterization sampling locations and sample analytical results are provided in Appendix H-1.

### **4.7.1 Erosion Control Measures, Clearing and Grubbing, and Security Fencing**

#### **4.7.1.1 Phases 1, 2, and 3 (Main Site)**

SWPPP-related work was performed jointly by Terry Contracting, Inc., and EQNE. The initial work included installation of silt fencing and erosion control features on the main site in accessible areas where no clearing and grubbing was initially required.

A significant amount of clearing and grubbing work was performed around the perimeter of the site and beyond the perimeter of the Main Site's property lines for excavation access. Smaller bushes and trees from the cleared and grubbed areas were chipped and left on site in the designated "no-work area" located on-site, northwest of the Metal Storage Building. Larger trees were cut down to existing grade, trimmed, and relocated to the no-work area. Below-grade grubbed materials, including roots, root balls, and tree trunks were further chipped and left on-site. The subgrade soils at the BB&S site are granular and once a root ball was moved from the ground and the roots chipped, the root ball was visually inspected for residual soils and, if determined to be clean, placed in the no-work area. Once clearing and grubbing was completed in these areas, the remaining erosion and sediment controls specified on the Contract Drawings and in the approved SWPPP (EEEPC Submittal 31A) were installed. EQNE's SWPPP was included as part of the site operations work plan submittal. The SWPPP review is included in the submittal log presented in Appendix E-1.

Concurrent with the clearing and grubbing phase, temporary site security fencing was installed around the sides of the main BB&S site. National Construction Rentals, Inc. (subcontractor to EQNE) installed the temporary fencing to secure the remedial excavation areas and create the exclusion zone. Once clearing and

grubbing was completed in the northwest corner of the main site, EQNE constructed a new access road, a decontamination station, and a truck staging and weighing area using geo-fabric and crushed stone to process contaminated soils from the site.

#### **4.7.1.2 Phase 4 (West Site, or Off-site Area)**

Clearing and grubbing work was initiated on the Phase 4 or West Site after the remedial excavations and building improvements on the Main Site were completed. The cleared and grubbed materials were chipped and left on the property north of the Phase 4 remediation site. Root balls were transported to the no-work zone at the Main Site. The sediment and erosion control measures identified in the SWPPP (EEEP Submittal 31A) were installed, including a diversion channel to divert runoff away from the swale in the area to be remediated.

In addition to general equipment and manpower mobilization, EQNE collected background and waste characterization samples in the remedial areas of the limits of work from September 29 to October 1, 2010. The samples were analyzed by York Analytical Laboratories, Inc. (York), and the results were submitted to EEEPC on October 8, 2010. The analytical results were used for waste profiling and to compare background sample results to post-construction sample results.

The results of the waste characterization sample analytical results performed by York are provided in Appendix H-1.

#### **4.7.2 Contractor Site Services**

EQNE provided site services for the duration of the project, including site security and security fencing (National); traffic controls; field offices and support areas; temporary utilities; erosion, sediment, and surface water controls; disposal of contractor-generated solid waste; noise, odor, dust, and vapor controls; staging/stockpiling and processing areas; survey controls for grades and elevation (L.K. McLean); access roads; decontamination trailers, equipment, and associated pads; and sanitary facilities. EQNE mobilized two field office trailers to the site. One trailer contained an office for the contractor, a conference area, and their general site operations facilities; the other trailer was used as an office by the Engineer (EEEP). Both trailers were furnished with office furniture and an all-in-one copier (facsimile, scanning machine, telephone, and internet access). A third trailer contained a restroom and shower facilities for site workers. The locations of the trailers are identified on EQNE's preconstruction topographic survey provided in Appendix G-1.

Potable water service was not available at the BB&S site. Potable water was provided either in bottles or large holding tanks for use by employees and for the sanitary facilities and showers. Potable water used for remedial activities and dust control was supplied by the Autochem Corporation (Southampton, New York) and delivered and distributed around the site by Terry Contracting and Materials, Inc.

A Health and Safety meeting was held at the start of each workday during the construction phase of the project. EQNE's Site Safety Officer (SSO) was responsible for the day-to-day assessment of potential work hazards and was required to advise EQNE and EEEPC personnel of any known or potential health and safety issues.

#### **4.7.3 Project Surveying Services**

EQNE subcontracted the surveying work associated with the project to L.K. McLean, a professional land surveyor licensed in the State of New York. Documentation of the surveying services included the initial (preconstruction) Site Topographic Survey (East Side), (As-built) End-point Sampling Locations Plan, (As built) Final Excavation Depth and Volume calculations (East Side), As-built Pre-redig Plan (East Side), (As-built) Redig Excavation Plan (East Side), (As-built) Topographic Survey (West Side), End-points Plan (West Side), (As-built) Excavation Plan (West Side), and Final As-built Topographic Survey (East Side). These nine drawings are provided in Appendix G-2. L.K. McLean established the excavation limits based on the Contract Drawings during their first week on site. EQNE and L.K. McLean used the elevations and coordinate system in the Contract Documents. While the above drawings issued by EQNE/L.K. McLean were marked as "As-built," these are noted to be the "Record" drawings for the project.

The building interior improvement details and drawings (three drawings) are provided in Appendix G-3.

#### **4.7.4 Contamination Reduction Zones**

A decontamination pad was constructed in accordance with project specifications at a location near the north side access gates and for personnel close to the CCA Treatment Building. The north decontamination station provided truck decontamination and weighing of the transport vehicles from the main site before transporting waste off the site to the respective disposal facilities. For the Phase 4 remediation area on the west side of Speonk-Riverhead Road, a separate remote or portable decontamination pad and scale was used to decontaminate the transport vehicles, remedial equipment, and personnel exiting the swale work area. Each transport vehicle (including tires) was decontaminated prior to leaving the site to transport hazardous and non-hazardous waste to the respective disposal facility.

During the remediation, EQNE personnel manually removed any gross debris from the remedial construction equipment and transport vehicles to remove any contaminated materials adhering to the surfaces. EQNE then rinsed them using a pressure washer, prior to moving them from the decontamination reduction zone off site. EEEPC's site representatives visually inspected vehicles and other construction equipment exiting the exclusion zones, as well as vehicles that were required to pass through the on-site decontamination station. The wash water used in the on-site decontamination process was subsequently collected in the on-site frac tanks, and then tested for waste profiling and off-site transport and disposal

requirements according to Supplementary Specifications, Section XI, Division 2, Section 02140 – Dewatering and 02223 – Transportation and Disposal.

## **4.8 Access Road and Site Security**

### **4.8.1 General**

EQNE initiated work on site clearing and tree trimming prior to installation of the temporary access road on October 20, 2010. Cut trees and vegetation were reduced to wood chips, which were placed in the no-work zone on the main site.

The temporary access road was constructed using approved geotextile, and stone accordance with EQNE's approved work plan and the Contract Documents. The access road was approximately 200 feet long and terminated in Phase 3 of the remedial work. Installation of the temporary access road was completed on October 24, 2010. Terry Contracting provided equipment support during the construction of the temporary access road.

Two access gates to Speonk-Riverhead Road were constructed at the north end of the main site: one adjacent to the north property boundary and a second just north of the northern-most reach of the hazardous soil.

### **4.8.2 Maintenance of the Access Road and Site Security Fencing**

In accordance with the requirements of the Contract Documents, EQNE provided periodic inspection and maintenance of the access road and site security fencing during the course of the remediation project. This included grading and rolling the access road to prevent ruts and washouts after rain events in order to maintain access to the site. Site fencing was adjusted as needed based on expanded excavation requirements or security issues.

### **4.8.3 Site Security and Sign-in Logs**

During the entire time EQNE was at the site, and as a requirement of the sHASP, daily sign-in logs were required for personnel entering or leaving the site. These logs were also used for security purposes. Copies of the sign-in and security logs are presented in Appendix I.

### **4.8.4 Highway Road Cut Permits**

To perform the remedial work in Speonk-Riverhead Road, a road cut permit was obtained from the Town of Southampton Highway Department. A copy of the Road Cut Permit and Performance Bond obtained by EQNE is provided as Appendix J.



# 5

## Remedial Program Elements

### 5.1 Engineering Services during Remedial Construction

#### 5.1.1 Ecology and Environment Engineering, P.C.

EEEPC provided engineering services during the remedial construction under Work Assignments D004442-22 and D007631-05. EEEPC performed an initial review of the Contract Document, including the Limited Site Data, and other project documents to gain an understanding of the scope of the project.

On August 11, 2010, a scoping meeting was held with EEEPC and NYSDEC personnel at the project site to perform an initial site reconnaissance and review the activities to be performed for the remediation of soils and buildings at the site. Discussions focused on the Scope of Work prepared by NYSDEC and the subsequent work plan and budget to be developed by EEEPC. The initial site visit and reconnaissance report is provided in Appendix C.

EEEPC provided review of the 5-day and 14-day plans submitted as a part of the evaluation to demonstrate whether the contractor had an understanding in the performance of the project scope of work and compliance with the Contract technical specifications. In addition, EEEPC reviewed the shop drawings submitted by EQNE to demonstrate that the products and materials to be installed on the project were consistent to those specified in the technical specifications. Finally, upon completion of the work, EEEPC provided review of the post-construction documentation that demonstrated the contractor had fulfilled the technical and administrative requirements of the Contract Document. A copy of the Project Submittal Log for the work performed by EQNE that was issued to the NYSDEC PM is provided in Appendix E-1.

EEEPC prepared and submitted Daily Observation Reports (DORs) to the NYSDEC PM during the course of the field work. The DORs documented the construction progress at the site and the project's budgetary status throughout the remedial construction period. Each DOR documented the remedial construction monitoring performed during the day, provided photos of major aspects of the work, and presented the results of the community air monitoring program. Copies of the EEEPC DORs for the work performed by EQNE and its subcontractors are provided in Appendix K-1. Project Photos taken by EEEPC during the remedial work performed by EQNE are provided in Appendix L-1.

In addition to the DORs, the EEEPC PM and staff communicated with NYSDEC by telephone on a generally daily basis. EEEPC also prepared and issued agendas in advance of progress meetings. EEEPC conducted the progress meetings at the site every two weeks and provided complete minutes and supportive documentation of each meeting to NYSDEC for record-keeping purposes. Copies of the Progress Meeting Minutes regarding the EQNE Contract Work are provided in Appendix D-1.

During the remediation project, EEEPC worked with NYSDEC to manage and resolve Requests For Information (RFIs) and, when necessary, provide clarifications of the Contract Documents to advance the Contractor's understanding of project, or if requested by the Contractor. Copies of the RFIs issued during performance of the work and their responses are provided in Appendix M. A summary of the project RFIs is provided in Section 5.4.1 and presented in Table 5-1.

EEEPC issued Field Orders (FOs) to EQNE or its subcontractors when directed by NYSDEC. The FOs included orders to re-excavate on-site areas where the results of initial confirmation sampling did not meet the SCOs stipulated in the Amended ROD for the site. Copies of the FOs for the work performed by EQNE are provided in Appendix N. A summary of the project FOs is provided in Section 5.4.2 and presented in Table 5-2.

EEEPC evaluated the Proposed Change Orders (PCOs) generated by the Contractor or NYSDEC to determine if they were appropriate and to describe any additional work not covered by the original scope of work for the project. EEEPC evaluated each PCO for cost and time and, if they were appropriate, recommended the PCO to NYSDEC. Once a PCO was executed and completed, the Contractor submitted final costs and time for EEEPC's review. Copies of the PCOs for the work performed by EQNE during the execution of the remedial contract are provided in Appendix O. A summary of the project POCs is provided in Section 5.4.3 and presented in Table 5-3.

If the costs and time for an individual PCO was acceptable, they were included in a final project Change Order (CO), which was submitted to NYSDEC for approval and then to the New York State Office of the State Controller for acceptance and payment of funds. The project COs related to the Contract are discussed in greater detail Sections 7.6.1 through 7.6.3. Copies of the COs for the project are provided in Appendices P-1 and P-2.

EEEPC reviewed the contractor's completed bid items and quantities in the monthly Contractor Application for Payment (CAP). This included field confirmation of the project quantities requested in the CAP and review of the Contractor's and Subcontractors' certified payrolls to provide compliance with the New York State Department of Labor's accepted wage rates for the BB&S project. Contractor payments and certified payrolls are discussed in greater detail in Sec-

tions 7.6.4 and 7.6.5. Copies of the CAPs for the work performed by EQNE for the remedial contract are provided in Appendix Q.

EEEPC also provided oversight and document review for work performed by the NYSDEC Standby Callout Contractor (EnviroTrac Ltd.) and the Standby Callout Laboratories (H2M Labs, Inc., and TestAmerica Laboratories, Inc.). These callout support services provided rapid response actions when quick decisions by the NYSDEC PM were needed in order to move ahead with construction so as not to impact EQNE's work or schedule. EEEPC provided independent validation of the analytical data provided by TestAmerica Laboratories, Inc., and H2M Labs, Inc., NYSDEC's Standby Callout laboratories. The analytical data validation work performed by EEEPC is discussed in Section 6.3.

### **5.1.2 YU & Associates, Inc., Services**

To support EEEPC, a sub-consultant, YU & Associates, Inc. (Elmwood Park, New Jersey), a New York State-certified minority- and women-owned business enterprise (MBE/WBE), assisted in providing engineering services during construction.

## **5.2 NYSDEC Standby Callout Contractor Services**

### **5.2.1 Remediation Services Provided By EnviroTrac Ltd.**

EnviroTrac Ltd. (EnviroTrac), a New York State Standby Callout Contractor, provided environmental support services for the BB&S site remedial project under Callout Order No. 117839. EnviroTrac provided specific remedial services prior to and during the remedial work, including (a) additional groundwater sampling of previously unknown wells discovered on site (southeast well); (b) soil sampling in suspect areas where the site owner had tracked soils beyond the limits of work (north property line); and (c) movement of miscellaneous lumber and supplies not accounted for in the Contract Scope of Work from areas of proposed work left over by the property owner. EnviroTrac also provided regrading services and site restoration for the Phase 4, or West area, and the improvements to the north and south on-site retention ponds on the Main site.

The work performed by Envirotrac at the BB&S site is discussed in Sections 7.7.7, 7.7.8, 7.7.9, 7.7.12, 7.7.13, and 7.7.14.

### **5.2.2 TestAmerica Laboratories, Inc., and H2M Analytical Services, Inc.**

TestAmerica Laboratories, Inc., and H2M Analytical Services, Inc., NYSDEC's Standby Callout Laboratories, provided analytical support services for the BB&S site remedial project in support of the contract work performed by EQNE under the remedial contract. Additional details regarding the services performed by the Standby Callout Laboratories are presented in Sections 6.2 and 6.4.

### **5.3 Project Administration**

#### **5.3.1 Progress Meetings**

Progress meetings were held bi-weekly at the project site; if needed, the meeting dates were adjusted for the convenience of the primary stakeholders. Attendees typically included representatives of NYSDEC, EQNE, EEEPC, subcontractors and other parties to the project, as required. The meetings were held on-site within the Contractor's Field Office during the construction period. EEEPC prepared and distributed an agenda for each meeting and provided a sign-in sheet for documentation purposes. EEEPC recorded the minutes of each meeting and distributed draft copies to the attendees. Comments were received and reviewed before being finalized. Final copies were then distributed to the attendees before or at the next scheduled progress meeting.

A total of 16 progress meetings were held with EQNE during the course of the project. Copies of the progress meeting minutes are presented in chronological order in Appendix D-1.

#### **5.3.2 Submittal Reviews**

As previously discussed, Supplementary Specifications, Section XI, Division 1, Section 01011 – Submittals provided requirements for the preparation and submittal of the materials, equipment, and methods related to the BB&S remedial construction and restoration. EQNE prepared and submitted project plans and shop drawings in general compliance with these requirements, and revised and resubmitted in a timely manner those which were found to be deficient. Submittals were reviewed for general conformance with the Contract Documents, including the plans and technical specifications. EQNE submitted a total of 13 project plans and/or Contract-required submissions and 31 individual shop drawings for EEEPC review and approval. EEEPC's site representative and PM determined whether to reject the shop drawings or to approve them, with or without conditions. Copies of the submittals and a Submittal Log were maintained by EEEPC throughout the course of the project and are presented in Appendix E-1.

### **5.4 Contract RFIs, FOs, and PCOs**

#### **5.4.1 Requests for Information**

Requests For Information (RFIs) for clarification or interpretation of the Contract Documents were prepared by the Contractor, EEEPC, or NYSDEC. Each RFI was addressed by the party it was directed to and then evaluated by EEEPC. A total of 22 individual RFIs were submitted to EEEPC and are summarized in Table 5-1. Copies of the RFIs and an RFI Log were maintained by EEEPC throughout the course of the project and their responses are presented in Appendix M.

**Table 5-1 BB&S Treated Lumber Site RFI List Summary**

RFI Number	Date Received	Description
001	9/8/2010	<b>Requested by EQNE</b> – Additional information on the status of the removal of the recovery well pumping line.
002	10/21/2010	<b>Requested by EEEPC</b> – Means and methods of performing the road crossing on Speonk-Riverhead Road issued to EQNE.
003	10/5/2010	<b>EQNE requested the site SCO information from NYSDEC. NYSDEC provided the SCOs from the BB&amp;S Amended ROD (Table 2, page 25).</b>
004	10/6/2010	<b>Requested by EQNE</b> – CCA Building wastes – per EQNE, the Bid Item LS-6 does not include transportation and disposal of the wastes removed from the CCA Treatment Building. EQNE requests clarification for wastes transported and disposed under Bid Item UC-5.
005	10/7/2010	<b>Requested by EQNE</b> – Clarification and confirmation as a result of Progress Meeting #1 that personnel documentation samples (air) will be limited to arsenic, chromium, trivalent chromium, hexavalent chromium, copper, zinc, and particulate.
006	10/8/2010	<b>Requested by EQNE</b> – Have NYSDEC contact local water department or department of health to assist in locating potable water for use at the BB&S site.
007	10/8/2010	<b>Requested by EQNE</b> – Request to modify the CAMP procedures.
008	11/16/2010	<b>Requested by EQNE</b> – Issues with the Frame Building on site: 1. What to do with the building supplies on the racks. 2. Regarding no existing columns on the south side, causing unsafe conditions if material racks are removed for remediation.
009	12/14/2010	<b>Requested by EQNE</b> – The Frame Storage Building concrete floor extends into the excavated area (marked “existing dirt floor”) for a 15 foot by 15 foot area. As this is not “existing dirt” as depicted on the detail (Contract Drawing 16), EQ is assuming this area is not to be excavated (consistent with the “existing concrete floor”, which is not being excavated). Map was attached.
010	1/3/2011	<b>Requested by EQNE</b> 1. Backfill will occur at a slow and deliberate rate while other activities continue. There will be days with little or no backfill activities. To have a soil testing engineer on call or on-site each day is not effective. 2. EQ requests to proceed backfilling per the contract (lifts and rolled), with compaction tests at the time of final grading. Risk associated with completing testing later will be borne by Contractor. 3. Also, is 90% compaction, as discussed, acceptable opposed to 95%, which seems to be overdesigned for the site?



Table 5-1 BB&amp;S Treated Lumber Site RFI List Summary

RFI Number	Date Received	Description
011	1/17/2011	<p><b>Requested by NYSDEC/EEEPC</b> – In review of the final verification or confirmatory sampling requirements in the Supplementary Specifications, the post-excavation samples require 24 hour turn-around-time (TAT). This requirement is critical where additional digging is required to achieve cleanup objectives at the site, specifically in Phases 1, 2, 3, and off-site (West of Speonk-Riverhead Road).</p> <p>In the hazardous waste excavation areas around the three building at the site, the excavation depth requirements are currently established per the Contract Drawings. No further digging is required once the bottom depth is achieved and confirmed upon survey. In this case, no rapid TAT of the sample analysis is required, but only regular or standard TAT of the analysis for final documentation of the levels of contamination that will remain at the site.</p> <p>We are requesting a cost per sample associated with standard TAT analysis for the documentation samples performed in the on-site hazardous waste removal areas only.</p>
012	3/16/2011	<p><b>Requested by EEEPC</b> - Outfall Drain Line for the Drip Pad Building Section Z-Z' and Floor Drain Pipe Detail:</p> <ol style="list-style-type: none"> <li>1. Explain the procedure for the installation of the 4 inch pipe through the exterior foundation wall of the Drip Pad Building.</li> <li>2. If the EQNE procedure is to saw cut or core the foundation wall, what material will be used to watertight seal the interstitial space around the pipe to the wall so contamination is not able to pass from behind the foundation wall to the exterior in this area?</li> <li>3. What type of material will be used for bedding? Submittal will be required on the structural fill materials to be used. See Contract Drawing Sheet 16 of 19 – Floor Drain Pipe Detail</li> <li>4. Submit structural fill compaction requirements. DOT backfill requirements around culverts and pipes are listed in the NYSDOT Spec Manual under 203-3.15.</li> <li>5. Who is the provider and what is the design mix of the Class A concrete? The compressive strength of Class A concrete is expected to meet the minimum compressive strength requirements per the Contract Document Standard Specifications 00002 – Concrete.</li> <li>6. Is the 6" by 6" WWF epoxy coated or uncoated?</li> </ol>

**Table 5-1 BB&S Treated Lumber Site RFI List Summary**

RFI Number	Date Received	Description
013	4/12/2011	<p><b>Requested by EQNE</b> – Excavation activities will resume April 18, 2011. This includes the hazardous soil south and west of the Frame Storage Building. Additional information is required prior to excavation and restoration in the vicinity of the Frame Storage Building.</p> <ol style="list-style-type: none"> <li>1. There is a concern regarding the subgrade condition and/or presence of footings below the Frame Storage Building roof support columns. Please note that a 3-foot excavation is required immediately adjacent to several of the columns on the west and southwest side of the building. The 3-foot excavation will likely undermine the columns.</li> <li>2. Exposed exterior wood at the base of the south and west walls of the Frame Storage Building are rotted and/or not present at all. As such, there are no existing concrete slabs to attach the ½ inch thick expansion joint material, and any wood at the base of the exterior walls is either not present or too rotted to attach to the ½ inch thick expansion joint material.</li> </ol>
014	4/27/2011	<p><b>Requested by EQNE</b> – How will the SE site corner drainage be handled?</p>
015	4/29/2011	<p><b>Requested by EQNE</b> – The geo-membrane installation subcontractor, Chenango, arrived on site on April 28, 2011 to start the initial phases of the work (drilling holes for batten/bolt installation). They took several photographs of conditions not evident until excavation around the structures was completed. The photos are attached, with Chenango's notes. Most notable are the following changed conditions:</p> <ol style="list-style-type: none"> <li>1. Irregular concrete protrusions from under the CCA Building (see photos 112, 113, 131, 132). These protrusions will not allow the geo-membrane to be installed per the contract drawings.</li> <li>2. Concrete in some areas is of poor quality not allowing for batten attachment and/or proper seal. Cracks, rounded corners, scaled or missing concrete will void any guarantee regarding leaking behind the geo-membrane. In some instances, concrete is not even present. (See photos 113, 114, 116, 124, 129)</li> </ol>
016	5/5/2011	<p><b>Requested by EQNE</b> – Contractor requests clarification regarding the need to install the geo-membrane liner at Frame Storage Building. Section A-A' on Contract Drawing 11 shows a geo-membrane layer on the south side of the Frame Storage Building. However question and answer #60 of Addendum #1 states that geo-membrane should be installed at the Drip Pad, CCA, and Office Building excavations, and "At other building locations, install only where structural foundations contact contaminated soil...." No structural foundations exist at the Frame Storage Building, which is why it was not included in the list of buildings where the geo-membrane should be installed.</p>

**Table 5-1 BB&S Treated Lumber Site RFI List Summary**

RFI Number	Date Received	Description
017	5/12/2011	<b>Requested by EQNE</b> – Clarification on the stone to be used at the Drip Pad Building: 1. The specification for stone gradation is for light stone protection. The specification allows stones up to 110 pounds. EQ assumes the size preference is 6”, not 12”. 2. Please verify that the cost of the stone to be used is paid for under Line Item UC-13.
018	5/20/2011	<b>Requested by EQNE</b> – Guidance on the disposition of the continued ponded water that is occurring on the south and east side of the Metal Building (southeast corner of site).
019	6/1/2011	Additional placement of erosion control product on Phase 3 and 4 areas.
020	6/14/2011	<b>Requested by EQNE</b> – Clarification on the monitoring well –related contract line items: LS-9: How many monitoring wells are to be installed and where? UC-9: Please locate the monitoring wells to be decommissioned UC-15: Which wells get the tags, locks, and keys? UC-16: Which wells get protective casings? Additional placement of erosion control product on Phase 3 and 4 areas.
021	7/19/11	Without the Phase 4 area being backfilled, during storm events similar to last night (2”/hr.), the runoff/ run-on water overwhelms the drainage in place, curbs, erosion controls and diversion swale. With the current weather more storms can be expected each night with additional damage accompanying each until this issue is addressed. At this point, the bulk of the backfill material nearest the road in Phase 4 has been displaced over the first 60-100 feet of the open excavation in Phase 4, which will increase the soil quantities when the area is redug.
022	6/14/2011	Fencing subcontractor recommends that permanent fence post holes be advanced to three foot depth only. Four foot deep post holes will result in “floating effect in excess concrete, whereby posts will risk (float) in at uneven depths and tilted angles. The bottom of the posts should sit on the solid ground, three feet deep. Maps attached to the RFI.

The responses to the 22 RFIs resulted in two Proposed Change Orders (PCOs). Details of the PCOs resulting from the RFIs are discussed in Section 5.4.3.

#### 5.4.2 Field Orders

A total of 17 Field Orders (FOs) were issued by EEEPC as directed by the NYSDEC in response to (a) changes in field conditions that required additional direction or (b) where additional excavation work was required to meet the project SCOs. The FOs were issued for no-cost items only. Descriptions of each FO are

provided in Table 5-2. Copies of the FO log and the individual FOs are presented in Appendix N.

**Table 5-2 BB&S Treated Lumber Site Field Order List**

Field Order Number	Issue Date	Description
001	11/30/2010	Re-excavation of previous end-point sampling locations EP-3, EP-4, EP-8, EP-9, EP-10/EP-21, and EP-19. Additional re-excavation performed on EP-9A, which was above the SCOs.
002	12/13/2010	Re-excavation of end point sampling locations EP- 23, EP-24, EP-25, and EP-28.
003	12/15/2010	Re-excavation of end point sampling locations EP-91, EP-100, EP-102, EP-97, EP-141, EP-144, and EP145.
004	12/20/201	Re-excavation of end-point sampling locations EP-198, EP-199, EP-201, EP-202, EP-204, and EP-205.
005	12/21/2010	Re-excavation of end-point sampling locations EP-270, EP-277, EP-275, EP-285, EP-290.
006	12/22/2010	Re-excavation of end-point sampling locations EP-110, EP-112, EP-113, EP-153, EP-174, EP-175, EP-177, EP-178, EP-228, EP-247, EP-231, EP-233, EP-242, EP-256, and EP-249.
007	1/4/2011	Re-excavation of end-point sampling locations EP-9ASW, EP-145, EP-201, EP-202, EP-213, and EP-215.
008	1/5/2011	Re-excavation of end-point sampling locations EP-251, EP-252, EP-338, EP-344, EP-345, EP-346, EP-347, EP-350, EP-353, and EP-204A.
009	1/10/2011	Re-excavation of end-point sampling locations EP-201-A, EP-204-A, EP-213-A, and EP-346.
010	2/1/2011	Winter demobilization
011	4/28/2011	Concrete encasement of the Drip Pad Drainline
012	6/3/2011	Re-excavation in Phase 3 – Use methods for expeditious excavation as discussed in Progress Meeting #10.
013	6/16/2011	Second round of redigs in Phase 3. Same expeditious excavation work per discussions at Progress Meeting #10.
014	7/25/12	Re-excavation of end-point sampling locations in the Phase 4 Off-site locations.
015	8/3/11	Next round of re-excavation of end-point sampling locations in the Phase 4 off-site locations.
016	8/10/11	Next round of re-excavation of end-point sampling locations in the Phase 4 off-site locations.
017	8/17/11	Next round of re-excavation of end-point sampling locations in the Phase 4 off-site locations to finish.

Each of the 17 FOs issued by EEEPC were included in a PCO. The FOs were primarily issued for re-excavation work in each of the phases of the project to achieve the SCOs.

#### 5.4.3 Proposed Change Orders

A total of 23 PCOs were issued by the project. Each PCO was developed by EQNE, EEEPC, or NYSDEC based on changes in conditions or additional activities required at the site to achieve the contract requirements. Each PCO was reviewed by EEEPC after discussions with both NYSDEC and the Contractor's PM. PCOs were either rejected or approved by the Project Engineer and then implemented by the Contractor, or tabled for future consideration in accordance with the General Conditions of the Contract Documents. The PCOs are summarized in Table 5-3. Copies of the individual PCOs and a complete PCO Log are presented in Appendix O.

**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
001	EQNE	9/29/10	Replacement of the Main Gate for security and safety reasons. Recommended at Progress Meeting #1 that two cost to be prepared – first for repair and improvement and the second for replacement. NYSDEC to evaluate and select on basis of review.
002	EEEPC	10/26/10	Additional soils excavation work at the southeast corner of the BB&S Site.
003	EQNE	10/28/10	Movement of wood and debris for Phase 1 and 2 areas to the "No work zone."
004	EEEPC	12/20/10	Additional re-excavations above the SCOs. To be determined by EEEPC Field Inspection Team and confirmed by EQ Superintendent. Time and Material costs to be tracked by EEEPC inspector and EQNE Superintendent.
005	EEEPC	12/20/10	Additional work for the removal of wall board in the CCA Treatment Building. To be determined by EEEPC Field Inspection Team and confirmed by EQ Superintendent.
006	EQNE	1/13/11	Additional work by EQNE to be performed during times only for "adverse weather conditions." The use of EQ time, equipment, and materials to be determined by EEEPC Field Inspection Team and confirmed by EQ Superintendent.



**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
007	EQNE	1/28/11	PCO #007 is requested by EQNE (D. Cirolì) pursuant to a site changed condition. An approximate 40 foot by 40 foot concrete slab was uncovered in an excavation area adjacent to the CCA Treatment Building, not previously identified on the Contract Drawings. The labor and equipment were included in the PCO request. EEEPC discussed that the work would be performed with previous out of scope work meaning T&M sheets signed by both parties at the end of the day.
008	EEEP	2/2/11	<p>Provide for the labor, equipment, and materials to perform demobilization / remobilization to and from the remediation site as referenced by Field Order #010 – Winter Shut-down and the conditions provided.</p> <p>The Contract Site Superintendent and Engineer’s Inspector must agree on the time, equipment, and materials used on a daily basis to perform the work required. The T&amp;M costs will then be accumulated for payment under PCO #008. Review of PCO #008 and costs accrued to date by EQNE will be performed as necessary at each Progress Meeting.</p> <p>The PCO work shall be consistent with either the current unit cost measurement and payment items with the project or as prescribed in Section VIII – General Conditions, Article 9 – Changes in the Work and Article 10 - Changes of Contract Price and Time.</p>

**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
009	EQNE	4/7/11	<p>Three utility poles exist in areas to be excavated on the east side of Speonk-Riverhead Road. Two of these are located in a one foot excavation area and the third in a two foot excavation area. While coordinating with Long Island Power Authority (LIPA), in accordance with Contract Drawing 2 – General Notes, LIPA recommends that the poles are supported during excavation immediately adjacent to the poles, despite the fact that excavations are very shallow. LIPA performs the support activities with a bucket type utility truck.</p> <p>Provided is the quote from LIPA to complete the support work. EQ considers this a PCO because:</p> <ol style="list-style-type: none"> <li>1) Excavation depths at the three pole locations are shallow and would not normally require support, and:</li> <li>2) The contractor was requested to “coordinate” with the utility company regarding the possibility of temporary support. Cost of any such support would require a PCO.</li> </ol> <p>LIPA Quote - \$5,274 (3 days x \$1,758/day)  EQ Fee (5%)- \$ 263.70 (3 days x \$87.90/day)  Estimate Total - \$5,537.70 (or \$1,845.90/day)</p>

**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
010	EEEPC	4/11/11	<p>Provide for the labor, equipment, and materials to perform the substitution of compacted structural fill with the encasement of the high-density polyethylene (HDPE) outlet drainage pipe with Class “A” concrete. The encasement shall be the same as the concrete materials that are used to match the existing flooring in the Drip Pad Building at the BB&amp;S Site.</p> <p>Pursuant to section VIII – General Conditions, Article 9.4 – Contractor proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three days of receipt (or issuance) of a Proposed Change Order initiated by NYSDEC (or Contractor) and shall be submitted in accordance with Articles 9, 10, and 11 of the General Conditions. The PCO work shall consistent with either the current unit cost measurement and payment items with the project or as prescribed in Section VIII – General Conditions, Article 9 – Changes in the Work and Article 10 - Changes of Contract Price and Time.</p> <p>The Contract Site Superintendent and Engineer’s Inspector must agree on the time, equipment, and materials used on a daily basis to perform the work required. The T&amp;M cost will then be accumulated for payment under PCO #010. Review of PCO #010 and costs accrued to date by EQNE will be performed as necessary at each Progress Meeting.</p>
011	EQNE	4/29/11	<p>Provided are drawings showing how EQ proposes to form a seal between the existing Frame Building slab and the new slab to be poured. Excavation of the soil under the Frame Building overhang exposed rotted wood and other conditions requiring additional work to form an acceptable seal. A concrete-to –wood (2x8 lumber) seal was discussed previously. The attached drawings present a method to seal the new slab to the existing slab. Though this approach is more desirable than butting the concrete to new 2x8lumber (lumber will eventually rot), please note that the existing Frame Building slab is poor quality, requiring a first and second pour.</p> <p>The additional work involves labor to remove rotted wood, form the “short” 1<sup>st</sup> pour, complete the 1<sup>st</sup> pour, then remove the 1<sup>st</sup> pour forms. This is estimated at 1 day for 2 laborers.</p> <p>Estimated PCO costs by EQNE - \$1,500.</p>

**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
012	EEEPC	5/5/11	<p>Provide for the labor, equipment, and materials to perform the installation of new foundation wall in the southeast corner of the Drip Pad Building to attach the exterior HDPE liner and secure interior waterproofing membrane and asphalt pavement.</p> <p>Pursuant to Section VIII – General Conditions, Article 9.4 – Contractor proposals substantiating the amount and extent of any proposed adjustment in Contract Price or Contract Time shall become due within three days of receipt (or issuance) of a Proposed Change Order initiated by NYSDEC (or Contractor) and shall be submitted in accordance with Articles 9, 10, and 11 of the General Conditions. The PCO work shall consistent with either the current unit cost measurement and payment items with the project or as prescribed in Section VIII – General Conditions, Article 9 – Changes in the Work and Article 10 - Changes of Contract Price and Time.</p> <p>The Contract Site Superintendent and Engineer’s Inspector must agree on the time, equipment, and materials used on a daily basis to perform the work required. The T&amp;M cost will then be accumulated for payment under PCO #012. Review of PCO #012 and costs accrued to date by EQNE will be performed as necessary at each Progress Meeting.</p>
013	EEEPC	6/16/11	<p>Large Catch Basin, Drainage Improvements, and Grading on the west side of the main site.</p> <p>Discussed as part of Progress Meeting #011 &amp; #012. To include some asphalt curbing in the text.</p>
014	EEEPC	6/3/11 FO #012 6/17/11 FO #013	Field Order #012 to perform re-excavations to meet SCOs in Phase 3. To be performed per the requirements discussed in Progress Meeting #010. Field order #13 issued 6/17/11 for addition re-digs after 6 areas still remain over the SCOs.
015	EEEPC	In process	Performance of the work in Phase 4 to the current limits of work. No re-excavations to be performed. Contractor to provide and stockpile materials for restoration by others. Discussed as part of Progress Meeting #011.
016	EQNE	6/1/11	Proposal by EQNE to install Erosion Control Project in the graded and topsoil areas. Approximately 57,000SF of covering prior to seeding application. Cost approximately \$13,100.

**Table 5-3 BB&S Treated Lumber Site PCO List**

PCO Number	Initiated By	Date Received	Topic
017	EEEPC	7/25/11	Field Order #014 to perform re-excavations to meet SCOs in Phase 4. To be performed per the requirements discussed in Progress Meeting #014.
018	EQNE	7/25/11	EQ proposes to use the bridge deck membrane / asphalt process that is currently being installed in the Drip Pad Building to seal the concrete floor in the CCA building that are currently designated to get epoxy coating. The floor in their current condition would otherwise require extensive grinding and preparation and the building roof itself would require repair to stop the leaking in order to allow the application of the specified epoxy coating. Also included is the detail for the protection of the vertical surfaces using plywood and Hilti type anchors and the associated cost break down.
019	EEEPC	8/15/11	Additional Epoxy surface coating on surfaces areas in the CCA Building. Surface areas are beyond the original pay limit in the project plans
020	EEEPC	2/2/12	Over-time reimbursement of EEEPC Staff per Contract
021	EEEPC	2/22/12	Survey Credit for incompleteness of site ALTA survey document
022	EEEPC	2/22/12	Contractor failure to provide As-Built (Redline) Drawings per Contract
023	EEEPC	2/22/12	Acceptance of Change in Revision of Section VII Appendix A, dated December 2011

Nineteen of the 23 PCOs developed for the project resulted in cost change items. The changes in costs for the project are discussed in Section 7.6.2 and Appendix O.

## 5.5 Changes to the Project Scope

Changes to the project scope of work are discussed in Section 7. For a detailed list and description of each of the scope revisions, refer to executed Change Order Numbers 1 and 2, which are provided in Appendices P-1 and P-2.

## 5.6 Changes to the Project Schedule

The original Contract Time was 300 calendar days to achieve substantial completion and 330 calendar days to achieve Final Completion. With a Notice to Proceed (NTP) date issued on September 13, 2010, the actual Final Completion date was then established as June 9, 2011. Based on schedule changes and/or delays resulting from either adverse weather conditions or changes in the original scope of work (in excavated areas necessary to meet the SCOs), the construction schedule was extended.



Change Order No. 1, which was issued due to adverse winter weather conditions, added 104 additional calendar days to the project schedule at no increase in contract cost. The addition of these days resulted in a revised Substantial Completion date of August 22, 2011, and a revised Final Completion date of September 21, 2011. Change Order No. 1 was executed by the NYS Office of the State Comptroller on September 23, 2011.

Change Order No. 2, which was issued due to changes in the scope of work, added 55 additional calendar days to the project schedule, as follows:

- Re-excavation work in Phases 1, 2 and 3: 24 days;
- Winter demobilization and spring re-mobilization: 13 days; and
- Additional site improvement beyond the Scope of Work: 18 days.

The additional Contract time from Change Order No. 2 resulted in a revised Substantial Completion date of October 16, 2011, and a revised Final Completion date of November 15, 2011. Change Order No. 2 was executed by the NYS Office of the State Comptroller on September 20, 2012.

Based on the two Change Orders that were executed for the project, work was completed in the amended Contract Time.

# 6

## Contaminated Soils Removal and Site Building Improvements

### 6.1 Removal of Contaminated Soils and Materials

Based on the Amended ROD, the primary remedial work at the site involved the excavation, removal, and disposal of contaminated soils on both the “Main” Site (i.e., the BB&S property) and the “West” Site, located downgradient and off the Main Site. Incidental work included the removal of wastes, stabilization of buildings, and securing or capping the surfaces in each building on the Main Site. The incidental work was done to further reduce the movement of contamination to areas on and off the BB&S property. Remedial efforts concerning soil remediation and buildings are discussed in the sections below.

#### 6.1.1 Soils Remediation

The criteria used to determine the disposal requirements for soils contaminated with CCA-derived arsenic and chromium are discussed in Section 2.3.

For the soils remediation, the Contract Documents divided the work into four remediation areas (or phases) based on the levels of contamination previously found. The areas were defined as follows:

- The Main Site areas, which included:
  - Phase 1 – an area of low-level contamination located on the Main Site along the east property boundary.
  - Phase 2 – an area of low-level contamination located near the center of the site but outside the CCA Treatment and Drip Pad Buildings.
  - Phase 3 – an area of low-level contamination located along the northwest boundary of site but outside the areas of the processing buildings.
- On-site Hazardous Boundary Area Soils – this included an area delineated around and inside the three on-site processing and storage buildings (CCA Treatment, Drip Pad, and Frame Storage Buildings). This primarily is the area of the listed F035 hazardous waste (CCA) that was either spent or disposed of without treatment.
- Speonk- Riverhead Road Crossing and Culvert – A public right-of-way area immediately downgradient of the processing and storage buildings. Prior ana-

## **6 Contaminated Soils Removal and Site Building Improvements**

lytical testing has determined that the subsurface soils in the area of the road crossing are hazardous.

- Phase 4, or “West” Site. – This is a downgradient swale area that received the surface water runoff from the road crossing and BB&S site. Based on the results of prior investigative analytical testing, the soils in this area were determined to be hazardous.

Areas of low- and high-level contamination were previously defined by AECOM through the supplemental design investigation and confirmed by analytical results provided by York for waste characterization sampling performed by EQNE.

For the contaminated soil areas, the initial horizontal and vertical extent of the excavation work was defined on the Contract Drawings pursuant to past investigation efforts. The SCO guidance limits were provided in the Contract Documents and are provided in Table 2-1. Details of the work performed in each of the remedial areas are provided in Sections 6.2 through 6.4.

### **6.1.2 Main Site Buildings**

For the building remediation work, the Contract Documents divided the work up generally by buildings. These included the CCA Treatment Building, Drip Pad Building, and Frame Storage Building. The details of the work performed in each building are found in Section 6.5 below.

## **6.2 General Procedures for Soil Remediation Sampling and Analysis**

The analytical results from the end-point/confirmation or documentation sampling were compared to the SCOs for the contaminated soil excavation work. The end-point samples were collected and analyzed in compliance with the analytical QA/QC requirements established in the project specifications. The end-point/confirmation samples were collected following completion of the excavation to the specified limits or after additional excavation following the completion of various phases of the project. The SCO requirements for the on-site and off-site remedial areas are discussed in Section 2.4.

End-point/confirmation sampling was performed for Phases 1, 2, 3, and 4, and the analytical results were evaluated against the site-specific SCOs to determine whether the excavation work was complete or if additional excavation work and sampling/analysis was required. Documentation samples were collected in the Hazardous Waste Boundary area (near Phase 2 on the Main site) and at the Spunk-Riverhead Road crossing once the Contract excavation requirements were achieved. Samples were collected at the final excavation elevation to document the levels of residual contamination for future site management and monitoring purposes.

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End-point/confirmation and documentation samples were collected from remedial excavations at each of the phases using the protocols established in the Contract Documents, Supplementary Specifications, Section XI, Division 1, Section 01425 – Sampling. The samples were collected as follows:

1. Samples were collected from the floor of each excavation area and from sub-areas at a rate not exceeding one sample per 900 square feet. A minimum of one floor sample was collected at each depth interval for stepped excavations.
2. Samples were collected every 30 linear feet along the sidewalls of the excavation areas and sub-areas where the excavation depth changed by 2 or more feet. Samples were collected at mid-depth of the excavation wall.
3. For excavation areas shallower than 2 feet deep, separate sidewall samples were not required. However, samples were collected at the base of the excavations, at a spacing of 30 linear feet, along the excavation perimeter. These samples served as both bottom and sidewall samples.
4. Samples were collected at a spacing of 30 linear feet along the property boundary line for excavations on properties bordering the BB&S property.
5. In the delineated Hazardous Zone, where residual contaminated material remained after completion of excavation, the post-excavation samples were considered to be the final documentation samples. This protocol applied to samples collected along the boundary of the delineated area around the three on-site buildings (referred to as the Hazardous Waste Boundary Area on Contract Document Drawing 5 of 19; see Figure 1-3) and at the Speonk-Riverhead Road crossing (Contract Document Drawing 6 of 19; see Figure 1-4).
6. The final post-excavation samples consisted of five-point composites from either the bottom of the excavation or sidewall, according the sampling protocol. The center point of the five-point confirmation sampling location was surveyed both horizontally and vertically.

Analysis of end-point/confirmation and documentation samples was handled by two analytical laboratories during the remediation project: ChemTech (Mountainside, New Jersey) as a sub-consultant to EQNE, and H2M Labs, Inc. (Melville, New York) (H2M), as the Standby Callout Laboratory for NYSDEC. ChemTech's analytical services started on October 10, 2010, and ended on April 25, 2011. A discussion on the use of H2M for the analysis of end-point/confirmation and documentation for the balance of the project work (April 25 to August 17, 2011) is provided in Section 7.7.11.

Determination of the vertical and horizontal excavation limits based on the Contract Drawings was performed by EQNE's surveyor (L.K. McLean) and reviewed by EEEPC. L.K. McLean provided the grid layout plans and field stakeout for

## **6 Contaminated Soils Removal and Site Building Improvements**

areas to be remediated. Once an initial excavation was completed by EQNE, the sampling locations in the individual sub-areas were reviewed by EEEPC prior to collection by the EQNE's site personnel. End-point/confirmation and documentation sampling locations were surveyed both horizontally and vertically for later inclusion in NYSDEC's Environmental Data program. The samples were then collected and shipped to EQNE's subcontracted laboratory (ChemTech) or NYSDEC's Standby Callout Laboratory (H2M) for analysis. The samples were analyzed using a 24-hour TAT upon receipt by the lab. Once the analytical results were received by EQNE, they were compared by EQNE and EEEPC to the SCOs to determine whether the cleanup goals had been achieved. If the SCOs had not been achieved, additional excavation was necessary. The process continued until the SCOs had been achieved for Phases 1, 2, 3, and 4. Additional discussion on project end-point documentation is found in Section 7.7.1.

In Phases 1, 2, and 3, a total of 447 areas were excavated and first-round end-point/confirmation samples were collected from each location for analysis. Based on a comparison of the analytical results for those samples with the SCOs, 117 of these areas required further excavation. The process continued until the SCOs had been achieved in each of the sub-areas. A total of 564 analyses were performed to achieve the SCOs in Phases 1, 2, and 3. The analytical data packages for the end-point/confirmation samples for Phases 1, 2, and 3 are provided in Appendix H-2. The final end-point/confirmation sample locations and a summary of the analytical results for Phases 1, 2, and 3 are provided in Table 6-1. The surveyed locations of the end-point/confirmation samples are provided on the as-built drawings prepared by L.K. McLean (see Appendix G-2). While drawings issued by EQNE/L.K. McLean were marked as "As-built," these are noted to be the "Record" drawings for the project. The locations of the final sampling points for these project phases and the sample analytical results are provided on Figure 6-1.

For Phase 4, a total of 170 areas were excavated, and first-round end-point/confirmation excavation samples were collected for analysis. Based on a comparison of the analytical results for those samples against the off-site SCOs, 132 areas required further excavation. The process continued until the SCOs had been achieved in each of the sub-areas. A total of 302 analyses were performed in to achieve the SCOs in Phase 4. The analytical data packages for the end-point/confirmation samples for Phase 4 are provided in Appendix H-4. A summary of the final analytical results for the Phase 4 (off-site) area is provided in Table 6-2. The surveyed locations of the end-point/confirmation samples are provided on the as-built drawings prepared by L.K. McLean (see Appendix G-2). The locations of the final sampling points for this project phase and the sample analytical results are provided on Figure 6-2.

Documentation samples had to be collected only for the designated Hazardous Waste Boundary Area and the Speonk-Riverhead Road crossing. EQNE's surveyor provided the final vertical elevations and horizontal coordinates for input into the NYSDEC's Environmental Database program. The samples were then



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collected and shipped to either EQNE's subcontracted laboratory (ChemTech) or NYSDEC's Standby Callout Laboratory (H2M) for analysis. The samples were analyzed per the Callout Contract requirements upon their receipt by the lab. Once the analytical results were received by EQNE, they were included in the project's overall data summary plans for the project.

For the Hazardous Waste Boundary Area, a total of 102 documentation samples were collected for analysis. The analytical data packages for these documentation samples are provided in Appendix H-3. A summary of the analytical results for the Hazardous Waste Boundary Area is provided in Table 6-3. The locations of the final sampling points for this area and the sample analytical results are provided on Figure 6-3.

For the Speonk Riverhead Road crossing remediation, a total of 22 Documentation samples were taken for analysis. The analytical data packages for the Documentation results for Speonk Riverhead Road crossing area are provided in Appendix H-3. The final summarized analytical results from the road crossing area are listed in Table 6-4. The locations of the final sampling points for this area and the sample analytical results are provided on Figure 6-3.

Additional details of the work performed are provided by area in Section 6.4.

### **6.3 Data Validation of Sampling and Analyses**

The analytical data obtained by EQNE from ChemTech was independently validated by Nancy J. Potak (Greensboro, Vermont) in accordance with the requirements of the project-specific Quality Assurance Project Plan (QAPP). This was further confirmed by Preferred Environmental Services, Inc., which provided over quality assurance for EQNE. The DUSRs provided from Ms. Potak were for the analytical test data generated by EQNE from October 29, 2010, through January 5, 2011.

The analytical samples were obtained by EQNE and provided to EEEPC for submission to the NYSDEC Standby Callout laboratory, H2M, for analysis. The Callout laboratory was used to reduce overruns of the bid item costs in the Contract. The analytical data from H2M was independently validated by EEEPC per the project-specific QAPP requirements in the Contract.

The DUSRs for both sets of analytical data are provided in Appendix R. A summary of the DUSRs for the ChemTech analyses performed by Ms. Potak are provided in Appendix R-1, and a summary of the DUSRs for the H2M analyses performed by EEEPC are provided in Appendix R-2.

The data usability review performed by Ms. Potak identified several analytical issues with the initial laboratory packages. These analytical issues were flagged in the final data tables (provided in the DUSR) using standard qualifiers (see Ap-

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pendix R-1). No major concerns were encountered regarding the usability of the ChemTech analytical data.

The DUSRs for the H2M analytical results for end-point samples were independently validated by EEEPC's project chemist according to the requirements of the Contract. Any deviations from acceptable QC specifications are discussed in the DUSRs. Qualifiers were added to the specific data, if appropriate, to indicate potential concerns regarding data usability, and these qualifiers were transferred to the data summary reports presented in Appendix R-2. No major concerns were encountered regarding the usability of the H2M analytical data.

### **6.4 Soil Excavation Details**

#### **6.4.1 Excavation of Nonhazardous Soils: Phases 1, 2, and 3**

A preconstruction topographic survey was performed in the remedial areas of the site to confirm the site grades (see Appendix G-1). Remedial areas were then sampled for waste characterization purposes. See Appendix H-1 for the analytical results from the waste characterization sampling program for Phases 1, 2, and 3.

Each of the delineated areas was then excavated to the depths indicated on the Contract Drawings. Excavation of contaminated soil in Phase 1 began on October 28, 2010, with the removal of the contaminated soils along the southeast property line. The horizontal and vertical limits of excavation were then re-established by EQNE's surveyor, L.K. McLean, in accordance with the coordinates and excavation limits shown on the Contract Drawing.

Once the excavation of soil was completed in a designated area, the surveyor measured the final excavation elevations and the horizontal extent of the excavations to calculate the volume of soils removed. When the final excavation depth was achieved, end-point/confirmation samples were collected in accordance with the criteria established in the Supplementary Specifications, Section XI, Division 1, Section 01425 – Sampling. The samples were then shipped to EQNE's subcontracted laboratory (ChemTech) for analysis with a 24-hour TAT. The same shipping and analytical methods were used for the samples sent to H2M.

Upon receipt of the analytical results, they were compared with the project SCOs for arsenic (16 mg/kg), chromium (50mg/kg), and hexavalent chromium (19 mg/kg). When the results were equal to or below the SCO requirements, the excavation work was complete. If the analytical results exceeded any parameter of the SCO, then the area was rescheduled for additional excavation work, re-sampling, and analysis. At the direction of NYSDEC, EEEPC issued a number of FOs for additional excavation work. When the analytical results from the initial excavations identified elevated levels of arsenic, chromium, or hexavalent chromium, EQNE was directed to perform addition excavation work in designated areas of the site. The excavation and removal of contaminated soils to the stockpile area was repeated, end-point/confirmation samples were again collected and analyzed, and the results were compared with the site SCOs. Resurveying of the new

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bottom or sidewall elevations was performed as part of the project documentation protocols. The excavation and surveying work continued until the SCOs had been met in each area in Phases 1, 2, and 3.

In Phases 1, 2, and 3, a total of 447 areas were excavated and first-round end-point/confirmation samples were collected from each location for analysis. Excavation and sampling was to continue until the delineated areas in Phases 1, 2, and 3 met the project SCOs.

Comparisons of the analytical results for Phases 1, 2, and 3 to the respective SCOs are provided in Appendix H-2 and in Table 6-1. The surveyed locations and final depths for the end-point/confirmation samples are provided in Appendix G-2.

The analytical results for the documentation samples were validated through the DUSR process. The validation of the analytical data indicated the proper execution of the analytical process. The DUSRs for the end-point/confirmation samples for Phases 1, 2, and 3 are provided in Appendix R-1.

The excavated soils were stockpiled in the northwest area of the site prior to being transported to disposal facilities. The stockpile areas were established using high-density polyethylene (HDPE) liners and covered with a plastic at the end of each work day. The soils were then loaded onto individual transport vehicles, which were weighed on site and manifested to the permitted disposal facility. The non-hazardous soils excavated from Phases 1, 2, and 3 were transported to and disposed of at the Town of Brookhaven Landfill, in Brookhaven, New York.

The total volume of non-hazardous soils removed was approximately 11,346 cubic yards, which is approximately 9% above the bid quantity of 10,400 cubic yards.

### **6.4.2 Excavation of Hazardous Soils: Hazardous Waste Boundary Area**

Waste characterization sampling was performed by EQNE in the Hazardous Waste Boundary Area to determine the proper disposal requirements for soils excavated from that area per Contract Documents. The analytical results for the waste characterization sampling confirmed that the soils in specific areas were hazardous (see Appendix H-1).

A preconstruction topographic survey was performed to confirm the existing site grades and to enable the calculation of the volume of contaminated soils removed for payment. Each of the delineated areas was then excavated to the depths indicated on the Contract Drawings. Excavation of contaminated soil from this area began on April 28, 2011, when contaminated soils along the west side of the CCA Treatment Building were removed. As in the previous phases, the horizontal and

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vertical limits of excavation were then re-established by EQNE's surveyor, L.K. McLean, in accordance with the Contract Drawings.

Unlike the excavations performed in Phases 1, 2, and 3, the excavations in the Hazardous Waste Boundary Area were considered complete when the vertical limits from the Contract Drawings had been reached. The impacted soils that remained in this area are to be monitored and managed under NYSDEC's site management program and in accordance with the Amended ROD.

The samples collected at the bottom and along sidewalls were considered documentation samples. These samples were shipped to NYSDEC's Standby Callout Laboratory (H2M) for analysis on a 24-hour TAT per the original contract requirements.

The excavated hazardous soils were temporarily stockpiled on a HDPE liner and covered within a segregated area in the northwest area of the Main site prior to transport and off-site disposal. The soils were loaded onto individual transport vehicles, which were then weighed and manifested to the approved permitted disposal facility. The Hazardous Waste Boundary Area soils were transported to and disposed of in Waste Management's Secure Hazardous Waste Facility in Model City, New York.

Table 6-2 presents the analytical results for the final documentation samples in comparison to the On-site SCOs. The remedial objectives for this area were to excavate to a specified depth only and not to meet the SCOs. No plastic or demarcation liners were placed at the final excavation depth per the Contract Documents for this area. The surveyed locations and final depths for the documentation samples are provided in Appendix G-2.

The analytical results for the documentation samples were validated through the DUSR process. The validation of the analytical data confirmed the proper execution of the analytical process. The DUSRs for the documentation samples from this area are provided in Appendices R-1 and R-2.

### **6.4.3 Excavation of Hazardous Soils: Speonk-Riverhead Road Crossing Right-of-Way**

The analytical results obtained during the remedial investigation phase showed that the soils in the Speonk-Riverhead Road crossing right-of-way were hazardous and required excavation and disposal as a hazardous waste.

As required by the Town of Southampton Highway Department, EQNE had to obtain a road cut permit before work was performed in the right-of-way of the road. A copy of the permit is provided in Appendix J.

A preconstruction topographic survey was performed to confirm the existing site grades and to enable the calculation of the volume of contaminated soils removed

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for payment. Each of the delineated areas was then excavated to the depths indicated on the Contract Drawings. Excavation of contaminated soil from this area began on June 1, 2011.

The horizontal and vertical limits of excavation were re-established by EQNE's surveyor, L.K. McLean, in accordance with the coordinates and excavation limits shown on the Contract Drawing. The lower vertical elevation was specified in the Contract Documents to be the final elevation of the remedial excavation work to be performed in this area. The soils that remain in this area are to be monitored and managed under NYSDEC's site management program in accordance with the Amended ROD.

Following the completion of excavation, documentation samples were collected. The documentation samples were shipped to NYSDEC's Standby Callout Laboratory (H2M) for analysis on a 24-hour TAT.

Once the documentation samples from the required depth had been collected, a layer of plastic was placed in the bottom of the excavation per the Contract Documents. The plastic serves as a demarcation layer to show where the excavation was completed, in case any future highway maintenance and excavation work has to be performed here by the Town of Southampton.

The excavated hazardous soils were temporarily stockpiled and covered in a segregated area in the northwest area of the Main Site prior to transport and off-site disposal. The soils were loaded onto individual transport vehicles, which were then weighed and manifested to the permitted disposal facility. The hazardous soils stockpiled from this area were transported to and disposed of in Waste Management's Secure Hazardous Waste Facility in Model City, New York.

After excavation of the soils was completed in each of the designated areas, the surveyors obtained final excavation elevations and the horizontal extent of the excavation. This data was used to calculate the volume of soils removed and document the volume for payment. The total volume of hazardous soils excavated and disposed of is provided at the end of Section 6.4.4.

Table 6-3 presents the analytical results for the final documentation samples in comparison to the off-site SCOs. The remedial objectives for this area were to excavate to a specified depth only and not to meet the SCOs. The surveyed locations and final depths for the documentation samples are provided in Appendix G-2.

The analytical results of the documentation samples were validated through the DUSR process. The validation of the analytical data confirmed the proper execution of the analytical process. The DUSRs for the documentation samples for this area are provided in Appendix R-2.



## **6 Contaminated Soils Removal and Site Building Improvements**

Following installation of the demarcation layer, pipe culvert and precast catch basins were installed as required in the Contract Documents. The excavation was then backfilled with select stone and compacted to the requirements per the Contract Documents. Compaction test results are provided in Appendix S-1. After backfill compaction, the sub-base (NYSDOT Type 3) and base layer (NYSDOT Type 6) asphalt paving were installed by Terry Contracting and Materials per the Contract Document requirements. Compaction results for the base layer and asphaltic paving are provide in Appendix S-1.

### **6.4.4 Excavation of Hazardous Soils: Phase 4**

Phase 4 (i.e., the West Site) is described as an off-site drainage swale downgradient of the Speonk-Riverhead Road crossing discharge. Soils in the swale had been contaminated by runoff, which transported contaminants from the upgradient treatment process areas. The analytical results obtained during the remedial investigation phase indicated that the soils in Phase 4 were hazardous. The waste characterization analysis confirmed that these soils required disposal at a hazardous waste facility.

As in the previous phases of work involving hazardous soils, the horizontal and vertical limits of excavation were re-established by EQNE's surveyor, L.K. McLean, in accordance with the Contract Drawings.

Following excavation work, end-point/confirmation samples were collected and shipped to NYSDEC's Standby Callout Laboratory, H2M, for analysis on a 24-hour TAT. The analytical results were then compared with the off-site SCOs. Unlike the other project excavations involving hazardous soils, the excavations in Phase 4 continued until the off-site SCOs had been achieved. When the analytical results exceeded the SCOs, FOs were developed to perform additional excavations to achieve the SCOs. FOs 014, 015, 016, and 017 were required for the additional excavation work in Phase 4.

The excavated hazardous soils from Phase 4 were temporarily stockpiled and covered in a segregated area in the northwest area of the Main Site prior to transport and off-site disposal. The soil was loaded onto individual transport vehicles, which were then weighed and manifested to the permitted disposal facility. Hazardous soils excavated from Phase 4 were transported to and disposed of in Waste Management's Secure Hazardous Waste Facility in Model City, New York.

Table 6-4 presents a comparison of the analytical results for the confirmation samples with the SCOs for this area. The surveyed locations and final depths for the End-point/confirmation samples are provided in Appendix G-5.

The analytical results of the end-point/confirmation samples were validated through the DUSR process. The validation of the analytical data confirmed the

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proper execution of the analytical process. The DUSRs for the end-point/confirmation samples from this area are provided in Appendix R-2.

Once the excavation work was completed and the sample analytical results confirmed that the project SCOs had been achieved, approved imported common fill was delivered to the site to begin backfilling, site grading, and restoration. Site restoration and compaction testing for the Phase 4 area was performed by Enviro-Trac and is discussed in Sections 7.4.1 and 7.4.2.

Following the completion of excavation work, the horizontal and vertical limits of excavation were re-established by EQNE's surveyor, L.K. McLean, in accordance with the Contract Drawings, and used to calculate the volume of soils removed.

Based on the final site surveys, the total volume of hazardous waste soils removed from the Hazardous Waste Boundary area, the Speonk-Riverhead road crossing, and Phase 4 was approximately 7,640 cubic yards, which is approximately 4.5% below the Contract bid quantity of 8,000 cubic yards.

### **6.5 On-Site Building Remediation and Improvements**

#### **6.5.1 CCA Treatment Building Remediation and Improvements**

During the RI, the CCA Treatment Building was identified as the primary source of CCA contamination at the BB&S site. Prior to remediation, the building housed six vertical holding tanks, which stored the CCA solution used to treat raw lumber. The building also housed the building's boiler and the "pilot" reverse osmosis equipment that had been used as part of the groundwater remedial trials in the 1990s.

The south side of the building consisted of a diked concrete foundation area for the vertical tanks. A below-grade, concrete-lined lumber-soaking pit was located on the north side of the tank storage area. The soaking pit extended to the north end of the building, where the lumber was removed after treatment and placed on rail cars for transfer to the Drip Pad Building for stacking and drying.

As detailed in the Contract Documents, the remedial and building restoration work to be performed in the CCA Treatment Building included:

- Cleanup of debris in and around the building;
- Removal, decontamination, and off-site disposal (via metal recycling) of the deactivated boiler and reverse osmosis equipment;
- Demolition, dismantling, and disposal (via metal recycling) of the six empty vertical tanks housed in the CCA Treatment Building;
- Cleaning and dewatering of the soaking pit;

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- Removal and disposal of any remaining contaminated wall board in the building;
- Installation and placement of flowable concrete in the soaking pit; and
- Installation of a two-layered epoxy-coated surface on the floors throughout CCA Treatment Building and boiler room area.

EQNE's remedial cleanup work in the CCA Treatment Building began on October 5, 2010, and was completed by December 2, 2010. Approximately 59.65 tons of metal debris and waste was taken to Crown Recycling, Inc., in Calverton, New York. The discussion on the bills of lading generated from this work is presented in Section 7.1.1.

Concrete fill was placed in the former lumber-soaking pit on December 29, 2010. The soaking pit was filled to the level of the adjacent grade so that it would not retain rainwater. Concrete cylinders were collected for 7-day and 28-day compression testing. The results of the concrete compression tests are provided in Appendix S-1.

The application of the two-layered epoxy coating (red and gray) to the CCA treatment Building floor was performed on August 29, 2011, to encapsulate the floor surfaces.

During on-site activities in the CCA Treatment Building, additional necessary work was identified, including the removal of additional contaminated wall board (PCO No. 005) and the coating of additional floor area with epoxy (PCO No. 019). Both items were included as PCOs into final Change Order No. 2 for the Contract. In addition, an exterior garage door was removed from the CCA Treatment Building and disposed.

Record drawings regarding the removal, remediation, and restoration in the CCA Treatment Building are provided in Appendix G-3.

### **6.5.2 Drip Pad Building Cleanup and Improvements**

Following the treatment process with CCA, the lumber was taken to the Drip Pad Building, where it was stacked for drying. The Drip Pad Building was an open, pre-fabricated metal-framed building supported by metal columns extending from an exterior concrete foundation wall. The interior metal columns were supported by concrete piers. The roof was made of metal and had gutters and downspouts to handle rain events. The building floor was concrete with embedded metal rails. The rails were used to transport the treated lumber on rail cars around the building during the drying process.

EQNE could not start scheduled work on the Drip Pad Building until the remaining building supplies were removed by the owner. The owner did not respond to

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requests to move the materials; therefore, NYSDEC directed its Standby Callout Contractor, EnviroTrac, to move the remaining building supplies to the “no work zone” at the BB&S site. The movement of the building supplies to the “no work zone” was completed by EnviroTrac on November 5, 2010.

As detailed in the Contract Documents, the remedial and building restoration work to be performed in the Drip Pad Building included:

- Cleanup of debris in and around the building;
- Installation of a new floor surface drain to serve the new floor surface;
- Repair to one interior and two exterior columns;
- Repair of floor cracks and plugging of cracks in the exterior foundation w;
- Installation on an impervious surface to the drip pad floor with positive drainage slopes to the new floor drain;
- Decommissioning of one damaged groundwater monitoring well that had been installed through the Drip Pad floor;
- Installation and attachment of a 40-mil HDPE skirt to the exterior foundation walls of the Drip Pad Building (as well as the CCA Building and Frame Storage Building). The skirt extends a minimum of 6 feet from the buildings foundations and to the height of the top of the foundation wall to reduce the amount of infiltration back through each building foundation;
- Regrading the area outside the exterior foundation walls and placement of stone to provide for positive drainage.

EQNE began work on the removal of the rails in the floor of the Drip Pad Building on November 9, 2010. Work on the floor drain improvements began on January 11, 2011, and was completed on May 12, 2011. Concrete cylinders were taken for 7-day and 28-day compression testing for the concrete encasement for the pipe drain improvements. The concrete compression tests results are provided in Appendix S-1.

The column repairs were performed on July 11, 2011. The foundation crack repairs were completed and the impervious surface coating was applied to the Drip Pad floor surface on July 22, 2011. Groundwater monitoring well RW-1 was decommissioned on June 21, 2011, and monitoring well MW-21 was decommissioned on June 23, 2011. Regrading and stone placement was completed on July 28, 2011.

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Additional work that was performed within the Drip Pad Building during the remedial action included:

- Installation of a partial foundation wall in the southeast corner of the building (PCO No. 012);
- Installation of new gutters and downspouts on the building to control and direct rainfall away from the foundations (PCO No. 013); and
- Installation of a larger catch basin at CB-3A to drop out on-site sediments before discharge to the downgradient swale (PCO No. 013).

Installation of the HDPE skirting was completed for the CCA Treatment and Drip Pad Buildings on June 1, 2011, by Chenango Contracting. The post-construction documentation regarding the panels installed and the welding of each panel is provided in the project submittals (see Appendix E-1).

Record drawings regarding the removal, remediation, and restoration in the Drip Pad Building are provided in Appendix G-3.

### **6.5.3 Frame Storage Building Cleanup and Improvements**

The Framed Storage Building is a wood-framed structure with partial concrete floors. It was used for the indoor storage of building supplies other than treated lumber. The remedial and restoration work for the structure included:

- Removal of the building supplies to the “no work zone” in the central and southern part of the property;
- Removal and disposal of residual garbage left in the building;
- Installation of 40-mil HDPE skirting around south and west sides of the building; and
- Regrading around the building to provide positive drainage.

At the directive of NYSDEC, EnviroTrac moved the property owner’s remaining building supplies to the “no work zone” on the property during project mobilization. EQNE completed the removal of residual garbage and debris on December 1, 2010. Installation of the 40-mil HDPE skirting was completed for the three buildings on June 1, 2011. Final site regrading to provide for positive drainage was completed on August 4, 2011.

The additional work that occurred within the Frame Storage Building during the remedial action included the placement of new concrete and the installation of an anchoring system to attach the 40-mil HDPE skirt to the south and west sides of the building (PCO No. 011).

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Record drawings regarding the removal, remediation, and restoration in the Frame Storage Building are provided in Appendix G-3.



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP1(1FTBG)	BBS- SOEP2(1FTBG)	BBS-SOEP- 3A(1.5FTBG)	BBSOEP3ASW (.75FTBG)	BBDS-SOEP- 4A(1-5FTBG)	BBS- SOEP5(1FTBG)	BBS- SOEP6(1FTBG)
	Date:	10/29/10	10/29/10	12/07/10	12/07/10	12/08/10	10/29/10	10/29/10
	Screening							
	Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	2.59	1.76	3.03	1.24	5.31 J	7.28	15
CHROMIUM, TOTAL	50	3.88	3.57	39	5.23	9.56	7.51	34
CHROMIUM, HEXAVALENT	19	0.111 J	0.113 J	0.37 J	0.46	0.12 J	0.168 J	0.119 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP7(1FTBG)	BBS-SOEP- 8A(2FTBG)	BBS-SOEP- 9C(4FTBG)	BBDS-SOEP- 10A(3FTBG)	BBDS-SOEP- 10ASW (1- 5FTBG)	BBS- SOEP11(1FTBG)	BBS- SOEP12(1FTBG)
	Date:	10/29/10	12/07/10	01/04/11	12/08/10	12/08/10	10/29/10	11/01/10
	Screening Criteria <sup>(1)</sup>							
	Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	16	8.68	5.16	0.87 J	1.97 J	1.31 J	14	0.73 J
CHROMIUM, TOTAL	50	19	10	5.13 J	10	4.31	48	3.71
CHROMIUM, HEXAVALENT	19	0.484	0.38 J	0.38 J	0.41 J	0.46	0.935	0.158 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP13(3FTBG)	BBS- SOEP14(3FTBG)	BBSOEP15(2F TBGSW)	BBSOEP16(2F TBGSW)	BBSOEP17(2F TBGSW)	BBS- SOEP18(1FTBG)	BBDS-SOEP- 19A(1-5FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/01/10	11/01/10	11/01/10	11/01/10	11/01/10	11/01/10	12/08/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.84</b>	<b>1.62</b>	<b>5.22</b>	<b>1.22</b>	<b>1.89</b>	<b>4.76</b>	<b>3.01 J</b>
CHROMIUM, TOTAL	50	<b>9.67</b>	<b>10</b>	<b>11</b>	<b>8.18</b>	<b>12</b>	<b>11</b>	<b>5.49</b>
CHROMIUM, HEXAVALENT	19	<b>0.11 J</b>	<b>0.163 J</b>	<b>0.154 J</b>	0.448 U	<b>0.168 J</b>	<b>0.102 J</b>	<b>0.12 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP20(2F	BBDS-SOEP-	BBDS-SOEP-	BBS-	BBS-SOEP-	BBS-SOEP-	BBS-SOEP-
	Date:	TBGSW)	21A(3FTBG)	21ASW (1-	SOEP22(1FTBG)	23A(1.5FTBG)	24A(1.5FTBG)	25A(1.5FTBG)
	Screening	11/01/10	12/08/10	12/08/10	11/01/10	12/20/10	12/20/10	12/20/10
	Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	3.25	3.76 J	0.72 J	3.03	11	11	8.67
CHROMIUM, TOTAL	50	13	8.57	1.7	9.35	29	22	21
CHROMIUM, HEXAVALENT	19	0.325 J	0.5	0.22 J	0.105 J	0.09 J	0.2 J	0.435 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP26(1FTBG)	BBS- SOEP27(1FTBG)	BBS-SOEP- 28A(2FTBG)	BBS- SOEP29(1FTBG)	BBS- SOEP30(1FTBG)	BBS- SOEP31(1FTBG)	BBS- SOEP32(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/02/10	11/02/10	12/20/10	11/02/10	11/02/10	11/02/10	11/02/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	13	2.57	6.27	4.6	1.05	1.31	1.72
CHROMIUM, TOTAL	50	26	13	50	13	37	9.6	10
CHROMIUM, HEXAVALENT	19	0.922	0.1 J	1.62	0.1 J	17	0.087 J	0.086 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP33(1FTBG)	BBS-SOEP34(1FTBG)	BBS-SOEP-35A(2FTBG)	BBS-SOEP36(1FTBG)	BBS-SOEP-37A(2FTBG)	BBS-SOEP38(1FTBG)	BBS-SOEP-39A(2FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/02/10	11/02/10	11/15/10	11/02/10	11/15/10	11/02/10	11/15/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	2.18	1.78	2.68	1.13	2.96	1.24	4.14
CHROMIUM, TOTAL	50	19	10	12	7.7	17	7.73	21
CHROMIUM, HEXAVALENT	19	0.204 J	0.218 J	0.409 J	0.151 J	0.677	0.194 J	0.453

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP40(1FTBG)	BBS- SOEP41(1FTBG)	BBS- SOEP42(1FTBG)	BBS- SOEP43(6INBG)	BBS- SOEP44(6INBG)	BBS- SOEP45(6INBG)	BBS- SOEP46(6INBG)
	Date:	11/02/10	11/02/10	11/02/10	11/03/10	11/03/10	11/03/10	11/03/10
	Screening Criteria <sup>(1)</sup>							
	Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	16	2.65	1.28	1.09	5.2	7.08	5.42	2.85
CHROMIUM, TOTAL	50	7.67	6.66	5.28	14	20	15	8.45
CHROMIUM, HEXAVALENT	19	0.086 J	0.137 J	0.085 J	0.588	0.222 J	0.171 J	0.224 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP47(6INBG)	BBS- SOEP48(6INBG)	BBS- SOEP49(6INBG)	BBS- SOEP50(6INBG)	BBS-SOEP- 51A(1.5FTBG)	BBS- SOEP52(6INBG)	BBS- SOEP53(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/03/10	11/03/10	11/03/10	11/03/10	11/15/10	11/03/10	11/03/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	3.64	11	12	13	1	9.46	5.03
CHROMIUM, TOTAL	50	8.72	23	24	19	7.05	19	29
CHROMIUM, HEXAVALENT	19	0.382 J	0.386 J	0.693	0.221 J	0.128 J	0.177 J	0.324 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS- SOEP54(6INBG)	BBS- SOEP55(6INBG)	BBS- SOEP56(6INBG)	BBS-SOEP- 57(6INBG)	BBS-SOEP- 58(6INBG)	BBS-SOEP- 59(6INBG)	BBS-SOEP- 60A(1FTBG)
	Date:	11/03/10	11/03/10	11/03/10	11/03/10	11/03/10	11/03/10	11/16/10
	Screening							
	Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	2.41	0.44 J	6.67	1.86	1.58	8.76	2.14
CHROMIUM, TOTAL	50	16	6.16	13	11	8.87	15	11
CHROMIUM, HEXAVALENT	19	0.27 J	0.168 J	0.267 J	0.166 J	0.167 J	0.218 J	0.112 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-61(6INBG)	BBS-SOEP-62(6INBG)	BBS-SOEP-63(6INBG)	BBS-SOEP-64A(1FTBG)	BBS-SOEP-65(6INBG)	BBS-SOEP-66(1FTBGPER)	BBS-SOEP-67(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/03/10	11/03/10	11/03/10	11/16/10	11/03/10	11/10/10	11/10/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.49</b>	<b>7.77</b>	<b>12</b>	<b>1.68</b>	<b>1.61</b>	<b>0.96</b>	<b>0.62 J</b>
CHROMIUM, TOTAL	50	<b>8.2</b>	<b>15</b>	<b>17</b>	<b>9.35</b>	<b>8.15</b>	<b>3.09</b>	<b>2.83</b>
CHROMIUM, HEXAVALENT	19	<b>0.22 J</b>	<b>0.215 J</b>	<b>0.266 J</b>	<b>0.113 J</b>	<b>0.238 J</b>	<b>0.119 J</b>	<b>0.175 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 68A(1.5FTBG)	BBS-SOEP- 69(1FTBGPER)	BBS-SOEP- 70(1FTBG)	BBS-SOEP- 71A(1.5FTBG)	BBS-SOEP- 72(6INBG)PER	BBS-SOEP- 73(1FTBG)	BBS-SOEP- 74A(2FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/16/10	11/10/10	11/10/10	11/16/10	11/10/10	11/10/10	11/16/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.39</b>	<b>1.65</b>	<b>4.19</b>	<b>5.27</b>	<b>2.25</b>	<b>1.4</b>	<b>4.54</b>
CHROMIUM, TOTAL	50	<b>23</b>	<b>3.07</b>	<b>8.47</b>	<b>38</b>	<b>2.96</b>	<b>4.56</b>	<b>40</b>
CHROMIUM, HEXAVALENT	19	<b>0.334 J</b>	<b>0.174 J</b>	<b>0.238 J</b>	<b>0.164 J</b>	<b>0.192 J</b>	<b>0.123 J</b>	<b>0.166 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-75(6INBG)	BBS-SOEP-76(6INBG)	BBS-SOEP-77(6INBG)	BBS-SOEP-78(3FTBG)	BBS-SOEP-79(3FTBG)	BBS-SOEP-80(3FTBG)	BBS-SOEP-81(1.5FTBGSW)
	Date: Screening Criteria <sup>(1)</sup>	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>2.51</b>	<b>0.6 J</b>	<b>0.94</b>	<b>0.36 J</b>	<b>0.88</b>	<b>2.19</b>	<b>0.92 J</b>
CHROMIUM, TOTAL	50	<b>2.52</b>	<b>1.52</b>	<b>3.57</b>	<b>1.28</b>	<b>3.75</b>	<b>6.13</b>	<b>4.51</b>
CHROMIUM, HEXAVALENT	19	<b>0.238 J</b>	<b>0.177 J</b>	<b>0.178 J</b>	<b>0.215 J</b>	<b>0.167 J</b>	<b>0.172 J</b>	<b>0.122 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-82(1.5FTBGSW)	BBS-SOEP-83(1.5FTBGSW)	BBS-SOEP-84(1.5FTBGSW)	BBS-SOEP-85(1.5FTBGSW)	BBS-SOEP-86(1.5FTBGSW)	BBS-SOEP-87(6INBGPER)	BBS-SOEP-88(6INBGPER)
	Date:	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10	11/10/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	1.14	0.41 J	6.6	2.71	0.68	3.26	1.19
CHROMIUM, TOTAL	50	4.63	4.39	15	15	2.84	4.82	3.05
CHROMIUM, HEXAVALENT	19	0.232 J	0.176 J	0.175 J	0.172 J	0.176	0.228	0.173

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-89(6INBGPER)	BBS-SOEP-90(6INBGPER)	BBS-SOEP-91A(6INBG)	BBS-SOEP-92(1FTBG)	BBS-SOEP-93(6INBG)	BBS-SOEP-94(6INBG)	BBS-SOEP-95(6INBG)
	Date:	11/10/10	11/10/10	12/20/10	11/10/10	11/12/10	11/12/10	11/12/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	2.2	7.74	1.71	3.46	1.86	9.53	4.81
CHROMIUM, TOTAL	50	3.18	9.15	8.07	8.26	13	19	8.3
CHROMIUM, HEXAVALENT	19	0.121	0.169	0.1 J	0.18	0.181 J	0.18 J	0.179 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-96(6INBG)	BBS-SOEP-97A(1.5FTBG)	BBS-SOEP-98(1FTBG)	BBS-SOEP-99(6INBG)	BBS-SOEP-100A(6INBG)	BBS-SOEP-101(6INBG)	BBS-SOEP-102A(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/12/10	12/20/10	11/12/10	11/12/10	12/20/10	11/12/10	12/20/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	15	3.99	13	14	3.32	8.55	3.3
CHROMIUM, TOTAL	50	25	23	23	29	10	21	7.26
CHROMIUM, HEXAVALENT	19	0.386 J	0.09 J	0.183 J	0.188 J	0.16 J	0.187 J	0.15 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-103(6INBG)	BBS-SOEP-104(1FTBG)	BBS-SOEP-105(1FTBG)	BBS-SOEP-106(1FTBG)	BBS-SOEP-107(6INBG)	BBS-SOEP-108(6INBG)	BBS-SOEP-109(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/12/10	11/12/10	11/12/10	11/12/10	11/15/10	11/15/10	11/15/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>2.66</b>	<b>3.11</b>	<b>0.9</b>	<b>15</b>	<b>0.96</b>	<b>1.81</b>	<b>2.68</b>
CHROMIUM, TOTAL	50	<b>4.61</b>	<b>9.55</b>	<b>5.63</b>	<b>39</b>	<b>9.97</b>	<b>8.86</b>	<b>9.65</b>
CHROMIUM, HEXAVALENT	19	<b>0.18 J</b>	<b>0.131 J</b>	0.43 U	<b>0.969</b>	<b>0.125 J</b>	<b>0.126 J</b>	<b>0.125 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 110A(1FTBG)	BBS-SOEP- 111(6INBG)	BBS-SOEP- 112A(1.5FTBG)	BBS-SOEP- 113A(1.5FTBG)	BBS-SOEP- 114(6INBG)	BBS-SOEP- 115(6INBG)	BBS-SOEP- 116(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	12/22/10	11/15/10	12/22/10	12/22/10	11/15/10	11/15/10	11/15/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>0.98 J</b>	<b>13</b>	<b>0.77 J</b>	<b>0.67 J</b>	<b>2.46</b>	<b>1.15</b>	<b>13</b>
CHROMIUM, TOTAL	50	<b>17</b>	<b>24</b>	<b>5.21</b>	<b>11</b>	<b>33</b>	<b>11</b>	<b>30</b>
CHROMIUM, HEXAVALENT	19	0.428 U	<b>0.497</b>	0.412 U	<b>0.33 J</b>	<b>0.38 J</b>	<b>0.18 J</b>	<b>0.177 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-117(6INBG)	BBS-SOEP-118(1FTBG)	BBS-SOEP-119(1FTBG)	BBS-SOEP-120(6INBG)	BBS-SOEP-121(6INBG)	BBS-SOEP-122(6INBG)	BBS-SOEP-123(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/15/10	11/15/10	11/15/10	11/15/10	11/15/10	11/15/10	11/15/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>4.02</b>	<b>3.12</b>	<b>2.14</b>	<b>1.92</b>	<b>11</b>	<b>3.23</b>	<b>0.87</b>
CHROMIUM, TOTAL	50	<b>16</b>	<b>8.14</b>	<b>7.7</b>	<b>12</b>	<b>18</b>	<b>22</b>	<b>8.09</b>
CHROMIUM, HEXAVALENT	19	<b>0.439</b>	<b>0.126 J</b>	<b>0.127 J</b>	<b>0.183 J</b>	<b>0.18 J</b>	<b>2.16</b>	<b>0.179 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-124(6INBG)	BBS-SOEP-125(6INBG)	BBS-SOEP-126(6INBG)	BBS-SOEP-127(1FTBG)	BBS-SOEP-128(1FTBG)	BBS-SOEP-129(1FTBG)	BBS-SOEP-130(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/15/10	11/15/10	11/15/10	11/16/10	11/16/10	11/16/10	11/16/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	0.82	4.89	15	0.86	7.94	11	8.54
CHROMIUM, TOTAL	50	8.64	17	34	13	17	20	11
CHROMIUM, HEXAVALENT	19	0.179 J	0.331 J	0.589	0.212 J	0.213 J	0.158 J	0.164 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-131(1FTBG)	BBS-SOEP-132(6INBG)	BBS-SOEP-133(6INBG)	BBS-SOEP-134(6INBG)	BBS-SOEP-135A(1.5FTBG)	BBS-SOEP-136A(1.5FTBG)	BBS-SOEP-137(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/16/10	11/16/10	11/16/10	11/16/10	12/20/10	12/20/10	11/16/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	2.44	1.18	4.58	3.62	0.29 J	3.37	1.14
CHROMIUM, TOTAL	50	6.84	8.63	14	17	2.11	11	6.78
CHROMIUM, HEXAVALENT	19	0.161 J	0.109 J	0.161 J	0.22 J	0.19 J	0.25 J	0.106 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-138(1FTBG)	BBS-SOEP-139(1FTBG)	BBS-SOEP-140(1FTBG)	BBS-SOEP-141A(2FTBG)	BBS-SOEP-142(1FTBG)	BBS-SOEP-143(1FTBG)	BBS-SOEP-144A(2FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/16/10	11/16/10	11/16/10	12/20/10	11/29/10	11/17/10	12/20/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	2.51	1.63	2.88	2.29	3.67	0.9 U	4.53
CHROMIUM, TOTAL	50	6.85	12	7.95	5.13	44	17	9.87
CHROMIUM, HEXAVALENT	19	0.156 J	0.164 J	0.161 J	0.419 U	1.32	0.53	0.25 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: BBSSOEP145B(2.5FTBG)		BBS-SOEP-146(1FTBG)	BBS-SOEP-147(1FTBG)	BBS-SOEP-148(1FTBG)	BBS-SOEP-149(1FTBG)	BBS-SOEP-150(6INBG)	BBS-SOEP-151(6INBG)
	Date:	01/04/11						
Screening Criteria <sup>(1)</sup>								
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>11</b>	<b>2.05</b>	<b>1.07</b>	<b>1.58</b>	<b>0.86 J</b>	<b>1.4</b>	<b>0.74 J</b>
CHROMIUM, TOTAL	50	<b>5.43 J</b>	<b>7.07</b>	<b>6.39</b>	<b>4.89</b>	<b>4.48</b>	<b>8.55</b>	<b>8.75</b>
CHROMIUM, HEXAVALENT	19	<b>0.43</b>	<b>0.31 J</b>	<b>0.25 J</b>	<b>0.27 J</b>	<b>0.27 J</b>	<b>0.27 J</b>	<b>0.25 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-152(6INBG)	BBS-SOEP-153A(1.5FTBG)	BBS-SOEP-154A(1.5FTBG)	BBS-SOEP-155(6INBG)	BBS-SOEP-156A(1FTBG)	BBS-SOEP-157(1.75FTBG)	BBS-SOEP-158(3FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/17/10	12/22/10	12/22/10	11/17/10	12/22/10	11/29/10	11/29/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>7.45</b>	<b>0.4 J</b>	<b>0.82 J</b>	<b>13</b>	<b>3.34 J</b>	<b>2.42</b>	<b>0.296 J</b>
CHROMIUM, TOTAL	50	<b>18</b>	<b>3.28</b>	<b>4.42</b>	<b>38</b>	<b>5.43</b>	<b>5.6</b>	<b>0.864</b>
CHROMIUM, HEXAVALENT	19	<b>0.38 J</b>	0.407 U	0.412 U	<b>0.25 J</b>	0.415 U	<b>0.29 J</b>	<b>0.28 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-159(1.75FTBG)	BBS-SOEP-160(3FTBG)	BBS-SOEP-161(1.75FTBG)	BBS-SOEP-162(6INBG)	BBS-SOEP-163(6INBG)	BBS-SOEP-164(6INBG)	BBS-SOEP-165(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.69</b>	<b>1.04</b>	<b>1.49</b>	<b>2.16</b>	<b>1.7</b>	<b>2.5</b>	<b>4.97</b>
CHROMIUM, TOTAL	50	<b>3.25</b>	<b>6.36</b>	<b>3.55</b>	<b>8.65</b>	<b>12</b>	<b>24</b>	<b>12</b>
CHROMIUM, HEXAVALENT	19	<b>0.44</b>	<b>0.25 J</b>	<b>0.25 J</b>	<b>0.35 J</b>	<b>0.89</b>	<b>2.06</b>	<b>0.55</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 166(6INBG)	BBS-SOEP- 167(6INBG)	BBS-SOEP- 168(6INBG)	BBS-SOEP- 169(1.75FTBG)	BBS-SOEP- 170(3FTBG)	BBS-SOEP- 171(3FTBG)	BBS-SOEP- 172(1.75FTBG)
	Date: Screening Criteria <sup>(1)</sup>	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10	11/29/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>6.83</b>	<b>10</b>	<b>4.8</b>	<b>3.14</b>	<b>1.13</b>	<b>2.02</b>	<b>2.76</b>
CHROMIUM, TOTAL	50	<b>11</b>	<b>20</b>	<b>11</b>	<b>4.97</b>	<b>3.5</b>	<b>6.9</b>	<b>3.89</b>
CHROMIUM, HEXAVALENT	19	<b>0.56</b>	<b>0.35 J</b>	<b>0.4 J</b>	<b>0.35 J</b>	<b>0.39 J</b>	<b>0.25 J</b>	<b>0.13 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-173(6INBG)	BBSSOEP174A(1.5FTBG)	BBS-SOEP-175A(1.5FTBG)	BBSSOEP176(6INBG)	BBSSOEP177A(1FTBG)	BBSSOEP178A(1FTBG)	BBSSOEP179(6INBG)
	Date:	11/29/10	01/03/11	12/22/10	11/30/10	01/05/11	01/05/11	12/02/10
	Screening Criteria <sup>(1)</sup>							
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>2.04</b>	<b>13</b>	<b>1.91</b>	<b>8.47</b>	<b>2.2</b>	<b>1.96</b>	<b>3.76</b>
CHROMIUM, TOTAL	50	<b>22</b>	<b>28 J</b>	<b>7.41 J</b>	<b>26</b>	<b>4.7</b>	<b>4.68</b>	<b>9.33</b>
CHROMIUM, HEXAVALENT	19	<b>0.78</b>	<b>0.23 J</b>	0.41 U	<b>0.11 J</b>	<b>0.2 J</b>	<b>0.14 J</b>	<b>0.18 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP180(1. 75FTBG) BBSOEP181(1. 75FTBG) BBSOEP182(1. 75FTBG) BBSOEP183(1F TBG) BBSOEP184(6I NBG) BBSOEP185(6I NBG) BBSOEP186(6I NBG)						
	Date:	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	1.63	3.01	1.21	0.59 J	1.2	1.07	2.28
CHROMIUM, TOTAL	50	4.28	6.21	2.62	4.19	5.04	2.13	4.49
CHROMIUM, HEXAVALENT	19	0.412 U	0.433 U	0.422 U	0.431 U	0.11 J	0.427 U	0.16 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP187(6I	BBSOEP188(6I	BBSOEP189(1F	BBSOEP190(1F	BBSOEP191(6I	BBSOEP192(6I	BBSOEP193(1F
	Date:	NBG)	NBG)	TBG)	TBG)	NBG)	NBG)	TBG)
	Screening Criteria <sup>(1)</sup>	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10	11/30/10
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.49 J	0.97	1.19	0.4 J	0.56 J	5.37	1.29
CHROMIUM, TOTAL	50	3.91	3.74	5.22	1.79	3.74	9.38	6
CHROMIUM, HEXAVALENT	19	0.437 U	0.443 U	0.447 U	0.42 U	0.11 J	0.504 U	0.11 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP194(2. BBSOEP195(2. BBSOEP196(2. BBSOEP197(2. BBSOEP198A( BBSOEP199A( BBSOEP200(2.						
	Date:	5FTBG)	5FTBG)	5FTBG)	5FTBG)	2FTBG)	2FTBG)	5FTBG)
	Screening Criteria <sup>(1)</sup>	12/01/10	12/01/10	12/01/10	12/01/10	01/04/11	01/04/11	12/01/10
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.39 J	0.75 U	0.79 U	3	3.32	12	6.92
CHROMIUM, TOTAL	50	1.72 J	0.72 J	1.14 J	2.35 J	6.1 J	14 J	12 J
CHROMIUM, HEXAVALENT	19	0.409 U	0.407 U	0.41 U	0.412 U	0.71	0.64	0.427 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP201B( BBSOEP202A( BBSOEP203(2. BBSOEP204C( BBSOEP205A( BBSOEP206(4F BBSOEP207(4F						
	Date:	2FTBG)	2FTBG)	5FTBG)	6FTBG)	5FTBG)	TBG)	TBG)
	Screening	01/10/11	01/04/11	12/01/10	01/10/11	01/03/11	12/01/10	12/01/10
	Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	18	13	7.56	6.35	5	1.2	0.85 U
CHROMIUM, TOTAL	50	25	16 J	12 J	9	6.32 J	3.52 J	1.54 J
CHROMIUM, HEXAVALENT	19	0.25 J	0.59	0.25 J	0.25 J	0.23 J	0.99	0.438 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP208(4F BBSOEP209(4F BBSOEP210(4F BBSOEP211(4F BBSOEP212(4F BBSOEP213B( BBSOEP214(4F						
	Date:	TBG)	TBG)	TBG)	TBG)	TBG)	5.5FTBG)	TBG)
	Screening Criteria <sup>(1)</sup>	12/01/10	12/01/10	12/01/10	12/01/10	12/01/10	01/10/11	12/01/10
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	12	2.82	0.49 J	4.83	14	25	12
CHROMIUM, TOTAL	50	18 J	6.21 J	2.67 J	9 J	22 J	30	11
CHROMIUM, HEXAVALENT	19	0.456 U	0.1 J	0.42 U	0.423 U	0.45 J	0.1 J	0.1 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP215A( 4.5 FTBG)							BBSOEP216(1F TBG)	BBSOEP217(1F TBG)	BBSOEP218(1F TBG)	BBSOEP219(1F TBG)	BBSOEP220(1F TBG)	BBSOEP221(1F TBG)
	Date:	01/04/11							12/01/10	12/01/10	12/02/10	12/02/10	12/02/10	12/02/10
	Screening Criteria <sup>(1)</sup>													
Metals by Methods SW6010B and SW7196 (mg/kg)														
ARSENIC	16	6.38	4.04	8.25	1.21	1.95	9.19	16						
CHROMIUM, TOTAL	50	9.89 J	16	13	3.88	4.42	17	42						
CHROMIUM, HEXAVALENT	19	0.54	0.21 J	0.1 J	0.29 J	0.24 J	0.18 J	0.35 J						

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP222(1F	BBSOEP223(1F	BBSOEP224(1F	BBSOEP225(1F	BBSOEP226A(	BBSOEP227(1F	BBSOEP228(1F
	Date:	TBG)	TBG)	TBG)	TBG)	1.5FTBG)	TBG)	TBG)
	Screening Criteria <sup>(1)</sup>	12/02/10	12/02/10	12/02/10	12/02/10	01/05/11	12/02/10	12/02/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	6.4	14	4.83	3.42	14	4.11	6.81
CHROMIUM, TOTAL	50	12	29	10	6.65	27	11.9	22.8
CHROMIUM, HEXAVALENT	19	0.13 J	0.19 J	0.18 J	0.12 J	0.1 J	0.18 J	0.23 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP229(1F BBSOEP230(1F BBSOEP231A( BBSOEP232(1F BBSOEP233A( BBSOEP233AS BBSOEP234(1.						
	Date:	TBG)	TBG)	2FTBG)	TBG)	3FTBG)	W(2FTBG)	5FTBG)
	Screening Criteria <sup>(1)</sup>	12/02/10	12/02/10	01/05/11	12/02/10	01/05/11	01/05/11	12/02/10
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.9	3.74	0.97	1.61	0.86 U	0.65 J	6.86
CHROMIUM, TOTAL	50	4.7	13.8	3.28	10.6	1.85	5.77	10.2
CHROMIUM, HEXAVALENT	19	0.27 J	0.63	0.09 J	0.12 J	0.413 U	0.2 J	0.33 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP235(1. BBSOEP236(1. BBSOEP237(1. BBSOEP238(1. BBSOEP239(2F BBSOEP240(2F BBSOEP241(1F						
	Date:	5FTBG)	5FTBG)	5FTBG)	5FTBG)	TBG)	TBG)	TBG)
	Screening	12/02/10	12/02/10	12/02/10	12/02/10	12/02/10	12/02/10	12/02/10
	Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.79 U	3.03	1.37	2.82	1.29	2.63	3.08
CHROMIUM, TOTAL	50	1.5	8.06	7.24	12	7.7	1.82	11
CHROMIUM, HEXAVALENT	19	0.17 J	0.43	0.33 J	0.33 J	0.49	0.17 J	0.48

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP242A(2FTBG)	BBS-SOEP-243(6INBG)	BBS-SOEP-244(6INBG)	BBS-SOEP-245(1FTBG)	BBS-SOEP-246(6INBG)	BBSOEP247A(1FTBG)	BBS-SOEP-248(1FTBG)
	Date:	01/05/11	12/06/10	12/06/10	12/06/10	12/06/10	01/04/11	12/06/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.9	5.57 J	5.34 J	11 J	11 J	5.02	5.75 J
CHROMIUM, TOTAL	50	5.25	9.68 J	15 J	24 J	28 J	6.85 J	12 J
CHROMIUM, HEXAVALENT	19	0.2 J	0.18 J	0.13 J	0.18 J	0.24 J	0.55	0.24 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP249A(	BBS-SOEP-	BBSOEP251B(	BBSOEP252A(	BBSOEP253A(	BBSOEP253AS	BBS-SOEP-
		1.5FTBG)	250(6INBG)	2.5FTBG)	2FTBG)	3FTBG)	W(1.5FTBG)	254(1FTBG)
	Date:	01/04/11	12/06/10	01/05/11	01/05/11	01/05/11	01/05/11	12/07/10
	Screening Criteria <sup>(1)</sup>							
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>4.83</b>	<b>7.84 J</b>	<b>0.75 J</b>	<b>3.93</b>	0.73 U	<b>0.56 J</b>	<b>7.25</b>
CHROMIUM, TOTAL	50	<b>19 J</b>	<b>16 J</b>	<b>1.97</b>	<b>8.07</b>	<b>1.13</b>	<b>1.99</b>	<b>13</b>
CHROMIUM, HEXAVALENT	19	<b>1.07</b>	<b>0.24 J</b>	<b>0.09 J</b>	<b>0.15 J</b>	<b>0.09 J</b>	<b>0.09 J</b>	<b>0.28 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 255(1FTBG)	BBSSOEP256A( 2FTBG)	BBDS-SOEP- 257(4FTBG)	BBDS-SOEP- 258(4FTBG)	BBDS-SOEP- 259(4FTBG)	BBDS-SOEP- 260(3-5FTBG)	BBDS-SOEP- 261(2-5FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/07/10	01/05/11	12/08/10	12/08/10	12/08/10	12/08/10	12/08/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.47</b>	1.06 U	0.75 UJ	<b>0.77 J</b>	<b>0.47 J</b>	<b>0.54 J</b>	<b>0.35 J</b>
CHROMIUM, TOTAL	50	<b>3.95</b>	<b>2.52</b>	<b>0.67</b>	<b>2.02</b>	<b>2.39</b>	<b>2.27</b>	<b>1.41</b>
CHROMIUM, HEXAVALENT	19	<b>0.33 J</b>	0.423 U	<b>0.12 J</b>	<b>0.22 J</b>	<b>0.17 J</b>	<b>0.12 J</b>	<b>0.17 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 262A(2FTBG)	BBDS-SOEP- 263(2.5FTBG)	BBDS-SOEP- 264(2-5FTBG)	BBDS-SOEP- 265(2-5FTBG)	BBS-SOEP- 266(2.5FTBG)	BBS-SOEP- 267(2.5FTBG)	BBS-SOEP- 268(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/22/10	12/08/10	12/08/10	12/08/10	12/09/10	12/09/10	12/09/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.43 J</b>	<b>1.07 J</b>	<b>0.88 J</b>	1.03 UJ	0.83 U	<b>11</b>	<b>0.42 J</b>
CHROMIUM, TOTAL	50	<b>8.79</b>	<b>8.17</b>	<b>3.87</b>	<b>1.03</b>	<b>1.47</b>	<b>24</b>	<b>3.54</b>
CHROMIUM, HEXAVALENT	19	0.446 U	<b>0.84</b>	<b>0.17 J</b>	<b>0.17 J</b>	0.405 U	<b>1.08</b>	<b>0.1 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 269(1FTBG)	BBS-SOEP270A (1.5FTBG)	BBS-SOEP- 271(1FTBG)	BBS-SOEP- 272(1FTBG)	BBS-SOEP- 273(1FTBG)	BBS-SOEP- 274(1FTBG)	BBS-SOEP- 275A(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/09/10	12/21/10	12/09/10	12/09/10	12/09/10	12/09/10	12/22/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>6.41</b>	<b>3.02 J</b>	<b>12</b>	<b>11</b>	<b>10</b>	<b>1</b>	<b>1.75 J</b>
CHROMIUM, TOTAL	50	<b>29</b>	<b>9.07</b>	<b>22</b>	<b>17</b>	<b>22</b>	<b>6.03</b>	<b>6.72</b>
CHROMIUM, HEXAVALENT	19	<b>0.92</b>	<b>0.12 J</b>	<b>0.87</b>	<b>0.15 J</b>	<b>0.41 J</b>	<b>0.1 J</b>	0.423 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 276(6INBG)	BBS-SOEP- 277A(1.5FTBG)	BBS-SOEP- 278(6INBG)	BBS-SOEP- 279(6INBG)	BBS-SOEP- 280(6INBG)	BBS-SOEP- 281(6INBG)	BBS-SOEP- 282(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	12/09/10	12/22/10	12/09/10	12/09/10	12/09/10	12/09/10	12/09/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	2.53	3.63 J	12	9.29	9.09	1.27	4.46
CHROMIUM, TOTAL	50	7.76	8.91	23	21	28	14	10
CHROMIUM, HEXAVALENT	19	0.423 U	0.425 U	0.15 J	0.418 U	0.46	0.15 J	0.3 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-283(2.5FTBG)	BBS-SOEP-284(2.5FTBG)	BBS-SOEP-285A(1.5FTBG)	BBS-SOEP-286(6INBG)	BBS-SOEP-287(6INBG)	BBS-SOEP-288(1FTBG)	BBS-SOEP-289(1FTBG)
	Date:	12/09/10	12/09/10	12/21/10	12/13/10	12/13/10	12/13/10	12/13/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	0.71 J	1.2	2.53 J	5.69 J	6.96 J	1.15 J	9.93 J
CHROMIUM, TOTAL	50	3.3	3.27	8.45	21 J	14 J	6.6 J	23 J
CHROMIUM, HEXAVALENT	19	0.404 U	0.15 J	0.426 U	0.45 J	0.37 J	0.2 J	0.5

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 290A(1.5FTBG)	BBS-SOEP- 291(1FTBG)	BBS-SOEP- 292(1FTBG)	BBS-SOEP- 293(1FTBG)	BBS-SOEP- 294(1FTBG)	BBS-SOEP- 295(2FTBG)	BBS-SOEP- 296(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	12/22/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>0.63 J</b>	<b>3.91 J</b>	<b>1.6 J</b>	<b>5.73 J</b>	<b>5.55 J</b>	<b>2.78 J</b>	<b>2.94 J</b>
CHROMIUM, TOTAL	50	<b>4.3</b>	<b>13 J</b>	<b>9.83 J</b>	<b>19 J</b>	<b>17 J</b>	<b>11 J</b>	<b>6.24 J</b>
CHROMIUM, HEXAVALENT	19	0.418 U	<b>0.52</b>	<b>0.14 J</b>	<b>0.58</b>	<b>0.27 J</b>	<b>0.26 J</b>	<b>0.2 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 297(1FTBG)	BBS-SOEP- 298(1FTBG)	BBS-SOEP- 299(6INBG)	BBS-SOEP- 300(6INBG)	BBS-SOEP- 301(1FTBG)	BBS-SOEP- 302(1FTBG)	BBS-SOEP- 303(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>1.92 J</b>	<b>1.4 J</b>	<b>4.4 J</b>	<b>1.32 J</b>	<b>1.19 J</b>	<b>1.28 J</b>	<b>1.09 J</b>
CHROMIUM, TOTAL	50	<b>11 J</b>	<b>9.17 J</b>	<b>6.55 J</b>	<b>2.67 J</b>	<b>6.11 J</b>	<b>7.23 J</b>	<b>4.53 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.2 J</b>	<b>0.21 J</b>	<b>0.32 J</b>	<b>0.25 J</b>	<b>0.14 J</b>	<b>0.2 J</b>	<b>0.31 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-304(6INBG)	BBS-SOEP-305(1FTBG)	BBS-SOEP-306(1FTBG)	BBS-SOEP-307(1FTBG)	BBS-SOEP-308(6INBG)	BBS-SOEP-309(6INBG)	BBS-SOEP-310(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10	12/13/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>0.93 J</b>	<b>1.59 J</b>	<b>6.82 J</b>	<b>2.98 J</b>	<b>5.77 J</b>	<b>3.23 J</b>	<b>7.88 J</b>
CHROMIUM, TOTAL	50	<b>5.03 J</b>	<b>6.81 J</b>	<b>12 J</b>	<b>6.46 J</b>	<b>16 J</b>	<b>19 J</b>	<b>14 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.2 J</b>	<b>0.14 J</b>	<b>0.36 J</b>	<b>0.2 J</b>	<b>0.42 J</b>	<b>0.8</b>	<b>0.46</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-311(6INBG)	BBS-SOEP-312(6INBG)	BBS-SOEP-313(1FTBG)	BBS-SOEP-314(1FTBG)	BBS-SOEP-315(1FTBG)	BBS-SOEP-316(1FTBG)	BBS-SOEP-317(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/14/10	12/14/10	12/14/10	12/14/10	12/14/10	12/14/10	12/14/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	3.65	1.17	0.46 J	2.83	3.33	6.72	5.89
CHROMIUM, TOTAL	50	6.72	3.75	2.83	6.29	3.4	9.47	8.26
CHROMIUM, HEXAVALENT	19	0.43	0.22 J	0.11 J	0.27 J	0.11 J	0.26 J	0.408 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP318A(1.5FTBG)	BBS-SOEP-319(1FTBG)	BBS-SOEP-320(1FTBG)	BBS-SOEP-321(3FTBG)	BBS-SOEP-322(3FTBG)	BBS-SOEP-323(3FTBG)	BBS-SOEP-324(3FTBG)
	Date:	01/04/11	12/14/10	12/14/10	12/16/10	12/16/10	12/16/10	12/16/10
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	5.32	6.4	4.57	0.67 J	0.86	1.26	0.74 J
CHROMIUM, TOTAL	50	6.73 J	7.02	33	1.95	1.96	3.32	2.99
CHROMIUM, HEXAVALENT	19	0.43	0.22 J	0.415 U	0.412 U	0.415 U	0.421 U	0.11 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-325(3FTBG)	BBS-SOEP-326(3FTBG)	BBS-SOEP-327(3FTBG)	BBS-SOEP-328(3FTBG)	BBS-SOEP-329(2FTBG)	BBS-SOEP-330(2FTBG)	BBS-SOEP-331(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/16/10	12/16/10	12/16/10	12/16/10	12/16/10	12/16/10	12/16/10
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>3.76</b>	<b>2.87</b>	<b>2.09</b>	<b>1.25</b>	<b>5.39</b>	<b>0.6 J</b>	<b>1.41</b>
CHROMIUM, TOTAL	50	<b>7.1</b>	<b>7.23</b>	<b>6.31</b>	<b>3.21</b>	<b>11</b>	<b>4.47</b>	<b>4.92</b>
CHROMIUM, HEXAVALENT	19	<b>0.17 J</b>	0.452 U	0.46 U	0.442 U	<b>0.85</b>	<b>0.27 J</b>	<b>0.22 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-332(1FTBG)	BBS-SOEP-333(6INBG)	BBS-SOEP-334(1FTBG)	BBS-SOEP-335(1FTBG)	BBS-SOEP-336(1FTBG)	BBS-SOEP-337(1FTBG)	BBSOEP338A(1.5FTBG)
	Date:	12/16/10	12/20/10	12/21/10	12/21/10	12/21/10	12/21/10	01/05/11
	Screening Criteria <sup>(1)</sup>							
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>9.27</b>	<b>9.08</b>	<b>4.09 J</b>	<b>0.55 J</b>	<b>11 J</b>	<b>0.71 J</b>	<b>0.97</b>
CHROMIUM, TOTAL	50	<b>31</b>	<b>20</b>	<b>8.05</b>	<b>1.99</b>	<b>14</b>	<b>13</b>	<b>3.75</b>
CHROMIUM, HEXAVALENT	19	<b>1.04</b>	0.425 U	0.417 U	0.409 U	0.408 U	<b>0.22 J</b>	0.415 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-339(6INBG)	BBS-SOEP-340(6INBG)	BBS-SOEP-341(6INBG)	BBS-SOEP-342(6INBG)	BBS-SOEP-343(6INBG)	BBSOEP344A(1FTBG)	BBSOEP345A(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	12/21/10	12/21/10	12/22/10	12/22/10	12/22/10	01/05/11	01/05/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>7.84 J</b>	<b>4.21 J</b>	<b>4.6 J</b>	<b>12 J</b>	<b>4.98 J</b>	<b>15</b>	<b>5.07</b>
CHROMIUM, TOTAL	50	<b>15</b>	<b>28</b>	<b>8.92</b>	<b>18</b>	<b>10</b>	<b>20</b>	<b>6.01</b>
CHROMIUM, HEXAVALENT	19	0.423 U	0.415 U	0.427 U	0.415 U	0.407 U	<b>0.15 J</b>	<b>0.2 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP346B(	BBSOEP347A(	BBS-SOEP-	BBS-SOEP-	BBSOEP350A(	BBS-SOEP-	BBSOEP352(1F
	Date:	1.5FTBG)	1.5FTBG)	348(1FTBG)	349(1FTBG)	1.5FTBG)	351(1FTBG)	TBG)
	Screening Criteria <sup>(1)</sup>	01/10/11	01/05/11	12/22/10	12/22/10	01/05/11	12/22/10	01/03/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>6.31</b>	<b>3.9</b>	<b>3.29 J</b>	<b>5.61 J</b>	<b>8.3</b>	<b>7.27 J</b>	<b>4.95</b>
CHROMIUM, TOTAL	50	<b>8.46</b>	<b>6.14</b>	<b>9.79</b>	<b>11</b>	<b>11</b>	<b>11</b>	<b>7.73 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.15 J</b>	<b>0.09 J</b>	0.407 U	0.415 U	<b>0.15 J</b>	0.413 U	<b>0.18 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP353A(2FTBG)	BBSOEP354(1FTBG)	BBSOEP355(1FTBG)	BBSOEP356(1FTBG)	BBSOEP365(1FTBG)	BBSOEP366(1FTBG)	BBSOEP367(1FTBG)
	Date:	01/05/11	01/03/11	01/03/11	01/11/11	01/11/11	01/11/11	01/11/11
	Screening Criteria <sup>(1)</sup>							
	Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	16	3.23	5.74	11	102	39	16	19
CHROMIUM, TOTAL	50	6.91	9.04 J	6.86 J	129	41	20	20
CHROMIUM, HEXAVALENT	19	0.09 J	0.25 J	0.12 J	0.2 J	0.16 J	0.1	0.1 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSSOEP370(1F TBG)	BBSSOEP371(1F TBG)	S-SOEP-457A-1.0'-BGS	BB&S-SOEP-458A-1.0'-BGS	BB&S-SODC-459B-3.0'-BGS	BBS-SOEP-460(2FTBG)	BBS-SOEP-461(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	01/11/11	01/11/11	06/09/11	06/09/11	06/28/11	04/28/11	04/28/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	19	14	1.4	2.1	0.24 UJ	11	8.33
CHROMIUM, TOTAL	50	15	19	7.6	9.2	2.7 J	15	13
CHROMIUM, HEXAVALENT	19	0.22 J	0.28 J	1.1 U	1.1 U	1.2 U	0.66	0.35 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

- J = Estimated value.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-462(6INBG)	BBS-SOEP-463(6INBG)	BBS-SOEP-464(6INBG)	BB&S-SOEP-465A-1.0'-BGS	BB&S-SOEP-466A-1.0'-BGS	BB&S-SOEP-467A-1.0'-BGS	BB&S-SOEP-468-0.5'-BGS
	Date:	04/28/11	04/28/11	04/28/11	06/08/11	06/08/11	06/08/11	05/03/11
	Screening Criteria <sup>(1)</sup>							
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>14</b>	<b>3.73</b>	<b>6.49</b>	<b>0.99 J</b>	<b>10</b>	<b>8.1</b>	<b>2.6 J</b>
CHROMIUM, TOTAL	50	<b>20</b>	<b>5.12</b>	<b>7.54</b>	<b>3.7</b>	<b>17</b>	<b>10</b>	<b>6.4 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.11 J</b>	<b>0.22 J</b>	<b>0.33 J</b>	1.1 U	1 U	1 U	1.2 UJ

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP-469- BB&S-SOEP-470-		BB&S-SOEP-471A-1.0'-BGS	BB&S-SOEP-472- 0.5'-BGS	BB&S-SOEP-473- 0.5'-BGS	BB&S-SOEP-474- 1.0'-BGS	BB&S-SOEP-475- 1.0'-BGS
	Date:	05/03/11	05/03/11	06/08/11	05/09/11	05/09/11	05/09/11	05/09/11
	Screening Criteria <sup>(1)</sup>							
	Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	16	2.1 J	1.4 J	1.8	5.2 J	2.7 J	2.8 J	3.5 J
CHROMIUM, TOTAL	50	7.4 J	5.7 J	5.5	12 J	5.2 J	6.3 J	6.2 J
CHROMIUM, HEXAVALENT	19	1.2 UJ	1.3 UJ	1.1 U	1 U	1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP-476- 1.0'-BGS	BB&S-SOEP- 477A-1.0'-BGS	S-SOEP-478A- 1.0'-BGS	BBS-SOEP- 479(6INBG)	BB&S-SOEP- 480A-1.0'-BGS	BB&S-SOEP-481- 0.5'-BGS	BB&S-SOEP-482- 1.0'-BGS
	Date:	05/09/11	06/08/11	06/09/11	05/09/11	06/08/11	05/09/11	05/09/11
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	17 J	3.6	1.8	13	1.6	10 J	1.9 J
CHROMIUM, TOTAL	50	23 J	8.1	5	22	8.2	20 J	6.7 J
CHROMIUM, HEXAVALENT	19	1.9	1.1 U	1.1 U	0.21 J	1.1 U	1 U	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	S-SOEP-483B- 2.0'-BGS	BBS-SOEP- 484(1FTBG)	BB&S-SOEP- 485A-1.0'-BGS	BBS-SOEP- 486(1FTBG)	BBS-SOEP- 487(1FTBG)	BBS-SOEP- 488(1FTBG)	BB&S-SOEP- 489A-1.0'-BGS
	Date:	06/20/11	05/09/11	06/09/11	05/09/11	05/09/11	05/09/11	06/08/11
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	1.8 N	9.67	1.7	4.2	15	2.1	3.8
CHROMIUM, TOTAL	50	4.8	17	8.8	6.56	26	5.63	8.7
CHROMIUM, HEXAVALENT	19	1.04 U	0.11 J	1.1 U	0.16 J	0.16 J	0.22 J	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 490(1FTBG)	BB&S-SOEP- 491A-3.0'-BGS	BBS-SOEP- 492A(1FTBG)	BB&S-SOEP- 493A-3.0'-BGS	BB&S-SODC- 493S-A-2.0'-BGS	BB&S-SOEP- 494A-3.0'-BGS	BBS-SOEP- 495(1FTBG)
	Date: Screening Criteria <sup>(1)</sup>	05/12/11	06/08/11	06/09/11	06/08/11	06/28/11	06/07/11	05/12/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>4.36 J</b>	<b>1.6</b>	<b>15.6</b>	<b>8.8</b>	<b>0.39 J</b>	<b>16</b>	<b>2.13 J</b>
CHROMIUM, TOTAL	50	<b>8.15</b>	<b>7</b>	<b>32</b>	<b>8.6</b>	<b>6.4 J</b>	<b>29</b>	<b>5.35</b>
CHROMIUM, HEXAVALENT	19	<b>0.09 J</b>	1.1 U	<b>1.7</b>	<b>1</b>	1.3 U	<b>1.6</b>	0.419 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP- 496B-2.0'-BGS	BB&S-SOEP- 497A-1.0'-BGS	BBS-SOEP- 498(1FTBG)	BBS-SOEP- 499(1FTBG)	BBS-SOEP- 500(6INBG)	BB&S-SOEP- 501A-1.0'-BGS	BBS-SOEP- 502(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	06/20/11	06/08/11	05/12/11	05/12/11	05/16/11	06/08/11	05/16/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>8.5 J</b>	<b>15</b>	<b>7.78 J</b>	<b>10 J</b>	<b>11 J</b>	<b>4</b>	<b>10 J</b>
CHROMIUM, TOTAL	50	<b>14.3 J</b>	<b>17</b>	<b>13</b>	<b>16</b>	<b>18</b>	<b>8.1</b>	<b>22</b>
CHROMIUM, HEXAVALENT	19	1.09 U	1 U	<b>0.14 J</b>	<b>0.2 J</b>	0.462 U	1 U	0.457 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP- 503A-1.0'-BGS	BBS-SOEP- 504(6INBG)	BBS-SOEP- 505(6INBG)	BBS-SOEP- 506(6INBG)	BBS-SOEP- 507(6INBG)	BBS-SOEP- 508(6INBG)	BBS-SOEP- 509(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	06/08/11	05/16/11	05/16/11	05/16/11	05/16/11	05/16/11	05/16/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>3</b>	<b>14 J</b>	<b>11 J</b>	<b>7.02 J</b>	<b>3.57 J</b>	<b>4.89 J</b>	<b>14 J</b>
CHROMIUM, TOTAL	50	<b>4</b>	<b>27</b>	<b>15</b>	<b>17</b>	<b>7.07</b>	<b>7.44</b>	<b>15</b>
CHROMIUM, HEXAVALENT	19	1 U	0.463 U	0.44 U	0.442 U	0.442 U	0.446 U	0.447 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-510(6INBG)	BBS-SOEP-511(6INBG)	BBS-SOEP-512(6INBG)	BBS-SOEP-513(1FTBG)	BBS-SOEP-514(1FTBG)	BB&S-SODC-515B-3.0'-BGS	BBS-SOEP-516(1.5FTBG)
	Date: Screening Criteria <sup>(1)</sup>	05/17/11	05/17/11	05/17/11	05/17/11	05/17/11	06/28/11	05/17/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>12 J</b>	<b>7.1 J</b>	<b>1.56 J</b>	<b>6.99 J</b>	<b>13 J</b>	0.24 UJ	<b>8.72 J</b>
CHROMIUM, TOTAL	50	<b>17 J</b>	<b>8.98 J</b>	<b>4.66 J</b>	<b>16 J</b>	<b>14 J</b>	<b>1.2 J</b>	<b>14 J</b>
CHROMIUM, HEXAVALENT	19	0.466 U	0.459 U	0.46 U	0.455 U	0.436 U	1.3 U	0.435 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)



**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP- 517(1.5FTBG)	BB&S-SOEP- 518A-1.0'-BGS	BBS-SOEP- 519(6INBG)	BBS-SOEP- 520(6INBG)	BBS-SOEP- 521(6INBG)	BBS-SOEP- 522(6INBG)	BBS-SOEP- 523(6INBG)
	Date:	05/17/11	06/09/11	05/23/11	05/23/11	05/23/11	05/23/11	05/23/11
	Screening Criteria <sup>(1)</sup>							
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>9.38 J</b>	<b>0.57 J</b>	<b>7.43 J</b>	<b>4.99 J</b>	<b>1.48 J</b>	<b>8.09 J</b>	<b>5.91 J</b>
CHROMIUM, TOTAL	50	<b>6.38 J</b>	<b>1.9</b>	<b>14 J</b>	<b>11 J</b>	<b>5.14 J</b>	<b>14 J</b>	<b>15 J</b>
CHROMIUM, HEXAVALENT	19	0.441 U	1 U	0.42 U	0.424 U	0.421 U	0.42 U	0.443 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-524(6INBG)	BBS-SOEP-525(6INBG)	BB&S-SOEP-526A-1.0'-BGS	BB&S-SOEP-527A-1.0'-BGS	BBS-SOEP-528(6INBG)	BBS-SOEP-529(6INBG)	BBS-SOEP-530(6INBG)
	Date: Screening Criteria <sup>(1)</sup>	05/23/11	05/23/11	06/09/11	06/09/11	05/23/11	05/23/11	05/23/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>								
ARSENIC	16	<b>6.44 J</b>	<b>16 J</b>	<b>2.5</b>	<b>3.5</b>	<b>9.59 J</b>	<b>2.67 J</b>	<b>1.4 J</b>
CHROMIUM, TOTAL	50	<b>16 J</b>	<b>25 J</b>	<b>7.3</b>	<b>6.1</b>	<b>15 J</b>	<b>6.42 J</b>	<b>4.39 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.31 J</b>	0.416 U	1 U	1 U	<b>0.19 J</b>	<b>0.14 J</b>	<b>1.39</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SOEP-531(6INBG)	BBS-SOEP-532(6INBG)	BBS-SOEP-533(6INBG)	BBS-SOEP-534(6INBG)	BBS-SOEP-535(6INBG)	BB&S-SOEP-536A-1.0'-BGS	BB&S-SOEP-537B-2.0'-BGS
	Date:	05/23/11	05/23/11	05/23/11	05/23/11	05/23/11	06/09/11	06/20/11
	Screening Criteria <sup>(1)</sup>							
Metals by Methods SW6010B and SW7196 (mg/kg)								
ARSENIC	16	6.82 J	2 J	1.38 J	1.72 J	4.55 J	2.9	0.49 J
CHROMIUM, TOTAL	50	12 J	6.12 J	4.64 J	6.93 J	8.82 J	6	2.8
CHROMIUM, HEXAVALENT	19	0.426 U	0.77	1.68	0.477 U	0.25 J	1 U	1.04 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-1 Final Analytical Results for Soil Samples - Phases 1, 2, and 3  
BB S Treated Lumber Corporation**

Analyte	Sample ID: BB&S-SOEP-538	
	Date: 05/29/11	SS-32A-1.0'-BGS 05/17/11
Screening Criteria <sup>(1)</sup>		
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>		
ARSENIC	16	<b>1.9</b>
CHROMIUM, TOTAL	50	<b>4.8 J</b>
CHROMIUM, HEXAVALENT	19	1.2 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SODC-556S-1.0'-BGS	BB&S-SODC-557-1.0'-BGS	BB&S-SODC-558S-1.0'-BGS	BB&S-SODC-559S-1.0'-BGS	BB&S-SODC-560-1.0'-BGS	BB&S-SODC-561-1.0'-BGS
	Date:	06/13/11	06/13/11	06/13/11	06/13/11	06/13/11	06/13/11
	Screening Criteria <sup>(1)</sup>						
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	13	<b>1.2</b>	<b>1.7</b>	<b>1.7</b>	<b>3.8</b>	<b>2.3</b>	<b>1.9</b>
CHROMIUM, TOTAL	30	<b>6</b>	<b>5.4</b>	<b>6.4</b>	<b>3.9</b>	<b>5.3</b>	<b>7</b>
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

- J = Estimated value.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- mg/kg = Milligrams per kilogram.
- \* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-	BB&S-SODC-563-	BB&S-SODC-564-	BB&S-SOEP-	BB&S-SODC-566-	BB&S-SODC-
		562S-1.0'-BGS	1.0'-BGS	1.0'-BGS	565SB-3.0'-BGS	1.0'-BGS	567S-1.0'-BGS
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.94 J	6.4	72	2.2	12	1.5
CHROMIUM, TOTAL	30	4.2	5.8	64	5.7	17	6.3
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1.1 U	1 U	1.1 U	1.09 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-568S-1.0'-BGS BB&S-SODC-569S-2.0'-BGS BB&S-SODC-570S-3.0'-BGS BB&S-SOEP-571A-6.0'-BGS BB&S-SODC-572-7.0'-BGS BB&S-SODC-573-7.0'-BGS					
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	3.4	1.4	3.7	5.7	0.57 J	0.99 J
CHROMIUM, TOTAL	30	11	4	11	9.7	1.9	1.9
CHROMIUM, HEXAVALENT	1	1.12 U	1.09 U	1.08 U	1.08 UJ	1.03 U	1.05 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC- 574S-7.0'-BGS	BB&S-SODC- 575S-1.0'-BGS	BB&S-SODC- 576S-2.0'-BGS	BB&S-SOEP- 577A-0.5'-BGS	BB&S-SODC- 578S-4.0'-BGS	BB&S-SOEP- 579A-1.0'-BGS
		06/13/11	06/13/11	06/13/11	07/27/11	06/13/11	07/27/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	3.3	2.2	0.95 J	0.93 J	1 J	1.1
CHROMIUM, TOTAL	30	3.7	8.3	3.7	3.4	2.7	2.4
CHROMIUM, HEXAVALENT	1	1.04 U	1.15 U	1.05 U	1.06 UJ	1.04 U	1.05 UJ

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)



**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-580		BB&S-SODC-581		BB&S-SODC-582		BB&S-SOEP-583S-2.0'-BGS		BB&S-SODC-584S-6.0'-BGS		BB&S-SOEP-585A-1.0'-BGS	
		7.0'-BGS		7.0'-BGS		7.0'-BGS		583S-2.0'-BGS		584S-6.0'-BGS		585A-1.0'-BGS	
		06/13/11		06/14/11		06/14/11		08/05/11		06/14/11		07/27/11	
Metals by Methods SW6010B and SW7196 (mg/kg)													
ARSENIC	13	4.5	1.1 J	1.2 J	3	0.27 J	0.61 J						
CHROMIUM, TOTAL	30	3.8	4.2 J	2.4 J	5.3	1.9 J	3						
CHROMIUM, HEXAVALENT	1	1.04 U	1 U	1.1 U	1 U	1 U	1.08 UJ						

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC- 586S-4.0'-BGS	BB&S-SOEP- 587A-2.0'-BGS	BB&S-SOEP- 588A-1.0'-BGS	BB&S-SOEP- 589A-2.0'-BGS	BB&S-SOEP- 590B-2.0'-BGS	BB&S-SOEP- 591SA-2.0'-BGS
		06/14/11	07/27/11	08/01/11	07/27/11	08/05/11	07/27/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	1.6 J	3.2	0.2 U	0.86 J	5.3	2.6
CHROMIUM, TOTAL	30	4.7 J	4.7	7.4 J	3.7	12	8.5
CHROMIUM, HEXAVALENT	1	1 U	1.04 UJ	1 U	1.06 UJ	1 U	1.06 UJ

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP-592SC-2.0'-BGS	BB&S-SOEP-593A-2.0'-BGS	BB&S-SODC-594-5.0'-BGS	BB&S-SOEP-595A-2.0'-BGS	BB&S-SODC-596-5.0'-BGS	BB&S-SODC-597-5.0'-BGS
		08/11/11	08/01/11	06/22/11	07/28/11	06/22/11	06/22/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
		ARSENIC	13	0.5 J	3.6	0.21 U	5.5
CHROMIUM, TOTAL	30	3.4	5.1 J	1.7	6.8	11	1.1
CHROMIUM, HEXAVALENT	1	1 U	1 U	1.1 U	1.04 U	1.1*	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte		Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-598		BB&S-SODC-599		BB&S-SOEP-600		BB&S-SOEP-601		BB&S-SOEP-602		BB&S-SODC-603		
			5.0'-BGS		5.0'-BGS		2.0'-BGS		2.0'-BGS		2.0'-BGS		1.0'-BGS		
			06/22/11		06/22/11		08/01/11		08/01/11		08/01/11		06/22/11		
Metals by Methods SW6010B and SW7196 (mg/kg)															
ARSENIC	13	0.2 U	0.2 U	0.2 U	3.3	0.2 U	0.21 U								
CHROMIUM, TOTAL	30	5.8	6.5	3.4 J	4.7 J	8.4 J	8.5								
CHROMIUM, HEXAVALENT	1	1 U	1 U	1 U	1 U	1 U	1.1 U								

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SODC-604S-1.0'-BGS	BB&S-SODC-605S-1.0'-BGS	BB&S-SOEP-606SB-3.0'-BGS	BB&S-SOEP-607SC-2.0'-BGS	BB&S-SODC-608S-1.0'-BGS	BB&S-SODC-609S-1.0'-BGS
	Date:	06/24/11	06/24/11	08/05/11	08/11/11	06/24/11	06/24/11
	Screening						
	Criteria <sup>(1)</sup>						
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	3.9	0.21 U	1.7	0.78 J	3.1	4.5
CHROMIUM, TOTAL	30	7.3 J	7 J	4.2	4.9	13 J	6.6 J
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1 U	1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-610S-1.0'-BGS BB&S-SOEP-611SB-3.0'-BGS BB&S-SOEP-612SA-0.5'-BGS BB&S-SODC-613S-3.0'-BGS BB&S-SODC-614-5.0'-BGS BB&S-SODC-615-5.0'-BGS											
		06/24/11		08/05/11		07/28/11		06/24/11		06/24/11		06/24/11	
Metals by Methods SW6010B and SW7196 (mg/kg)													
ARSENIC	13	0.22 UJ		10		0.5 U		0.2 U		3.2		4	
CHROMIUM, TOTAL	30	4.4 J		9.1		1.3		1.5 J		5.7 J		5.8 J	
CHROMIUM, HEXAVALENT	1	1.1 U		1 U		1.02 U		1 U		1.1 U		1 U	

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 616C-1.0'-BGS	BB&S-SOEP- 616S-2.0'-BGS	BB&S-SODC-617- 4.0'-BGS	BB&S-SOEP- 618B-2.0'-BGS	BB&S-SOEP- 618S-2.0'-BGS	BB&S-SODC- 619S-2.0'-BGS
		08/11/11	08/04/11	06/24/11	08/04/11	08/04/11	06/24/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	4.2	1 J	3.3	2.8	3.1	0.2 U
CHROMIUM, TOTAL	30	5.4	4.3	8.7 J	5.4	8	7.3 J
CHROMIUM, HEXAVALENT	1	1 U	1 U	1 U	1 U	1.1 U	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

- J = Estimated value.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- mg/kg = Milligrams per kilogram.
- \* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC- 620S-2.0'-BGS	BB&S-SOEP- 621A-2.0'-BGS	BB&S-SOEP- 622SA-1.0'-BGS	BB&S-SOEP- 623SA-2.0'-BGS	BB&S-SODC- 624S-2.0'-BGS	BB&S-SOEP- 625B-5.0'-BGS
		06/24/11	07/28/11	07/28/11	08/01/11	06/27/11	08/04/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.21 U	7.3	2.4	0.2 U	2.5	8.5
CHROMIUM, TOTAL	30	6.5 J	7.6	13	7.4 J	13	7.2
CHROMIUM, HEXAVALENT	1	1.1 U	1.03 U	1.02 U	1.4*	1.1*	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)



**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP-625S-2.0'-BGS					
		BB&S-SOEP-626C-1.0'-BGS		BB&S-SOEP-626S-2.0'-BGS		BB&S-SODC-627-3.0'-BGS	
		BB&S-SODC-628S-1.0'-BGS		BB&S-SODC-629S-1.0'-BGS			
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	1.5	3.4	13	3	1.2	0.84 J
CHROMIUM, TOTAL	30	9.7	4.5	10 J	9.6	2.7	2.7
CHROMIUM, HEXAVALENT	1	1.1 U	1 U	1.6*	1	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 630C-1.0'-BGS	BB&S-SOEP- 630SC-1.0'-BGS	BB&S-SOEP- 631C-2.0'-BGS	BB&S-SOEP- 631SD-2.0'-BGS	BB&S-SOEP- 632SA-1.0'-BGS	BB&S-SODC-633- 1.0'-BGS
		08/11/11	08/11/11	08/11/11	08/17/11	08/01/11	06/27/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.76 J	2.1	0.68 J	1.7	2.7	2.6
CHROMIUM, TOTAL	30	4.2	8.2	3.8	9.4 J	27 J	10
CHROMIUM, HEXAVALENT	1	1 U	1 U	1 U	1.1 U	2.6	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 634A-0.5'-BGS	BB&S-SOEP- 635B-3.0'-BGS	BB&S-SOEP- 635SA-0.5'-BGS	BB&S-SOEP- 636B-3.0'-BGS	BB&S-SOEP- 636S-2.0'-BGS	BB&S-SOEP- 637B-2.0'-BGS
		07/28/11	08/04/11	07/28/11	08/04/11	08/04/11	08/04/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	5.1 J	0.51 U	2.5 J	2.3	4.8	0.56 J
CHROMIUM, TOTAL	30	15 J	2.3 J	11 J	5.8	7.8 J	3.5 J
CHROMIUM, HEXAVALENT	1	1.3*	1 U	1	1 U	1 U	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 638SC-1.0'-BGS	BB&S-SOEP- 639A-0.5'-BGS	BB&S-SOEP- 640A-0.5'-BGS	BB&S-SOEP- 641C-1.0'-BGS	BB&S-SOEP- 641SC-1.0'-BGS	BB&S-SODC-642- 2.0'-BGS
		08/11/11	07/29/11	07/29/11	08/11/11	08/11/11	06/29/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
		ARSENIC	13	3.2	1.4	2.1	4.6
CHROMIUM, TOTAL	30	12	5.6 J	6.4 J	9.6	7.1	13 J
CHROMIUM, HEXAVALENT	1	1.1 U	1.04 U	1.03 U	1 U	1.2 U	1.25 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

- J = Estimated value.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- mg/kg = Milligrams per kilogram.
- \* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 643SA-1.0'-BGS	BB&S-SOEP- 644SC-1.0'-BGS	BB&S-SOEP- 645SA-0.5'-BGS	BB&S-SOEP- 646SD-2.0'-BGS	BB&S-SOEP- 647A-0.5'-BGS	BB&S-SOEP- 648A-0.5'-BGS
		08/01/11	08/11/11	07/29/11	08/17/11	08/01/11	08/01/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	0.2 U	0.6 U	2.8	0.95 J	0.2 U	0.21 U
CHROMIUM, TOTAL	30	4.3 J	0.6	19 J	10 J	4.3 J	5.5 J
CHROMIUM, HEXAVALENT	1	1 U	1.2 U	1.03 U	1.1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP-649B-2.0'-BGS	BB&S-SOEP-650C-1.0'-BGS	BB&S-SOEP-651SA-0.5'-BGS	BB&S-SODC-651-1.0'-BGS	BB&S-SODC-652S-1.0'-BGS	BB&S-SODC-653S-1.0'-BGS
	Date:	08/05/11	08/11/11	07/29/11	06/29/11	06/29/11	06/29/11
	Screening Criteria <sup>(1)</sup>						
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.63 J	6	1.1	0.24 UJ	0.2 U	0.21 U
CHROMIUM, TOTAL	30	2.8	4.8	3.7 J	1.6 J	4.9	4.2
CHROMIUM, HEXAVALENT	1	1 U	1 U	1.07 U	1.3 U	1.02 U	1.07 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC- 654S-1.0'-BGS	BB&S-SODC- 655S-1.0'-BGS	BB&S-SODC- 656S-1.0'-BGS	BB&S-SODC- 657S-1.0'-BGS	BB&S-SODC- 658S-1.0'-BGS	BB&S-SODC- 659S-1.0'-BGS
		06/29/11	06/29/11	06/29/11	06/29/11	06/29/11	06/29/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U	0.21 U
CHROMIUM, TOTAL	30	5.6	1.5	3.8	2.8	6.6	5.1
CHROMIUM, HEXAVALENT	1	1.09 U	1.08 U	1.09 U	1.07 U	1.11 U	1.09 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 660SA-1.0'-BGS	BB&S-SOEP- 661SA-1.0'-BGS	BB&S-SOEP- 662SC-2.0'-BGS	BB&S-SOEP- 663B-2.0'-BGS	BB&S-SOEP- 663SC-2.0'-BGS	BB&S-SODC-664- 1.0'-BGS
		07/29/11	07/29/11	08/11/11	08/04/11	08/11/11	06/30/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
		ARSENIC	13	8.8	3.1	0.7 J	1.5
CHROMIUM, TOTAL	30	20 J	13 J	4.1	6.4 J	6	8.9 J
CHROMIUM, HEXAVALENT	1	1.1 U	1.2*	1.2 U	1.2*	1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)



**Table 6-2 Final Analytical Results for Soil Samples - Phase 4  
BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 665C-2.0'-BGS	BB&S-SOEP- 666SA-1.0'-BGS	BB&S-SOEP- 667A-0.5'-BGS	BB&S-SOEP- 668SB-2.0'-BGS	BB&S-SOEP- 669SB-2.0'BGS	BB&S-SODC-670- 3.0'-BGS
		08/11/11	07/29/11	07/29/11	08/04/11	08/05/11	06/30/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	0.67 J	2.5	4.6	3.5	0.84 J	12 J
CHROMIUM, TOTAL	30	3.3	6.9 J	14 J	7.4 J	4.6	6.5 J
CHROMIUM, HEXAVALENT	1	1 U	1.04 U	1.1*	1 U	1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

- J = Estimated value.
- U = Not detected (lab reporting limit shown).
- UJ = Not detected/Estimated Value.
- mg/kg = Milligrams per kilogram.
- \* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 671B-3.0'-BGS	BB&S-SODC-672- 4.0'-BGS	BB&S-SOEP- 673SA-0.5'-BGS	BB&S-SOEP- 674SB-3.0'-BGS	BB&S-SOEP- 675SA-1.0'-BGS	BB&S-SODC- 676S-2.0'-BGS
		08/04/11	06/30/11	07/29/11	08/04/11	07/29/11	06/30/11
		Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	7.4	0.76 J	1.1	2.6	8.1	1.9 J
CHROMIUM, TOTAL	30	6 J	2.4 J	9.8 J	17 J	16 J	3.7 J
CHROMIUM, HEXAVALENT	1	1.2 U	1.1 U	1.06 U	1 U	1.03 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-677- BB&S-SODC-678- BB&S-SODC-679- BB&S-SOEP- 680A-0.5'-BGS BB&S-SODC-681- BB&S-SOEP- 682A-0.5'-BGS					
		1.0'-BGS	1.0'-BGS	1.0'-BGS	680A-0.5'-BGS	1.0'-BGS	682A-0.5'-BGS
		07/01/11	07/01/11	07/01/11	08/01/11	07/01/11	08/01/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	3.6	4.9	1.1 J	1.9 J	1.2	0.2 U
CHROMIUM, TOTAL	30	5	8.2	2.4	5 J	4.5	4 J
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1.1 U	1 U	1.1 U	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SODC-683- BB&S-SODC-684- BB&S-SOEP- BB&S-SODC-686- BB&S-SODC-687- BB&S-SODC-688-					
		1.0'-BGS	2.0'-BGS	685A-1.0'-BGS	2.0'-BGS	3.0'-BGS	3.0'-BGS
		07/01/11	07/01/11	08/01/11	07/01/11	07/01/11	07/01/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	2	11	0.2 U	3	1.8	0.66 J
CHROMIUM, TOTAL	30	5.8	7	6.8 J	7	5.9	3.6
CHROMIUM, HEXAVALENT	1	1.1 U	1 U	1 U	1.1 U	1 U	1.2 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP-					
		689SB-2.5'-BGS	690C-1.0'-BGS	691A-1.0'-BGS	692B-3.0'-BGS	692S-2.0'-BGS	693B-3.0'-BGS
		08/04/11	08/11/11	07/27/11	08/05/11	08/05/11	08/05/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.5 U	0.82 J	11	1.1	1.3	0.95 J
CHROMIUM, TOTAL	30	1.5	2.2	9.8	3.1	4	2.6
CHROMIUM, HEXAVALENT	1	1 U	1 U	1.05 UJ	1 U	1 U	1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 693S-2.0'-BGS	BB&S-SOEP- 694B-3.0'-BGS	BB&S-SOEP- 694S-2.0'-BGS	BB&S-SOEP- 695A-2.0'-BGS	BB&S-SODC-696- 1.0'-BGS	BB&S-SOEP- 697A-1.0'-BGS
		08/05/11	08/05/11	08/05/11	07/28/11	07/06/11	07/28/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	5.1	1.7	0.51 U	0.5 U	2.6 J	0.77 J
CHROMIUM, TOTAL	30	5.7	4.1	2.1	3.8	6.4 J	3.9
CHROMIUM, HEXAVALENT	1	1 U	1.1 U	1 U	1.03 U	1.1 U	1.04 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SOEP-698A-1.0'-BGS	BB&S-SODC-699-1.0'-BGS	BB&S-SODC-700-1.0'-BGS	BB&S-SODC-701S-2.0'-BGS	BB&S-SODC-702S-2.0'-BGS	BB&S-SODC-703S-1.0'-BGS
	Date:	07/28/11	07/06/11	07/06/11	07/06/11	07/06/11	07/06/11
	Screening Criteria <sup>(1)</sup>						
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	11	4.9 J	0.2 U	6 J	2.1 J	3.1 J
CHROMIUM, TOTAL	30	29	11 J	4.4 J	9.5 J	4.9 J	8.1
CHROMIUM, HEXAVALENT	1	1.09 U	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP-	BB&S-SODC-	BB&S-SODC-	BB&S-SODC-	BB&S-SODC-	BB&S-SODC-709
		704SA-2.0'-BGS	705S-1.0'-BGS	706S-1.0'-BGS	707S-1.0'-BGS	708S-1.0'-BGS	1.0'-BGS
		07/27/11	07/06/11	07/06/11	07/06/11	07/06/11	07/06/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	3.9	0.2 U	6 J	0.21 U	0.21 U	0.21 U
CHROMIUM, TOTAL	30	9.7	4.7	9.8	8.1	6.4	7.1
CHROMIUM, HEXAVALENT	1	1.1 UJ	1.1 U	1.1 U	1.1 U	1.1 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)



**Table 6-2 Final Analytical Results for Soil Samples - Phase 4**  
**BB S Treated Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1)</sup>	BB&S-SOEP- 710B-2.0'-BGS	BB&S-SOEP- 711SA-1.0'-BGS	BB&S-SODC- 713S-1.0'-BGS	BB&S-SOEP- 716SA-1.0'-BGS
		08/05/11	07/27/11	07/07/11	07/27/11
Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	0.99 J	2.9	2.6 J	2.4
CHROMIUM, TOTAL	30	4.4	8.5	8.5	5.7
CHROMIUM, HEXAVALENT	1	1 U	1.09 UJ	1.1 U	1.09 UJ

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

\* = Accepted by NYSDEC Project Manager

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP357(1F	BBSOEP358(1F	BBSOEP359(1F	BBSOEP360(1F	BBSOEP361(1F	BBSOEP362(1F
	Date:	TBG)	TBG)	TBG)	TBG)	TBG)	TBG)
	Screening Criteria <sup>(1,2)</sup>	01/11/11	01/11/11	01/11/11	01/11/11	01/11/11	01/11/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	8.56	7.91	1.7	3.26	2.58	6.08
CHROMIUM, TOTAL	50	12	10	5.34	9.11	8.15	11
CHROMIUM, HEXAVALENT	19	0.15 J	0.53	0.15 J	0.21 J	0.21 J	0.15 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP363(1F	BBSOEP364(2F	BBSOEP368(1F	BBSOEP369(1.	BBSOEP372(1F	BBSOEP373(2F
	Date:	TBG)	TBG)	TBG)	5FTBG)	TBG)	TBG)
	Screening Criteria <sup>(1,2)</sup>	01/11/11	01/11/11	01/11/11	01/11/11	01/13/11	01/13/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	2.37	6.18	4.81	0.887	290	25
CHROMIUM, TOTAL	50	6.09	8.25	8.27	2.94	139 R	27 R
CHROMIUM, HEXAVALENT	19	0.15 J	0.21 J	0.15 J	0.25 J	2.15	0.29 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP374(2F	BBSOEP375(1.	BBSOEP376(1F	BBSOEP377(1F	BBSOEP378(2F	BBSOEP379(2F
	Date:	TBG)	5FTBG)	TBG)	TBG)	TBG)	TBG)
	Screening Criteria <sup>(1,2)</sup>	01/13/11	01/13/11	01/13/11	01/13/11	01/13/11	01/13/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	7.15	2.91	15	1460	2.42	38
CHROMIUM, TOTAL	50	6.03 R	8.84 R	48 R	886 R	9.62 R	34 R
CHROMIUM, HEXAVALENT	19	0.18 J	0.24 J	1.14	2.63	0.439 U	0.81

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP380(1F	BBSOEP381(2F	BBSOEP382(2F	BBSOEP383(2F	BBSOEP384(2F	BBSOEP385(4F
	Date:	TBG)	TBG)	TBG)	TBG)	TBG)	TBG)
	Screening Criteria <sup>(1,2)</sup>	01/13/11	01/17/11	01/17/11	01/17/11	01/17/11	01/17/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	<b>2.31</b>	<b>15.2</b>	<b>10.4</b>	<b>9.47</b>	<b>55.6</b>	<b>4</b>
CHROMIUM, TOTAL	50	<b>6.76 R</b>	<b>24.7</b>	<b>12.6</b>	<b>13.1</b>	<b>65.3</b>	<b>4.41</b>
CHROMIUM, HEXAVALENT	19	0.456 U	0.418 U	<b>0.12 J</b>	<b>0.27 J</b>	<b>0.87</b>	<b>1.1</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP386(3F	BBSOEP387(3F	BBSOEP388(3F	BBSOEP389(4F	BBSOEP390(4F	BBSOEP-
	Date:	TBG)	TBG)	TBG)	TBG)	TBG)	391(4FTBG)
	Screening Criteria <sup>(1,2)</sup>	01/17/11	01/17/11	01/17/11	01/17/11	01/17/11	01/19/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	4.58	30.5	4.59	17.6	22.3	155
CHROMIUM, TOTAL	50	12	58.7	6.39	16.1	15.7	90
CHROMIUM, HEXAVALENT	19	0.38 J	0.22 J	0.37 J	0.43	0.71	1.48

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP-392(4FTBG)	BBSOEP-393(4FTBG)	BBSOEP-394(4FTBG)	BBSOEP-395(1FTBG)	BBSOEP-396(1FTBG)	BBSOEP-397(1FTBG)
	Date: Screening Criteria <sup>(1,2)</sup>	01/19/11	01/19/11	01/19/11	01/20/11	01/20/11	01/20/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	133	74	64	112	14	39
CHROMIUM, TOTAL	50	111	69	69	222	21	49
CHROMIUM, HEXAVALENT	19	0.36 J	0.439 UJ	0.31 J	0.31 J	0.38 J	0.38 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP- 398(1FTBG)	BBSOEP- 399(3FTBG)	BBSOEP- 400(2FTBG)	BBSOEP- 401(2.5FTBG)	BBSOEP- 402(1FTBG)	BBSOEP- 403(2.5FTBG)
	Date: Screening Criteria <sup>(1,2)</sup>	01/20/11	01/20/11	01/20/11	01/20/11	01/20/11	01/20/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	34	21	25	771	108	7.97
CHROMIUM, TOTAL	50	38	25	31	429	125	8.64
CHROMIUM, HEXAVALENT	19	0.44 J	0.31 J	0.44 J	0.89	0.55	0.43 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.



**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP-404(2FTBG)	BBSOEP-405(3FTBG)	BBSOEP-406(1FTBG)	BBSOEP407(1F TBG)	BBSOEP408(2F TBG)	BBSOEP409(3F TBG)
	Date:	01/20/11	01/20/11	01/20/11	01/24/11	01/24/11	01/24/11
	Screening Criteria <sup>(1,2)</sup>						
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	92	32	11	30	3.94	0.83 U
CHROMIUM, TOTAL	50	344	72	70	37	7.71	0.91
CHROMIUM, HEXAVALENT	19	0.45 J	0.37 J	0.26 J	0.26 J	0.11 J	0.11 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP410(2F	BBSOEP411(3F	BBSOEP412(2.	BBSOEP413(3F	BBSOEP414(2.	BBSOEP415(2.
	Date:	TBG)	TBG)	5FTBG)	TBG)	5FTBG)	5FTBG)
	Screening Criteria <sup>(1,2)</sup>	01/24/11	01/24/11	01/24/11	01/24/11	01/24/11	01/24/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	<b>0.38 J</b>	<b>1.11</b>	<b>0.95</b>	<b>0.46 J</b>	<b>1.07</b>	0.83 U
CHROMIUM, TOTAL	50	<b>2.18</b>	<b>2.13 J</b>	<b>2.44 J</b>	<b>1.39 J</b>	<b>3.42 J</b>	<b>1.25 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.16 J</b>	0.404 U	<b>0.16 J</b>	0.404 U	<b>0.16 J</b>	<b>0.11 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSOEP416(4F	BBSOEP417(3.	BBSOEP418(3F	BBSOEP419(3.	BBSODOC420(	BBSODOC421(
	Date:	TBG)	5FTBG)	TBG)	5FTBG)	4FTBG)	3.5FTBG)
	Screening Criteria <sup>(1,2)</sup>	01/24/11	01/24/11	01/24/11	01/24/11	01/25/11	01/25/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	0.78 U	0.79 U	<b>46</b>	0.81 U	0.768 U	<b>0.663 J</b>
CHROMIUM, TOTAL	50	<b>0.8 J</b>	<b>2.23 J</b>	<b>40 J</b>	<b>1.07 J</b>	<b>0.447 J</b>	<b>4.62 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.11 J</b>	<b>0.11 J</b>	<b>0.28 J</b>	0.407 U	<b>0.11 J</b>	0.41 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBSSODOC422(3FTBG)	BBSSODOC423(2FTBG)	BBSSODOC424(2FTBG)	BBS-SODOC-425(3FTBG)	BBS-SODOC-426(3FTBG)	BBS-SODOC-427(3FTBG)
	Date:	01/25/11	01/25/11	01/31/11	04/18/11	04/18/11	04/18/11
	Screening Criteria <sup>(1,2)</sup>						
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	<b>19.5</b>	<b>0.689 J</b>	<b>0.836 J</b>	<b>0.47 J</b>	<b>22</b>	<b>1.02</b>
CHROMIUM, TOTAL	50	<b>20.3 J</b>	<b>2.01 J</b>	<b>22.1</b>	<b>4.26</b>	<b>19</b>	<b>3.2</b>
CHROMIUM, HEXAVALENT	19	<b>0.5</b>	<b>0.11 J</b>	<b>0.77</b>	0.478 U	0.477 U	0.414 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SODOC-428(2FTBG)	BBS-SODOC-429(2FTBG)	BBS-SODOC-430(3FTBG)	BBS-SODOC-431(4FTBG)	BBS-SODOC-432(4FTBG)	BBS-SODOC-433(3FTBG)
	Date: Screening Criteria <sup>(1,2)</sup>	04/18/11	04/18/11	04/19/11	04/19/11	04/19/11	04/20/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	<b>15</b>	<b>4.24</b>	<b>20</b>	<b>0.91</b>	<b>1.18</b>	<b>1.31</b>
CHROMIUM, TOTAL	50	<b>12</b>	<b>14</b>	<b>56</b>	<b>1.7</b>	<b>4.9</b>	<b>4.63</b>
CHROMIUM, HEXAVALENT	19	0.438 U	0.431 U	0.448 U	0.415 U	0.435 U	<b>0.13 J</b>

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SODOC-434(3FTBG)	BBS-SODOC-435(3FTBG)	BBS-SODOC-436(2FTBG)	BBS-SODOC-437(2FTBG)	BBS-SODOC-438(1FTBG)	BBS-SODOC-439(1FTBG)
	Date:	04/20/11	04/20/11	04/20/11	04/20/11	04/25/11	04/25/11
	Screening Criteria <sup>(1,2)</sup>						
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	92	81	257	98	18	1.97
CHROMIUM, TOTAL	50	63	99	279	68	19	8.05
CHROMIUM, HEXAVALENT	19	0.13 J	0.447 U	0.14 J	0.469 U	0.1 J	0.09 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BBS-SODOC-440(1FTBG)	BB&S-SODC-442 1.0'-BGS	BB&S-SODC-443 1.0'-BGS	BB&S-SODC-444 1.0'-BGS	BB&S-SODC-445 4.0'-BGS	BB&S-SODC-446 4.0'-BGS
	Date:	04/25/11	04/26/11	04/26/11	04/26/11	04/26/11	04/26/11
	Screening Criteria <sup>(1,2)</sup>						
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	<b>0.73 J</b>	<b>43 J</b>	<b>19 J</b>	<b>24 J</b>	0.2 UJ	<b>75 J</b>
CHROMIUM, TOTAL	50	<b>5.55</b>	<b>43 J</b>	<b>28 J</b>	<b>33 J</b>	<b>1.4 J</b>	<b>103 J</b>
CHROMIUM, HEXAVALENT	19	<b>0.09 J</b>	1.1 UJ	<b>1 J</b>	<b>1.5 J</b>	1 UJ	1.1 UJ

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SODC-447	BB&S-SODC-448	BB&S-SODC-449	BB&S-SODC-450	BB&S-SODC-451	BB&S-SODC-452
	Date:	8.0'-BGS	4.0'-BGS	2.0'-BGS	3.0'-BGS	3.0'-BGS	3.0'-BGS
	Screening Criteria <sup>(1,2)</sup>	04/26/11	04/26/11	04/27/11	04/27/11	04/27/11	04/27/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>							
ARSENIC	16	2.1 J	367 J	66 J	19 J	64 J	261 J
CHROMIUM, TOTAL	50	3.3 J	286 J	54 J	22 J	58 J	406 J
CHROMIUM, HEXAVALENT	19	1 UJ	3.3 J	1.6 J	1.1 UJ	2.2 J	1.9 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.



**Table 6-3 Final Analytical Results for Soil Samples - Hazardous Waste Boundary Area  
BB S Treated Lumber Corporation**

Analyte	Sample ID:	BB&S-SODC-453	BB&S-SODC-454	BB&S-SODC-455	BB&S-SODC-456
	Date:	3.0'-BGS	3.0'-BGS	3.0'-BGS	3.0'-BGS
	Screening Criteria <sup>(1,2)</sup>	04/27/11	04/27/11	04/27/11	04/27/11
<b>Metals by Methods SW6010B and SW7196 (mg/kg)</b>					
ARSENIC	16	17 J	121 J	38 J	18 J
CHROMIUM, TOTAL	50	13 J	114 J	37 J	22 J
CHROMIUM, HEXAVALENT	19	1.1 J	1.3 J	1.1 UJ	1.1 J

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

R = Rejected by validator <sup>(3)</sup>

Note:

<sup>1</sup> Site derived guidance screening values (on-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

<sup>3</sup> Serial dilution above the 100% quality control limit for chromium: actual value was 103%. No major concerns were encountered regarding the usability of the ChemTech analytical data.

**Table 6-4 Final Analytical Results for Soil Samples - Road Crossing  
BB S Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1,2)</sup>	BB&S-SODC-539- BB&S-SODC-540- BB&S-SODC-541- BB&S-SODC-542- BB&S-SODC-543- BB&S-SODC-544-					
		1.0'-BGS	2.0'-BGS	3.0'-BGS	4.0'-BGS	5.0'-BGS	B-BGS
		05/31/11	05/31/11	05/31/11	05/31/11	05/31/11	05/31/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	31	1.7	0.6 U	0.98	0.8	1.3
CHROMIUM, TOTAL	30	57 J	12 J	3.5 J	3.5 J	7.4 J	9.5 J
CHROMIUM, HEXAVALENT	1	5.6	1.8	1.2 U	1.1 U	1.1 U	1.4

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

**Table 6-4 Final Analytical Results for Soil Samples - Road Crossing  
BB S Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1,2)</sup>	BB&S-SODC-545	BB&S-SODC-546	BB&S-SODC-547	BB&S-SODC-547S-1.0'-BGS	BB&S-SODC-548	BB&S-SODC-548S-1.0'-BGS
		1.0'-BGS	2.0'-BGS	3.0'-BGS	06/13/11	4.0'-BGS	06/13/11
		06/01/11	06/01/11	06/01/11	06/13/11	06/01/11	06/13/11
		06/01/11	06/01/11	06/01/11	06/13/11	06/01/11	06/13/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	1.8	0.82	1.9	1.4	1.3	1.2
CHROMIUM, TOTAL	30	8.7 J	3.6 J	8.1 J	5.6	9.3 J	6.2
CHROMIUM, HEXAVALENT	1	1.9	1.1 U	1.2 U	1.1 U	1.3 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

**Table 6-4 Final Analytical Results for Soil Samples - Road Crossing  
BB S Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1,2)</sup>	BB&S-SODC-549	BB&S-SODC-	BB&S-SODC-550	BB&S-SODC-	BB&S-SODC-551	BB&S-SODC-
		5.0'-BGS	549S-1.0'-BGS	6.0'-BGS	550S-1.0'-BGS	7.0'-BGS	551S-1.0'-BGS
		06/01/11	06/13/11	06/01/11	06/13/11	06/01/11	06/13/11
Metals by Methods SW6010B and SW7196 (mg/kg)							
ARSENIC	13	0.56 U	0.78	1.4	1.8	0.62 U	1.2
CHROMIUM, TOTAL	30	1.4 J	3.4	3 J	5.9	1.5 J	5.7
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1 U	1.1 U	1.3 U	1.1 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.

**Table 6-4 Final Analytical Results for Soil Samples - Road Crossing  
BB S Lumber Corporation**

Analyte	Sample ID: Date: Screening Criteria <sup>(1,2)</sup>	BB&S-SODC-	BB&S-SODC-	BB&S-SODC-554	BB&S-SODC-555
		552S-1.0'-BGS	553S-1.0'-BGS	1.0'-BGS	1.0'-BGS
		06/13/11	06/13/11	06/13/11	06/13/11
Metals by Methods SW6010B and SW7196 (mg/kg)					
ARSENIC	13	3.3	1.8	1.3	4.1
CHROMIUM, TOTAL	30	3.7	9.5	6.1	9.9
CHROMIUM, HEXAVALENT	1	1.1 U	1.1 U	1.1 U	1.2 U

Notes:

1. Shaded cells exceed the screening value.
2. Bold values denote positive hits.

Key:

J = Estimated value.

U = Not detected (lab reporting limit shown).

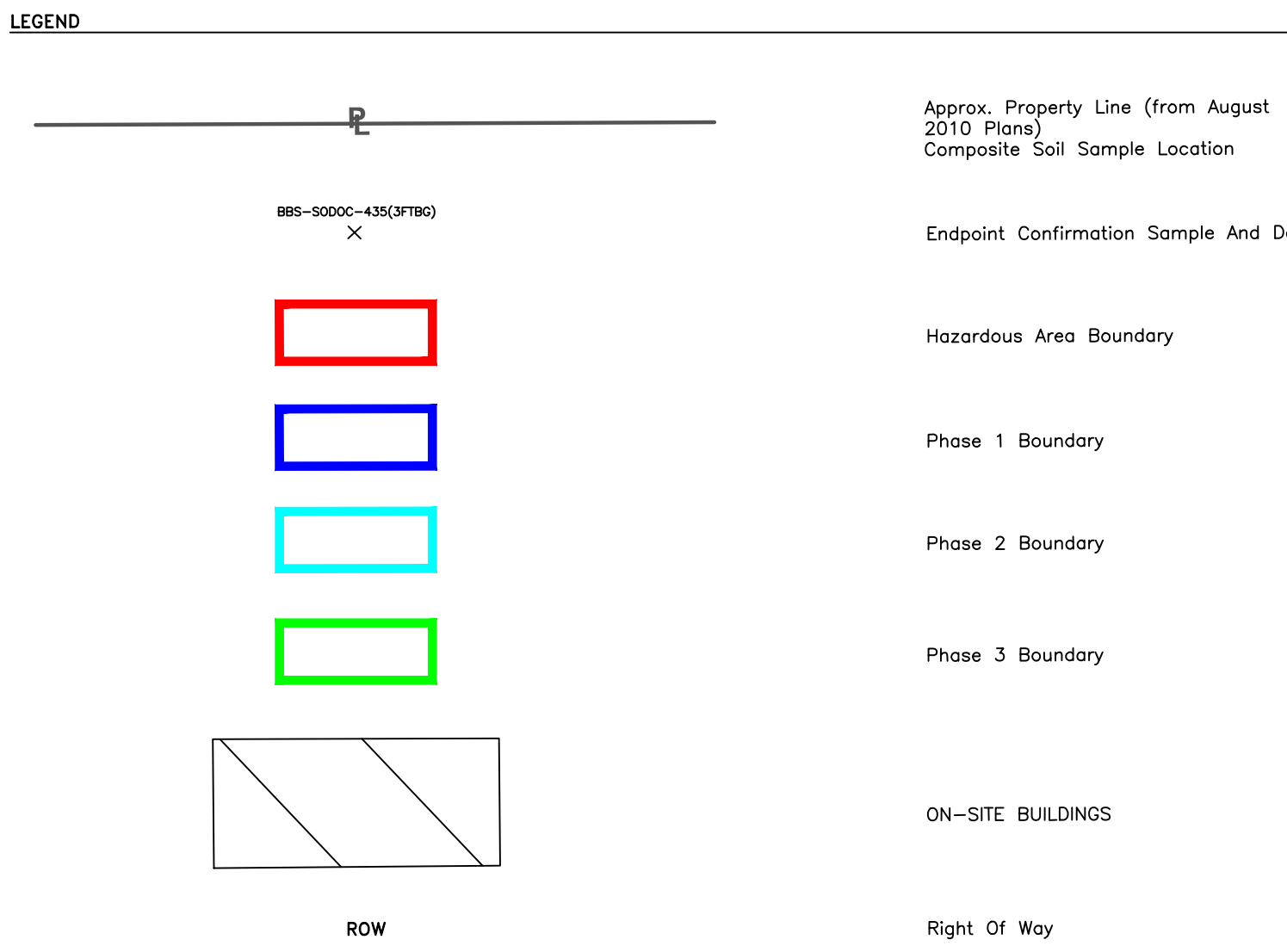
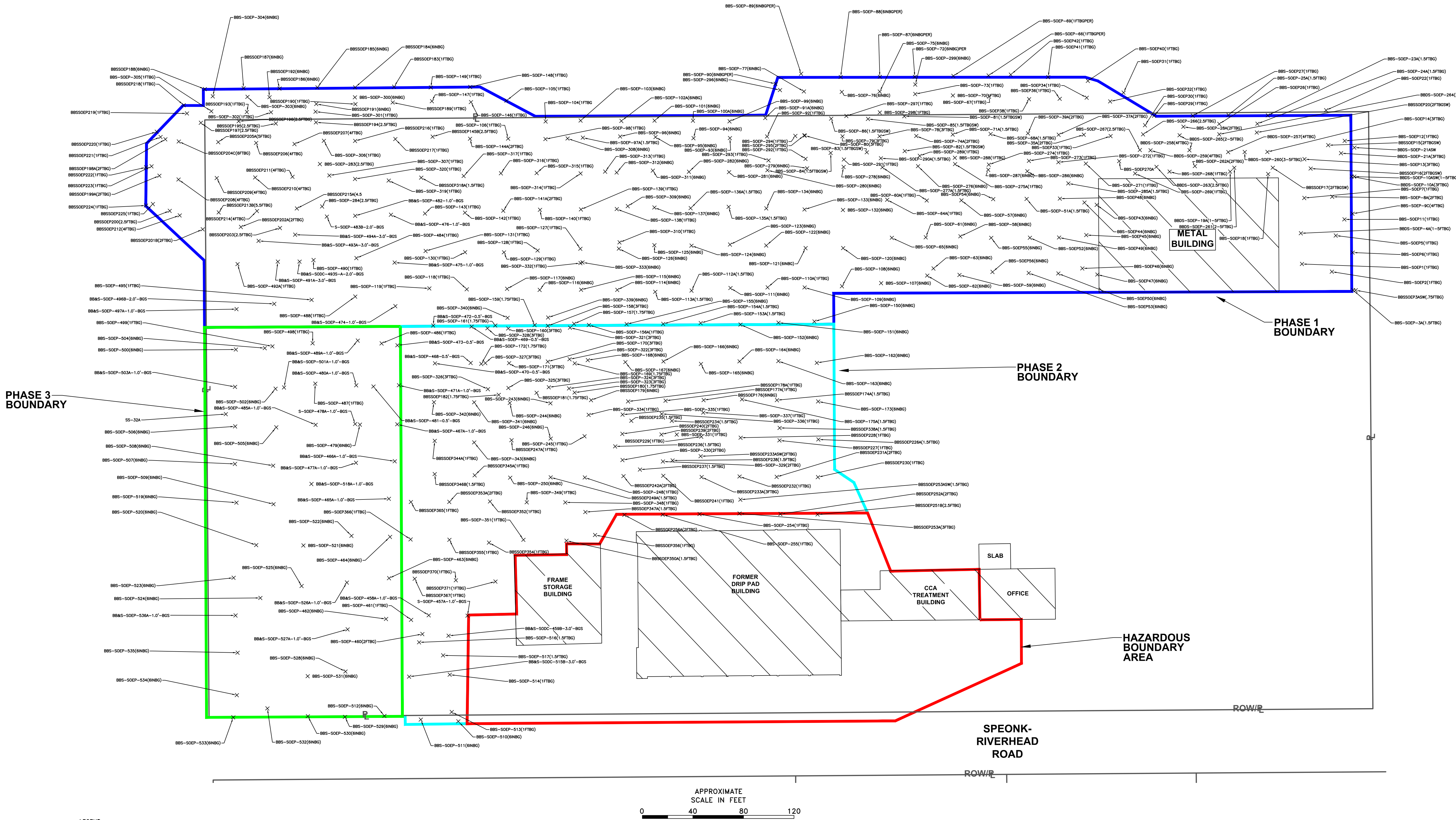
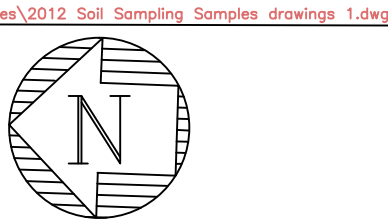
UJ = Not detected/Estimated Value.

mg/kg = Milligrams per kilogram.

Note:

<sup>1</sup> Site derived guidance screening values (off-site guidance only)

<sup>2</sup> Remedial objectives for this area were excavation to specified depth only, not to meet SCOs. This area to remain under NYSDEC site management.



**NOTE**  
1. THIS FIGURE IS ADAPTED FROM DRAWING 7/9, PROVIDED BY L.K. McLEAN ASSOCIATES P.C. (May 24TH, 2011).  
2. FOR CONFIRMATION ENDPOINT SAMPLE ANALYTICAL RESULTS, SEE FIGURE 6-1a.

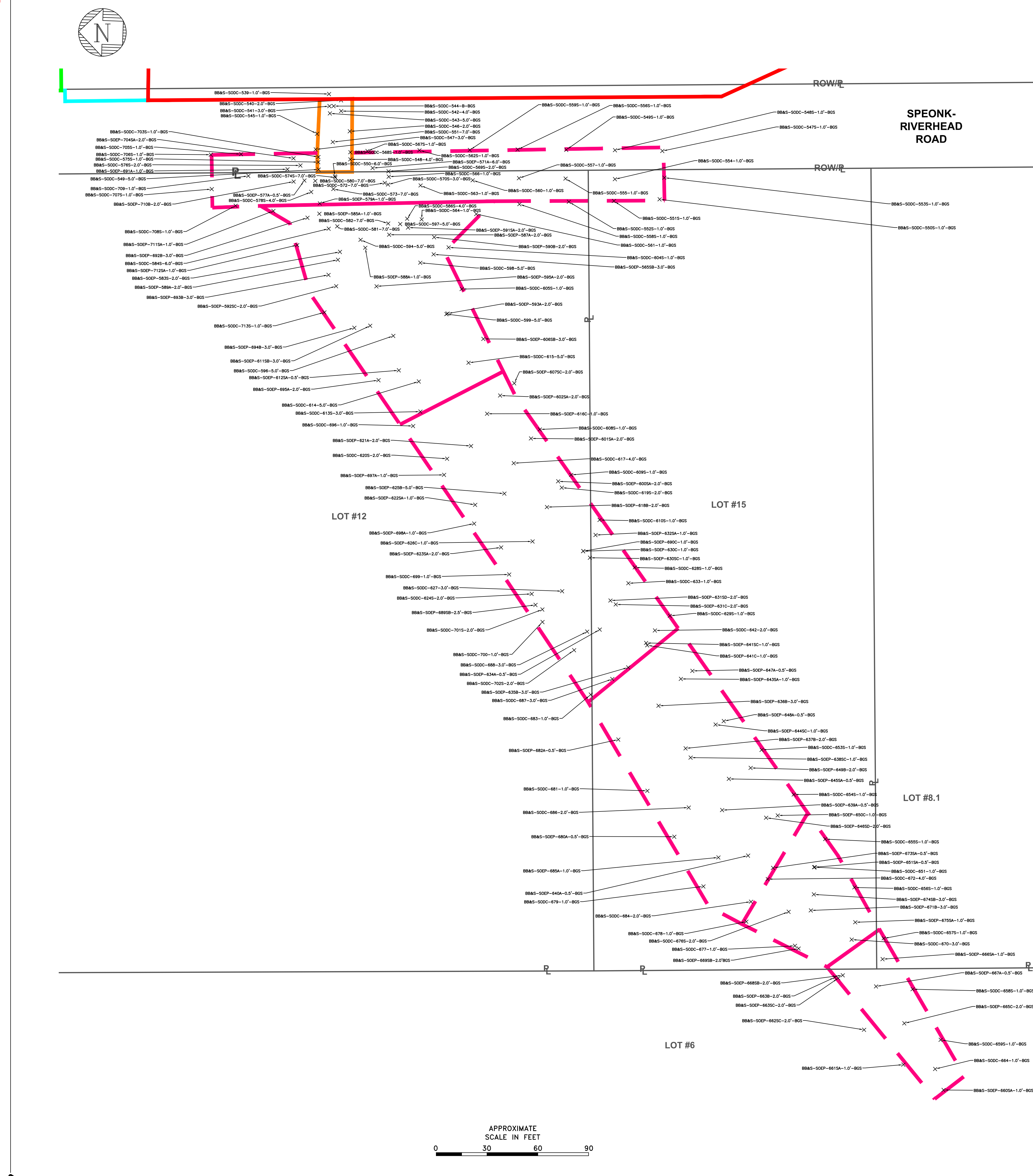
FIGURE 6-1 SAMPLE LOCATION MAP - PHASE 1, 2, & 3  
BB&S TREATED LUMBER CORPORATION SITE  
TOWN OF SOUTHAMPTON, SUFFOLK COUNTY, NY



Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
BBS-SOEP1(1FTBG)	10/29/10	2.59	3.88	0.111 J
BBS-SOEP2(1FTBG)	10/29/10	1.76	3.57	0.113 J
BBS-SOEP-3A(1.5FTBG)	12/07/10	3.03	39	0.37 J
BBSOEP3ASW(1.5FTBG)	12/07/10	1.24	5.23	0.46
BBS-SOEP-4A(1.5FTBG)	12/08/10	5.31 J	9.56	0.12 J
BBS-SOEP5(1FTBG)	10/29/10	7.28	7.51	0.168 J
BBS-SOEP6(1FTBG)	10/29/10	15	34	0.119 J
BBS-SOEP7(1FTBG)	10/29/10	8.68	19	0.484
BBS-SOEP-8A(2FTBG)	12/07/10	5.16	10	0.38 J
BBS-SOEP-9(4FTBG)	01/04/11	0.87 J	5.13 J	0.38 J
BBS-SOEP-10A(FTBG)	12/08/10	1.97 J	1.8	0.41 J
BBS-SOEP-10ASW(1.5FTBG)	12/08/10	1.31 J	4.31	0.46
BBS-SOEP11(1FTBG)	10/29/10	14	48	0.935
BBS-SOEP12(1FTBG)	11/01/10	0.73 J	4.71	0.158 J
BBS-SOEP13(3FTBG)	11/01/10	1.84	9.67	0.11 J
BBS-SOEP14(3FTBG)	11/01/10	1.62	10	0.163 J
BBSOEP15(2FTBGSW)	11/01/10	5.22	11	0.154 J
BBSOEP16(2FTBGSW)	11/01/10	1.22	8.18	0.448 U
BBSOEP17(2FTBGSW)	11/01/10	1.89	12	0.168 J
BBS-SOEP18(1FTBG)	11/01/10	4.76	11	0.102 J
BBS-SOEP-19A(1.5FTBG)	12/08/10	3.01 J	5.49	0.12 J
BBSOEP20(2FTBGSW)	11/01/10	3.25	13	0.325 J
BBS-SOEP-21A(FTBG)	12/08/10	3.76 J	8.57	0.5
BBS-SOEP-21ASW(1.5FTBG)	12/08/10	0.72 J	1.7	0.22 J
BBS-SOEP22A(FTBG)	11/01/10	3.03	9.35	0.105 J
BBS-SOEP-23A(1.5FTBG)	12/20/10	11	29	0.21 J
BBS-SOEP-24A(1.5FTBG)	12/20/10	11	22	0.21 J
BBS-SOEP-25A(1.5FTBG)	12/20/10	8.67	21	0.435 U
BBS-SOEP26(1FTBG)	11/02/10	13	26	0.922
BBS-SOEP27(1FTBG)	11/02/10	2.57	13	0.1 J
BBS-SOEP-28A(2FTBG)	12/20/10	6.27	50	1.62
BBS-SOEP29(1FTBG)	11/02/10	4.6	13	0.1 J
BBS-SOEP30(1FTBG)	11/02/10	1.05	37	17
BBS-SOEP31(1FTBG)	11/02/10	1.31	9.6	0.087 J
BBS-SOEP32(1FTBG)	11/02/10	1.72	10	0.086 J
BBS-SOEP33(1FTBG)	11/02/10	2.18	19	0.204 J
BBS-SOEP34(1FTBG)	11/02/10	1.78	10	0.218 J
BBS-SOEP-35A(2FTBG)	11/15/10	2.68	12	0.409 J
BBS-SOEP36(1FTBG)	11/02/10	1.13	7.7	0.151 J
BBS-SOEP-37A(2FTBG)	11/15/10	2.96	17	0.677 J
BBS-SOEP38(1FTBG)	11/02/10	1.24	7.73	0.194 J
BBS-SOEP-39A(2FTBG)	11/15/10	4.14	21	0.453
BBS-SOEP40(1FTBG)	11/02/10	2.65	7.67	0.086 J
BBS-SOEP41(1FTBG)	11/02/10	1.28	6.66	0.137 J
BBS-SOEP42(1FTBG)	11/02/10	1.09	5.28	0.085 J
BBS-SOEP43(6INBG)	11/03/10	5.2	14	0.588
BBS-SOEP44(6INBG)	11/03/10	7.08	20	0.222 J
BBS-SOEP45(6INBG)	11/03/10	5.42	15	0.171 J
BBS-SOEP46(6INBG)	11/03/10	2.85	8.45	0.224 J
BBS-SOEP47(6INBG)	11/03/10	3.64	8.72	0.382 J
BBS-SOEP48(6INBG)	11/03/10	11	23	0.386 J
BBS-SOEP49(6INBG)	11/03/10	12	24	0.693
BBS-SOEP50(6INBG)	11/03/10	13	19	0.221 J
BBS-SOEP-51A(1.5FTBG)	11/15/10	1	7.05	0.128 J
BBS-SOEP52(6INBG)	11/03/10	9.46	19	0.177 J
BBS-SOEP53(6INBG)	11/03/10	5.03	29	0.324 J
BBS-SOEP54(6INBG)	11/03/10	2.41	16	0.27 J
BBS-SOEP55(6INBG)	11/03/10	0.44 J	6.16	0.168 J
BBS-SOEP56(6INBG)	11/03/10	6.67	13	0.267 J
BBS-SOEP-57(6INBG)	11/03/10	1.86	11	0.166 J
BBS-SOEP-58(6INBG)	11/03/10	1.58	8.87	0.167 J
BBS-SOEP-59(6INBG)	11/03/10	8.76	15	0.218 J
BBS-SOEP-60A(1FTBG)	11/16/10	2.14	11	0.112 J
BBS-SOEP-61(6INBG)	11/03/10	1.49	8.2	0.22 J
BBS-SOEP-62(6INBG)	11/03/10	7.77	15	0.215 J
BBS-SOEP-63(6INBG)	11/03/10	12	17	0.266 J
BBS-SOEP-64A(1FTBG)	11/16/10	1.68	9.35	0.113 J
BBS-SOEP-65(6INBG)	11/16/10	1.61	9.15	0.238 J
BBS-SOEP-66(1FTBGPER)	11/16/10	0.96	3.09	0.119 J
BBS-SOEP-67(1FTBG)	11/16/10	0.62 J	2.83	0.175 J
BBS-SOEP-68A(1.5FTBG)	11/16/10	1.39	23	0.334 J
BBS-SOEP-69(1FTBGPER)	11/16/10	1.65	3.07	0.174 J
BBS-SOEP-70(1FTBG)	11/16/10	4.19	8.47	0.238 J
BBS-SOEP-71A(1.5FTBG)	11/16/10	5.27	38	0.164 J
BBS-SOEP-72(6INBG)PER	11/16/10	2.25	2.96	0.192 J
BBS-SOEP-73(1FTBG)	11/16/10	1.4	4.56	0.123 J
BBS-SOEP-74A(2FTBG)	11/16/10	4.54	40	0.166 J
BBS-SOEP-75(6INBG)	11/16/10	2.51	2.52	0.238 J
BBS-SOEP-76(6INBG)	11/16/10	0.6 J	1.52	0.177 J
BBS-SOEP-77(6INBG)	11/16/10	0.94	3.57	0.178 J
BBS-SOEP-78(3FTBG)	11/16/10	0.36 J	1.28	0.215 J
BBS-SOEP-79(3FTBG)	11/16/10	0.88	3.75	0.167 J
BBS-SOEP-80(3FTBG)	11/16/10	2.19	6.13	0.172 J
BBS-SOEP-81(1.5FTBGSW)	11/16/10	0.92 J	4.51	0.122 J
BBS-SOEP-82(1.5FTBGSW)	11/16/10	1.14	4.63	0.173 J
BBS-SOEP-83(1.5FTBGSW)	11/16/10	0.41 J	4.39	0.176 J
BBS-SOEP-84(1.5FTBGSW)	11/16/10	6.6	15	0.175 J
BBS-SOEP-85(1.5FTBGSW)	11/16/10	2.71	15	0.172 J
BBS-SOEP-86(1.5FTBGSW)	11/16/10	0.68	2.84	0.176
BBS-SOEP-87(6INBG)PER	11/16/10	3.26	4.82	0.228
BBS-SOEP-88(6INBG)PER	11/16/10	1.19	3.05	0.173
BBS-SOEP-89(6INBG)PER	11/16/10	2.2	3.18	0.121
BBS-SOEP-90(6INBG)PER	11/16/10	7.74	9.15	0.169
BBS-SOEP-91A(6INBG)	12/20/10	1.71	8.07	0.1 J
BBS-SOEP-92(1FTBG)	11/16/10	3.46	8.26	0.18
BBS-SOEP-93(6INBG)	11/12/10	1.86	13	0.181 J
BBS-SOEP-94(6INBG)	11/12/10	9.53	19	0.18 J
BBS-SOEP-95(6INBG)	11/12/10	4.81	8.3	0.179 J
BBS-SOEP-96(6INBG)	11/12/10	15	25	0.386 J
BBS-SOEP-97A(1.5FTBG)	12/20/10	3.89	23	0.09 J
BBS-SOEP-98(1FTBG)	11/12/10	13	23	0.183 J
BBS-SOEP-99(6INBG)	11/12/10	14	29	0.188 J
BBS-SOEP-100A(6INBG)	12/20/10	3.32	10	0.16 J
BBS-SOEP-101(6INBG)	11/12/10	8.55	21	0.187 J
BBS-SOEP-102A(6INBG)	12/20/10	3.3	7.26	0.15 J
BBS-SOEP-103(6INBG)	11/12/10	2.66	4.61	0.18 J
BBS-SOEP-104(1FTBG)	11/12/10	3.11	9.55	0.131 J
BBS-SOEP-105(1FTBG)	11/12/10	0.9	5.63	0.43 U
BBS-SOEP-106(1FTBG)	11/12/10	15	39	0.969
BBS-SOEP-107(6INBG)	11/15/10	0.96	9.97	0.125 J
BBS-SOEP-108(6INBG)	11/15/10	1.81	8.86	0.126 J
BBS-SOEP-109(6INBG)	11/15/10	2.68	9.65	0.125 J
BBS-SOEP-110A(1FTBG)	12/22/10	0.98 J	17	0.428 U
BBS-SOEP-111(6INBG)	11/15/10	13	24	0.497
BBS-SOEP-112A(1.5FTBG)	12/22/10	0.77 J	5.21	0.412 U
BBS-SOEP-113A(1.5FTBG)	12/22/10	0.67 J	11	0.33 J
BBS-SOEP-114(6INBG)	11/15/10	2.46	33	0.38 J
BBS-SOEP-115(6INBG)	11/15/10	1.15	11	0.18 J
BBS-SOEP-116(6INBG)	11/15/10	13	30	0.177 J
BBS-SOEP-117(6INBG)	11/15/10	4.02	16	0.439
BBS-SOEP-118(1FTBG)	11/15/10	3.12	8.14	0.126 J
BBS-SOEP-119(1FTBG)	11/15/10	2.14	7.7	0.127 J
BBS-SOEP-120(6INBG)	11/15/10	1.92	12	0.183 J
BBS-SOEP-121(6INBG)	11/15/10	11	18	0.18 J
BBS-SOEP-122(6INBG)	11/15/10	3.23	22	2.16
BBS-SOEP-123(6INBG)	11/15/10	0.87	8.09	0.179 J
BBS-SOEP-124(6INBG)	11/15/10	0.82	8.64	0.179 J
BBS-SOEP-125(6INBG)	11/15/10	4.89	17	0.331 J

Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
BBS-SOEP-126(6INBG)	11/15/10	15	34	0.589
BBS-SOEP-127(1FTBG)	11/16/10	0.86	13	0.212 J
BBS-SOEP-128(1FTBG)	11/16/10	7.94	17	0.213 J
BBS-SOEP-129(1FTBG)	11/16/10	11	20	0.158 J
BBS-SOEP-130(1FTBG)	11/16/10	8.54	11	0.164 J
BBS-SOEP-131(1FTBG)	11/16/10	2.44	6.84	0.161 J
BBS-SOEP-132(6INBG)	11/16/10	1.18	8.63	0.109 J
BBS-SOEP-133(6INBG)	11/16/10	4.58	14	0.161 J
BBS-SOEP-134(6INBG)	11/16/10	3.62	17	0.22 J
BBS-SOEP-135A(1.5FTBG)	12/20/10	0.29 J	2.11	0.19 J
BBS-SOEP-136A(1.5FTBG)	12/20/10	3.37	11	0.25 J
BBS-SOEP-137(6INBG)	11/16/10	1.14	6.78	0.106 J
BBS-SOEP-138(1FTBG)	11/16/10	2.51	6.85	0.156 J
BBS-SOEP-139(1FTBG)	11/16/10	1.63	12	0.164 J
BBS-SOEP-140(1FTBG)	11/16/10	2.88	7.95	0.161 J
BBS-SOEP-141A(2FTBG)	12/20/10	2.29	5.13	0.419 U
BBS-SOEP-142(1FTBG)	11/29/10	3.67	44	1.32
BBS-SOEP-143(1FTBG)	11/17/10	0.9 U	17	0.53
BBS-SOEP-144A(2FTBG)	12/20/10	4.53	9.87	0.25 J
BBSOEP145B(2.5FTBG)	01/04/11	11	5.43 J	0.43
BBS-SOEP-146(1FTBG)	11/17/10	2.05	7.07	0.31 J
BBS-SOEP-147(1FTBG)	11/17/10	1.07	6.39	0.25 J
BBS-SOEP-148(1FTBG)	11/17/10	1.58	4.89	0.27 J
BBS-SOEP-149(1FTBG)	11/17/10	0.86 J	4.48	0.27 J
BBS-SOEP-150(6INBG)	11/17/10	1.4	8.55	0.27 J
BBS-SOEP-151(6INBG)	11/17/10	0.74 J	8.75	0.25 J
BBS-SOEP-152(6INBG)	11/17/10	7.45	18	0.38 J
BBS-SOEP-153A(1.5FTBG)	12/22/10	0.41	3.28	0.407 U
BBS-SOEP-154A(1.5FTBG)	12/22/10	0.82 J	4.42	0.412 U
BBS-SOEP-155(6INBG)	11/17/10	13	38	0.25 J
BBS-SOEP-156A(1FTBG)	12/22/10	3.34 J	5.43	0.415 U
BBS-SOEP-157(1.75FTBG)	11/29/10	2.42	5.6	0.29 J
BBS-SOEP-158(3FTBG)	11/29/10	0.296 J	0.864	0.28 J
BBS-SOEP-159(1.75FTBG)	11/29/10	1.69	3.25	0.44 U
BBS-SOEP-160(3FTBG)	11/29/10	1.04	6.36	0.25 J
BBS-SOEP-161(1.75FTBG)	11/29/10	1.49	3.55	0.25 J
BBS-SOEP-162(6INBG)	11/29/10	2.16	8.65	0.35 J
BBS-SOEP-163(6INBG)	11/29/10	1.7	12	0.89
BBS-SOEP-164(6INBG)	11/29/10	2.5	24	2.66
BBS-SOEP-165(6INBG)	11/29/10	4.97	12	0.55
BBS-SOEP-166(6INBG)	11/29/10	6.83	11	0.56
BBS-SOEP-167(6INBG)	11/29/10	10	20	0.35 J
BBS-SOEP-168(6INBG)	11/29/10	4.8	11	0.41
BBS-SOEP-169(1.75FTBG)	11/29/10	3.14	4.97	0.35 J
BBS-SOEP-170(3FTBG)	11/29/10	1.13	3.5	0.39 J
BBS-SOEP-171(3FTBG)	11/29/10	2.02	6.9	0.25 J
BBS-SOEP-172(1.75FTBG)	11/29/10	2.76	3.89	0.13 J
BBS-SOEP-173(6INBG)	11/29/10	2.04	22	0.78
BBSOEP174A(1.5FTBG)	01/03/11	13	28 J	0.23 J
BBS-SOEP-175A(1.5FTBG)	12/22/10	1.91	7.41 J	0.41 U
BBSOEP176(6INBG)	11/30/10	8.47	26	0.11 J
BBSOEP177A(1FTBG)	01/05/11	2.2	4.7	0.2 J
BBSOEP178A(1FTBG)	01/05/11	1.96	4.68	0.14 J
BBSOEP179(6INBG)	12/02/10	3.76	9.33	0.418 U
BBSOEP180A(1.75FTBG)	11/30/10	1.63	4.28	0.142 U
BBSOEP181(1.75FTBG)	11/30/10	3.01	6.21	0.433 U
BBSOEP182(1.75FTBG)	11/30/10	1.21	2.62	0.422 U
BBSOEP183(1FTBG)	11/30/10	0.59 J	4.19	0.431 U
BBSOEP184(6INBG)	11/30/10	1.2	5.04	0.11 J
BBSOEP185(6INBG)	11/30/10	1.07	2.13	0.427 U
BBSOEP186(6INBG)	11/30/10	2.28	4.49	0.16 J
BBSOEP187(6INBG)	11/30/10	0.49 J	3.91	0.437 U
BBSOEP188(6INBG)	11/30/10	0.97	3.74	0.443 U
BBSOEP189(1FTBG)	11/30/10	1.19	5.22	0.447 U
BBSOEP190(1FTBG)	11/30/10	0.41	1.79	0.42 U
BBSOEP191(6INBG)	11/30/10	0.56 J	3.74	0.11 J
BBSOEP192(6INBG)	11/30/10	5.37	9.38	0.504 U
BBSOEP193(1FTBG)	11/30/10	1.29	6	0.11 J

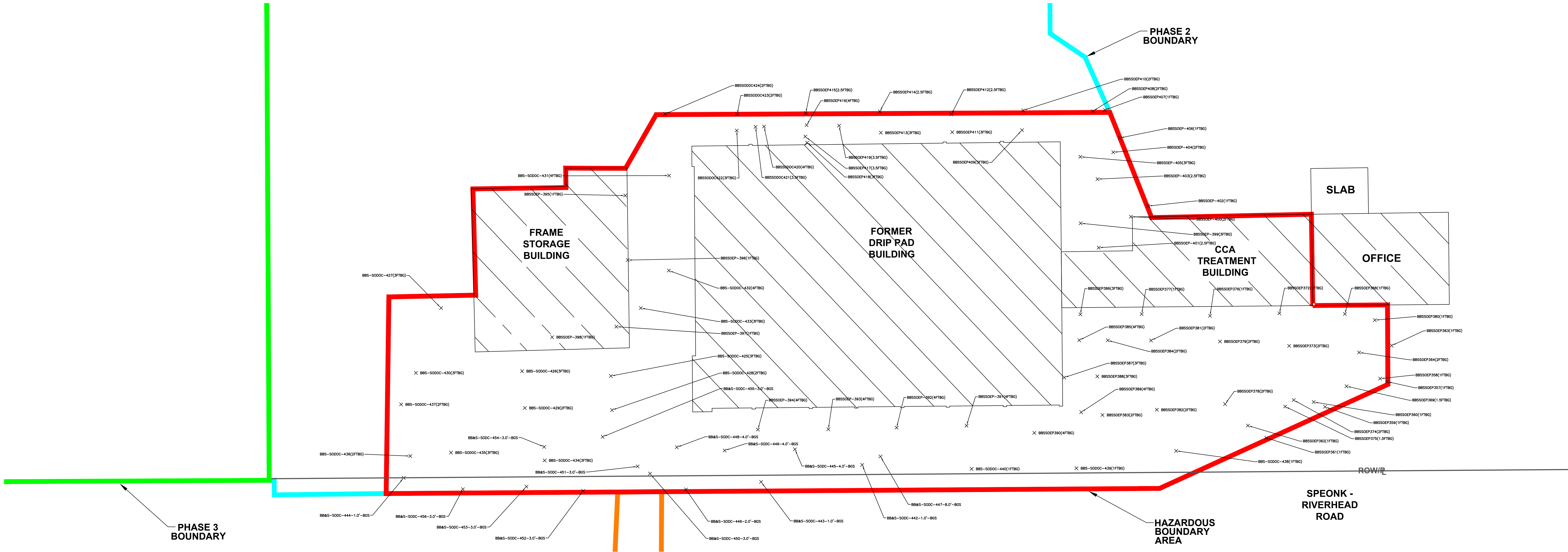
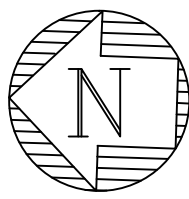




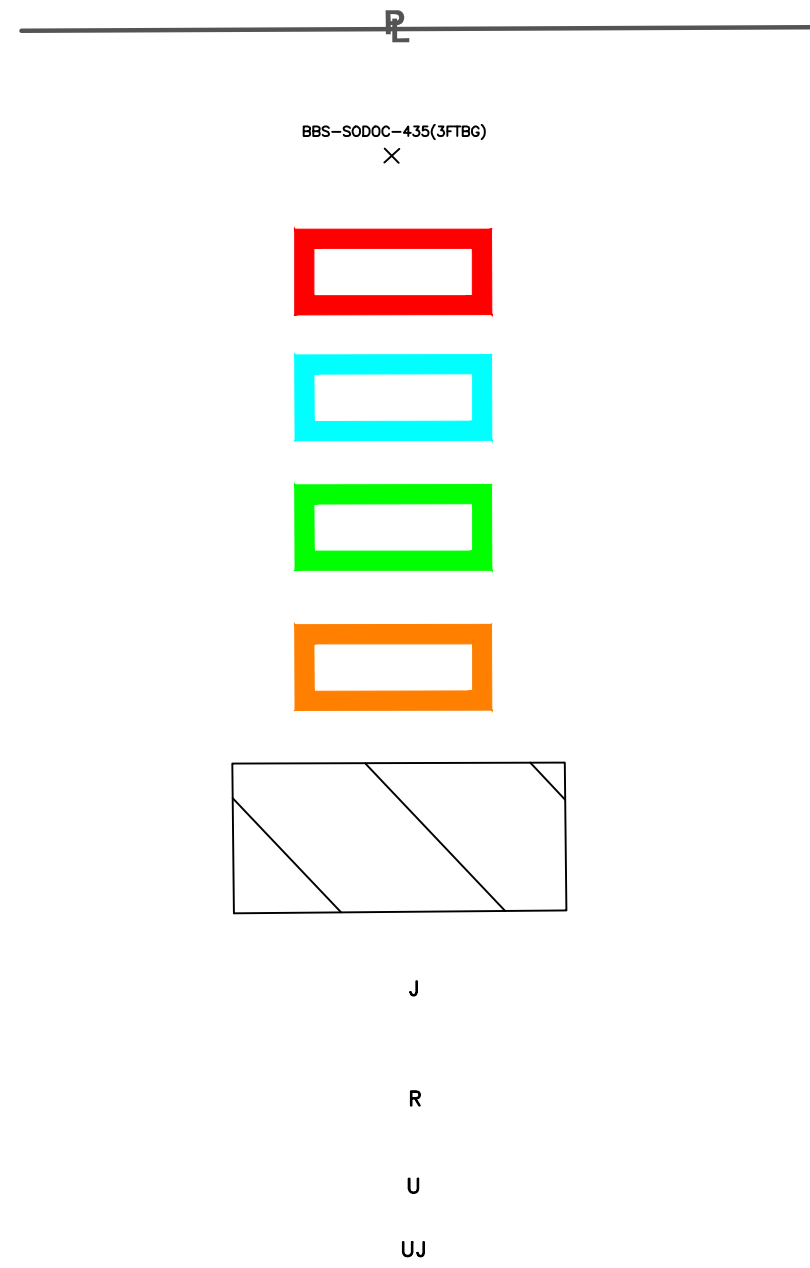
Area	Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
Road Crossing	BB&S-SOCC-539-1.0'-BGS	05/31/11	31	57 J	5.6
Road Crossing	BB&S-SOCC-540-2.0'-BGS	05/31/11	1.7	12 J	1.8
Road Crossing	BB&S-SOCC-541-3.0'-BGS	05/31/11	0.6 U	3.5 J	1.2 U
Road Crossing	BB&S-SOCC-542-4.0'-BGS	05/31/11	0.98	3.5 J	1.1 U
Road Crossing	BB&S-SOCC-543-5.0'-BGS	05/31/11	0.8	7.4 J	1.1 U
Road Crossing	BB&S-SOCC-544-6-BGS	05/31/11	1.3	9.5 J	1.4
Road Crossing	BB&S-SOCC-545-1.0'-BGS	06/01/11	1.8	8.7 J	1.9
Road Crossing	BB&S-SOCC-546-2.0'-BGS	06/01/11	0.82	3.6 J	1.1 U
Road Crossing	BB&S-SOCC-547-3.0'-BGS	06/13/11	1.9	8.1 J	1.2 U
Road Crossing	BB&S-SOCC-547-3.0'-BGS	06/13/11	1.4	5.6	1.1 U
Road Crossing	BB&S-SOCC-548-4.0'-BGS	06/13/11	1.3	9.3 J	1.3 U
Road Crossing	BB&S-SOCC-548-4.0'-BGS	06/13/11	1.2	6.2	1.1 U
Road Crossing	BB&S-SOCC-548-5.0'-BGS	06/13/11	0.56 UJ	1.4 J	1.1 U
Road Crossing	BB&S-SOCC-549-1.0'-BGS	06/13/11	0.78	3.4	1.1 U
Road Crossing	BB&S-SOCC-549-1.0'-BGS	06/13/11	1.4	3.3	1.1 U
Road Crossing	BB&S-SOCC-549-1.0'-BGS	06/13/11	1.8	5.9	1.1 U
Road Crossing	BB&S-SOCC-551-7.0'-BGS	06/13/11	0.62 U	1.5 J	1.3 U
Road Crossing	BB&S-SOCC-551-7.0'-BGS	06/13/11	1.2	5.7	1.1 U
Road Crossing	BB&S-SOCC-552-8.0'-BGS	06/13/11	3.3	3.7	1.1 U
Road Crossing	BB&S-SOCC-553-1.0'-BGS	06/13/11	1.8	9.5	1.1 U
Road Crossing	BB&S-SOCC-554-1.0'-BGS	06/13/11	1.3	6.1	1.1 U
Road Crossing	BB&S-SOCC-555-1.0'-BGS	06/13/11	4.1	9.9	1.2 U
Road Crossing	BB&S-SOCC-556-1.0'-BGS	06/13/11	1.2	6	1.1 U
Phase 4	BB&S-SOCC-557-1.0'-BGS	06/13/11	1.7	5.4	1.1 U
Phase 4	BB&S-SOCC-558-1.0'-BGS	06/13/11	1.7	6.4	1.1 U
Phase 4	BB&S-SOCC-559-1.0'-BGS	06/13/11	3.8	3.9	1.1 U
Phase 4	BB&S-SOCC-560-1.0'-BGS	06/13/11	2.3	5.3	1.1 U
Phase 4	BB&S-SOCC-561-1.0'-BGS	06/13/11	1.9	7	1.1 U
Phase 4	BB&S-SOCC-562-8.0'-BGS	06/13/11	0.94 J	4.2	1.1 U
Phase 4	BB&S-SOCC-563-1.0'-BGS	06/13/11	6.4	5.8	1.1 U
Phase 4	BB&S-SOCC-564-1.0'-BGS	06/13/11	7.2	64	1.1 U
Phase 4	BB&S-SOCC-565-3.0'-BGS	08/05/11	2.2	5.7	1 U
Phase 4	BB&S-SOCC-566-1.0'-BGS	06/13/11	12	17	1.1 U
Phase 4	BB&S-SOCC-567-1.0'-BGS	06/13/11	1.5	6.3	1.09 U
Phase 4	BB&S-SOCC-568-1.0'-BGS	06/13/11	3.4	11	1.12 U
Phase 4	BB&S-SOCC-569-1.0'-BGS	06/13/11	1.4	4	1.09 U
Phase 4	BB&S-SOCC-570-3.0'-BGS	06/13/11	3.7	11	1.08 U
Phase 4	BB&S-SOCC-571-6.0'-BGS	07/27/11	5.7	9.7	1.08 UJ
Phase 4	BB&S-SOCC-572-7.0'-BGS	06/13/11	0.57 J	1.9	1.03 U
Phase 4	BB&S-SOCC-573-7.0'-BGS	06/13/11	0.99 J	1.9	1.05 U
Phase 4	BB&S-SOCC-574-7.0'-BGS	06/13/11	3.3	3.7	1.04 U
Phase 4	BB&S-SOCC-575-1.0'-BGS	06/13/11	2.2	8.3	1.15 U
Phase 4	BB&S-SOCC-576-2.0'-BGS	06/13/11	0.95 J	3.7	1.05 U
Phase 4	BB&S-SOCC-577-4.0'-BGS	07/27/11	0.93 J	3.4	1.06 UJ
Phase 4	BB&S-SOCC-578-4.0'-BGS	06/13/11	1.3	2.7	1.04 U
Phase 4	BB&S-SOCC-579-1.0'-BGS	06/13/11	1.1	2.4	1.05 UJ
Phase 4	BB&S-SOCC-580-7.0'-BGS	06/13/11	4.5	3.8	1.04 U
Phase 4	BB&S-SOCC-581-7.0'-BGS	06/14/11	1.1 J	4.2 J	1 U
Phase 4	BB&S-SOCC-582-7.0'-BGS	06/14/11	1.2 J	2.4 J	1.1 U
Phase 4	BB&S-SOCC-583-2.0'-BGS	08/05/11	3	5.3	1 U
Phase 4	BB&S-SOCC-584-6.0'-BGS	06/14/11	0.27 J	1.9 J	1 U
Phase 4	BB&S-SOCC-585-1.0'-BGS	07/27/11	0.61 J	3	1.08 UJ
Phase 4	BB&S-SOCC-586-4.0'-BGS	06/14/11	1.6 J	4.7 J	1 U
Phase 4	BB&S-SOCC-587-2.0'-BGS	07/27/11	3.2	4.7	1.04 UJ
Phase 4	BB&S-SOCC-588-1.0'-BGS	08/01/11	0.2 U	7.4 J	1 U
Phase 4	BB&S-SOCC-589-2.0'-BGS	07/27/11	0.86 J	3.7	1.06 UJ
Phase 4	BB&S-SOCC-590-2.0'-BGS	08/05/11	5.3	12	1 U
Phase 4	BB&S-SOCC-591-2.0'-BGS	07/27/11	2.6	8.5	1.06 UJ
Phase 4	BB&S-SOCC-592-2.0'-BGS	08/11/11	0.5 J	3.4	1 U
Phase 4	BB&S-SOCC-593-2.0'-BGS	08/01/11	3.6	5.1 J	1 U
Phase 4	BB&S-SOCC-594-5.0'-BGS	06/22/11	0.21 U	1.7	1.1 U
Phase 4	BB&S-SOCC-595-2.0'-BGS	07/28/11	5.5	6.8	1.04 U
Phase 4	BB&S-SOCC-596-5.0'-BGS	06/22/11	0.2 U	11	1.1*
Phase 4	BB&S-SOCC-597-5.0'-BGS	06/22/11	0.2 U	1.1	1 U
Phase 4	BB&S-SOCC-598-5.0'-BGS	06/22/11	0.2 U	5.8	1 U
Phase 4	BB&S-SOCC-599-5.0'-BGS	06/22/11	0.2 U	6.5	1 U
Phase 4	BB&S-SOCC-600-2.0'-BGS	06/22/11	0.2 U	3.4 J	1 U
Phase 4	BB&S-SOCC-601-2.0'-BGS	08/01/11	3.3	4.7 J	1 U
Phase 4	BB&S-SOCC-602-3.0'-BGS	06/24/11	0.2 U	8.4 J	1 U
Phase 4	BB&S-SOCC-603-1.0'-BGS	06/24/11	3.9	7.3 J	1.1 U
Phase 4	BB&S-SOCC-604-1.0'-BGS	06/24/11	0.21 U	7.3	1.1 U
Phase 4	BB&S-SOCC-605-3.0'-BGS	08/05/11	1.7	4.2	1 U
Phase 4	BB&S-SOCC-606-3.0'-BGS	08/11/11	0.78 J	4.9	1 U
Phase 4	BB&S-SOCC-607-1.0'-BGS	06/24/11	3.1	13 J	1.1 U
Phase 4	BB&S-SOCC-608-1.0'-BGS	06/24/11	4.5	6.6 J	1.1 U
Phase 4	BB&S-SOCC-609-1.0'-BGS	06/24/11	0.22 UJ	4.4 J	1.1 U
Phase 4	BB&S-SOCC-610-1.0'-BGS	08/05/11	10	9.1	1 U
Phase 4	BB&S-SOCC-611-1.0'-BGS	07/28/11	0.5 U	1.3	1.02 U
Phase 4	BB&S-SOCC-612-3.0'-BGS	06/24/11	0.2 U	1.5 J	1 U
Phase 4	BB&S-SOCC-613-3.0'-BGS	06/24/11	3.2	5.7 J	1.1 U
Phase 4	BB&S-SOCC-614-5.0'-BGS	06/24/11	4	5.8 J	1 U
Phase 4	BB&S-SOCC-615-5.0'-BGS	08/11/11	4.2	5.4	1 U
Phase 4	BB&S-SOCC-617-4.0'-BGS	06/24/11	3.3	8.7 J	1 U
Phase 4	BB&S-SOCC-618-2.0'-BGS	08/04/11	2.8	5.4	1 U
Phase 4	BB&S-SOCC-619-2.0'-BGS	06/24/11	0.2 U	7.3 J	1 U
Phase 4	BB&S-SOCC-620-2.0'-BGS	06/24/11	0.21 U	6.5 J	1.1 U
Phase 4	BB&S-SOCC-621-2.0'-BGS	07/28/11	7.3	7.6	1.03 U
Phase 4	BB&S-SOCC-622-1.0'-BGS	07/28/11	2.4	13	1.02 U
Phase 4	BB&S-SOCC-623-1.0'-BGS	08/01/11	0.2 U	7.4 J	1.4*
Phase 4	BB&S-SOCC-624-2.0'-BGS	06/27/11	2.5	13	1.1*
Phase 4	BB&S-SOCC-625-5.0'-BGS	08/04/11	8.5	7.2	1 U
Phase 4	BB&S-SOCC-626-1.0'-BGS	08/11/11	3.4	4.5	1 U

Area	Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
Phase 4	BB&S-SOCC-627-3.0'-BGS	06/27/11	3	9.6	1
Phase 4	BB&S-SOCC-628-1.0'-BGS	06/27/11	1.2	2.7	1.1 U
Phase 4	BB&S-SOCC-629-1.0'-BGS	06/27/11	0.84 J	2.7	1.1 U
Phase 4	BB&S-SOEP-630C-1.0'-BGS	08/11/11	0.76 J	4.2	1 U
Phase 4	BB&S-SOEP-630SC-1.0'-BGS	08/11/11	2.1	8.2	1 U
Phase 4	BB&S-SOEP-631C-2.0'-BGS	08/11/11	0.68 J	3.8	1 U
Phase 4	BB&S-SOEP-631SD-2.0'-BGS	08/11/11	1.7	9.4 J	1.1 U
Phase 4	BB&S-SOEP-632SA-1.0'-BGS	08/01/11	2.7	27 J	2.6
Phase 4	BB&S-SOCC-633A-1.0'-BGS	06/27/11	2.6	10	1 U
Phase 4	BB&S-SOEP-633AA-0.5'-BGS	07/28/11	5.1 J	15 J	1.3*
Phase 4	BB&S-SOEP-635B-3.0'-BGS	08/04/11	0.51 U	2.3 J	1 U
Phase 4	BB&S-SOEP-635B-3.0'-BGS	08/04/11	2.3	5.8	1 U
Phase 4	BB&S-SOEP-637B-2.0'-BGS	08/04/11	0.56 J	3.5 J	1 U
Phase 4	BB&S-SOEP-638SC-1.0'-BGS	08/11/11	3.2	12	1.1 U
Phase 4	BB&S-SOEP-639AA-0.5'-BGS	07/29/11	1.4	5.6 J	1.04 U
Phase 4	BB&S-SOEP-640AA-0.5'-BGS	07/29/11	2.1	6.4 J	1.03 U
Phase 4	BB&S-SOEP-641C-1.0'-BGS	08/11/11	4.6	9.6	1 U
Phase 4	BB&S-SOEP-641SC-1.0'-BGS	08/11/11	3.5	7.1	1.2 U
Phase 4	BB&S-SOCC-642-2.0'-BGS	06/29/11	0.63 J	13 J	1.25 U
Phase 4	BB&S-SOEP-643SA-1.0'-BGS	08/01/11	0.2 U	4.3 J	1 U
Phase 4	BB&S-SOEP-644SA-1.0'-BGS	08/11/11	0.6 U	0.6	1.2 U
Phase 4	BB&S-SOEP-645SA-0.5'-BGS	07/29/11	2.8	19 J	1.03 U
Phase 4	BB&S-SOEP-646SA-2.0'-BGS	08/17/11	0.95 J	10 J	1.1 U
Phase 4	BB&S-SOEP-647AA-0.5'-BGS	08/01/11	0.2 U	4.3 J	1.1 U
Phase 4	BB&S-SOEP-648AA-0.5'-BGS	08/01/11	0.21 U	5.5 J	1.1 U
Phase 4	BB&S-SOEP-649B-2.0'-BGS	08/05/11	0.63 J	2.8	1 U
Phase 4	BB&S-SOEP-650C-1.0'-BGS	08/11/11	6	4.8	1 U
Phase 4	BB&S-SOEP-651SA-0.5'-BGS	07/29/11	1.1	3.7 J	1.07 U
Phase 4	BB&S-SOCC-651-1.0'-BGS	06/29/11	0.24 UJ	1.6 J	1.3 U
Phase 4	BB&S-SOCC-653B-1.0'-BGS	06/29/11	0.21 U	4.2	1.07 U
Phase 4	BB&S-SOCC-654B-1.0'-BGS	06/29/11	0.21 U	5.6	1.09 U
Phase 4	BB&S-SOCC-655B-1.0'-BGS	06/29/11	0.21 U	1.5	1.08 U
Phase 4	BB&S-SOCC-656B-1.0'-BGS	06/29/11	0.21 U	3.8	1.09 U
Phase 4	BB&S-SOCC-657B-1.0'-BGS	06/29/11	0.21 U	2.8	1.07 U
Phase 4	BB&S-SOCC-658B-1.0'-BGS	06/29/11	0.21 U	6.6	1.11 U
Phase 4	BB&S-SOCC-659B-1.0'-BGS	06/29/11	0.21 U	5.1	1.09 U
Phase 4	BB&S-SOEP-660SA-1.0'-BGS	07/29/11	8.8	20 J	1.1 U
Phase 4	BB&S-SOEP-661SA-1.0'-BGS	07/29/11	3.1	13 J	1.2*
Phase 4	BB&S-SOEP-662SC-2.0'-BGS	08/11/11	0.7 J	4.1	1.2 U
Phase 4	BB&S-SOEP-663B-2.0'-BGS	08/04/11	1.5	6.4 J	1.2*
Phase 4	BB&S-SOEP-663SC-2.0'-BGS	08/11/11	2	6	1 U
Phase 4	BB&S-SOCC-664-1.0'-BGS	06/30/11	3.7 J	8.9 J	1.1 U
Phase 4	BB&S-SOEP-665C-2.0'-BGS	08/11/11	0.67 J	3.3	1 U
Phase 4	BB&S-SOEP-666SA-1.0'-BGS	07/29/11	2.5	6.9 J	1.04 U
Phase 4	BB&S-SOEP-667AA-0.5'-BGS	07/29/11	4.6	14 J	1.1*
Phase 4	BB&S-SOEP-668SB-2.0'-BGS	08/04/11	3.5	7.4 J	1.1 U
Phase 4	BB&S-SOEP-669SB-2.0BGS	08/05/11	0.84 J	4.6	1 U
Phase 4	BB&S-SOCC-670-3.0'-BGS	06/30/11	12 J	6.5 J	1.1 U
Phase 4	BB&S-SOEP-671B-3.0'-BGS	08/04/11	7.4	6 J	1.2 U
Phase 4	BB&S-SOCC-672A-0'-BGS	06/30/11	0.76 J	2.4 J	1.1 U
Phase 4	BB&S-SOEP-673SA-0.5'-BGS	07/29/11	1.1	9.8 J	1.06 U
Phase 4	BB&S-SOEP-674SB-3.0'-BGS	08/04/11	2.6	17 J	1 U
Phase 4	BB&S-SOEP-675SA-1.0'-BGS	07/29/11	8.1	16 J	1.03 U
Phase 4	BB&S-SOCC-676B-2.0'-BGS	06/30/11	1.9 J	3.7 J	1.1 U
Phase 4	BB&S-SOCC-677A-1.0'-BGS	07/01/11	3.6	5	1.1 U
Phase 4	BB&S-SOCC-678A-1.0'-BGS	07/01/11	4.9	8.2	1.1 U
Phase 4	BB&S-SOCC-679A-1.0'-BGS	07/01/11	1.1 J	2.4	1.1 U
Phase 4	BB&S-SOEP-680A-0.5'-BGS	08/01/11	1.9 J	5.3	1 U
Phase 4	BB&S-SOCC-681-1.0'-BGS	07/01/11	1.2	4.5	1.1 U
Phase 4	BB&S-SOEP-682A-0.5'-BGS	08/01/11	0.2 U	4.3	1 U
Phase 4	BB&S-SOCC-683-1.0'-BGS	07/01/11	2	5.8	1.1 U
Phase 4	BB&S-SOCC-684-2.0'-BGS	07/01/11	11	7	1 U
Phase 4	BB&S-SOEP-685A-1.0'-BGS	08/01/11	0.2 U	6.8 J	1 U
Phase 4	BB&S-SOCC-686-2.0'-BGS	07/01/11	3	7	1.1 U
Phase 4	BB&S-SOCC-687-3.0'-BGS	07/01/11	1.8	5.9	1.1 U
Phase 4	BB&S-SOCC-688-3.0'-BGS	07/01/11	0.66 J	3.6	1.2 U
Phase 4	BB&S-SOEP-689SB-2.5'-BGS	08/04/11	0.5 U	1.5	1 U
Phase 4	BB&S-SOEP-690C-1.0'-BGS	08/11/11	0.82 J	2.2	1 U
Phase 4	BB&S-SOEP-691A-1.0'-BGS	07/27/11	11	9.8	1.05 UJ
Phase 4	BB&S-SOEP-692B-3.0'-BGS	08/05/11	1.1	3.1	1 U
Phase 4	BB&S-SOEP-693B-3.0'-BGS	08/05/11	0.95 J	2.6	1 U
Phase 4	BB&S-SOEP-694B-3.0'-BGS	08/05/11	1.7	4.1	1.1 U
Phase 4	BB&S-SOEP-695A-2.0'-BGS	07/28/11	0.5 U	3.8	1.03 U
Phase 4	BB&S-SOCC-696-1.0'-BGS	07/06/11	2.6 J	6.4 J	1.1 U
Phase 4	BB&S-SOEP-697A-1.0'-BGS	07/28/11	0.77 J	3.9	1.04 U
Phase 4	BB&S-SOEP-698A-1.0'-BGS	07/28/11	11	29	1.09 U
Phase 4	BB&S-SOCC-699-1.0'-BGS	07/06/11	4.9 J	11 J	1.1 U
Phase 4	BB&S-SOCC-700-701.0'-BGS	07/06/11	0.2 U	4.4 J	1.1 U
Phase 4	BB&S-SOCC-701S-2.0'-BGS	07/06/11	6 J	9.5 J	1.1 U
Phase 4	BB&S-SOCC-702S-2.0'-BGS	07/06/11	2.1 J	4.9 J	1.1 U
Phase 4	BB&S-SOCC-703S-1.0'-BGS	07/06/11	3.1 J	8.1	1.1 U
Phase 4	BB&S-SOEP-704SA-2.0'-BGS	07/27/11	3.9	9.7	1.1 UJ
Phase 4	BB&S-SOCC-705B-1.0'-BGS	07/06/11	0.2 U	4.7	1.1 U
Phase 4	BB&S-SOCC-706B-1.0'-BGS	07/06/11	6 J	9.8	1.1 U
Phase 4	BB&S-SOCC-707B-1.0'-BGS	07/06/11	0.21 U	8.1	1.1 U
Phase 4	BB&S-SOCC-708B-1.0'-BGS	07/06/11	0.21 U	6.4	1.1 U
Phase 4	BB&S-SOEP-710B-2.0'-BGS	08/05/11	0.99 J	4.1	1 U
Phase 4	BB&S-SOEP-711SA-1.0'-BGS	07/27/11	2.9	8.5	1.09 UJ
Phase 4	BB&S-SOEP-712SA-1.0'-BGS	07/27/11	2.4	5.7	1.09 UJ
Phase 4	BB&S-SOCC-713S-1.0'-BGS	07/07/11	2.6 J	8.5	1.1 U





LEGEND



NOTE  
1. THIS FIGURE IS ADAPTED FROM DRAWING 7/9, PROVIDED BY L.K. McLEAN ASSOCIATES P.C. (May 24TH, 2011).  
2. ALL RESULTS IN mg/kg.  
3. REMEDIAL OBJECTIVES FOR THIS AREA WERE EXCAVATION TO SPECIFIED DEPTH ONLY, NOT TO MEET SCOS. THIS AREA TO REMAIN UNDER NYSDEC SITE MANAGEMENT.



Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
BBSSOEP357(1FTBG)	01/11/11	8.56	12	0.15 J
BBSSOEP358(1FTBG)	01/11/11	7.91	10	0.53
BBSSOEP359(1FTBG)	01/11/11	1.7	5.34	0.15 J
BBSSOEP360(1FTBG)	01/11/11	3.26	9.11	0.21 J
BBSSOEP361(1FTBG)	01/11/11	2.58	8.15	0.21 J
BBSSOEP362(1FTBG)	01/11/11	6.08	11	0.15 J
BBSSOEP363(1FTBG)	01/11/11	2.37	6.09	0.15 J
BBSSOEP364(2FTBG)	01/13/11	6.18	8.25	0.21 J
BBSSOEP368(1FTBG)	01/11/11	4.81	8.27	0.15 J
BBSSOEP369(1.5FTBG)	01/11/11	0.887	2.94	0.25 J
BBSSOEP372(1FTBG)	01/13/11	290	139 R	2.15
BBSSOEP373(2FTBG)	01/13/11	25	27 R	0.29 J
BBSSOEP374(2FTBG)	01/13/11	7.15	6.03 R	0.18 J
BBSSOEP375(1.5FTBG)	01/13/11	2.91	8.84 R	0.24 J
BBSSOEP376(1FTBG)	01/13/11	15	48 R	1.14
BBSSOEP377(1FTBG)	01/13/11	1460	886 R	2.63
BBSSOEP378(2FTBG)	01/13/11	2.42	9.62 R	0.439 U
BBSSOEP379(2FTBG)	01/13/11	38	34 R	0.81
BBSSOEP380(1FTBG)	01/13/11	2.31	6.76 R	0.456 U
BBSSOEP381(2FTBG)	01/17/11	15.2	24.7	0.418 U
BBSSOEP382(2FTBG)	01/17/11	10.4	12.6	0.12 J
BBSSOEP383(2FTBG)	01/17/11	9.47	13.1	0.27 J
BBSSOEP384(2FTBG)	01/17/11	55.6	65.3	0.87
BBSSOEP385(4FTBG)	01/17/11	4	4.41	1.1
BBSSOEP386(3FTBG)	01/17/11	4.58	12	0.38 J
BBSSOEP387(3FTBG)	01/17/11	30.5	58.7	0.22 J
BBSSOEP388(3FTBG)	01/17/11	4.59	6.39	0.37 J
BBSSOEP389(4FTBG)	01/17/11	17.6	16.1	0.43
BBSSOEP390(4FTBG)	01/17/11	22.3	15.7	0.71
BBSSOEP391(4FTBG)	01/19/11	155	90	1.48
BBSSOEP392(4FTBG)	01/19/11	133	111	0.36 J
BBSSOEP393(4FTBG)	01/19/11	74	69	0.439 UJ
BBSSOEP394(4FTBG)	01/19/11	64	69	0.31 J
BBSSOEP395(1FTBG)	01/20/11	112	222	0.31 J
BBSSOEP396(1FTBG)	01/20/11	14	21	0.38 J
BBSSOEP397(1FTBG)	01/20/11	39	49	0.38 J
BBSSOEP398(1FTBG)	01/20/11	34	38	0.44 J
BBSSOEP399(3FTBG)	01/20/11	21	25	0.31 J
BBSSOEP400(2FTBG)	01/20/11	25	31	0.44 J
BBSSOEP401(2.5FTBG)	01/20/11	771	429	0.89
BBSSOEP402(1FTBG)	01/20/11	108	125	0.55
BBSSOEP403(2.5FTBG)	01/20/11	7.97	8.64	0.43 J
BBSSOEP404(2FTBG)	01/20/11	92	344	0.45 J
BBSSOEP405(3FTBG)	01/20/11	32	72	0.37 J
BBSSOEP406(1FTBG)	01/20/11	11	70	0.26 J
BBSSOEP407(1FTBG)	01/24/11	30	37	0.26 J

Sample ID:	Date:	ARSENIC	CHROMIUM, TOTAL	CHROMIUM, HEXAVALENT
BBSSOEP408(2FTBG)	01/24/11	3.94	7.71	0.11 J
BBSSOEP409(3FTBG)	01/24/11	0.83 U	0.91	0.11 J
BBSSOEP410(2FTBG)	01/24/11	0.38 J	2.18	0.16 J
BBSSOEP411(3FTBG)	01/24/11	1.11	2.13 J	0.404 U
BBSSOEP412(2.5FTBG)	01/24/11	0.95	2.44 J	0.16 J
BBSSOEP413(3FTBG)	01/24/11	0.46 J	1.39 J	0.404 U
BBSSOEP414(2.5FTBG)	01/24/11	1.07	3.42 J	0.16 J
BBSSOEP415(2.5FTBG)	01/24/11	0.83 U	1.25	0.11 J
BBSSOEP416(4FTBG)	01/24/11	0.78 U	0.8 J	0.11 J
BBSSOEP417(3.5FTBG)	01/24/11	0.79 U	2.23 J	0.11 J
BBSSOEP418(3FTBG)	01/24/11	46	40 J	0.28 J
BBSSOEP419(3.5FTBG)	01/24/11	0.81 U	1.07 J	0.407 U
BBSSODOC420(4FTBG)	01/25/11	0.768 U	0.447 J	0.11 J
BBSSODOC421(3.5FTBG)	01/25/11	0.663 J	4.62 J	0.41 U
BBSSODOC422(3FTBG)	01/25/11	19.5	20.3	0.5
BBSSODOC423(2FTBG)	01/25/11	0.689 J	2.01 J	0.11 J
BBSSODOC424(2FTBG)	01/31/11	0.836 J	2.21	0.77
BBSSODOC425(3FTBG)	04/18/11	0.347 J	4.26	0.478 U
BBSSODOC426(3FTBG)	04/18/11	22	19	0.477 U
BBSSODOC427(3FTBG)	04/18/11	1.02	3.2	0.414 U
BBSSODOC428(2FTBG)	04/18/11	15	12	0.438 U
BBSSODOC429(2FTBG)	04/18/11	4.24	14	0.431 U
BBSSODOC430(3FTBG)	04/19/11	20	56	0.448 U
BBSSODOC431(4FTBG)	04/19/11	0.91	1.7	0.415 U
BBSSODOC432(4FTBG)	04/19/11	1.18	4.9	0.435 U
BBSSODOC433(3FTBG)	04/20/11	1.31	4.63	0.13 J
BBSSODOC434(3FTBG)	04/20/11	92	63	0.13 J
BBSSODOC435(3FTBG)	04/20/11	81	90	0.447 U
BBSSODOC436(2FTBG)	04/20/11	257	279	0.14 J
BBSSODOC437(2FTBG)	04/20/11	98	68	0.469 U
BBSSODOC438(1FTBG)	04/25/11	18	19	0.1 J
BBSSODOC439(1FTBG)	04/25/11	1.97	8.05	0.09 J
BBSSODOC440(1FTBG)	04/25/11	0.73 J	5.55	0.09 J
BB&S-SODC-442-1.0'-BGS	04/26/11	43 J	43 J	1.1 UJ
BB&S-SODC-443-1.0'-BGS	04/26/11	19 J	28 J	1 J
BB&S-SODC-444-1.0'-BGS	04/26/11	24 J	33 J	1.5 J
BB&S-SODC-445-4.0'-BGS	04/26/11	0.2 UJ	1.4 J	1 UJ
BB&S-SODC-446-4.0'-BGS	04/26/11	75 J	103 J	1.1 UJ
BB&S-SODC-447-8.0'-BGS	04/26/11	2.1 J	3.3 J	1 UJ
BB&S-SODC-448-4.0'-BGS	04/26/11	367 J	286 J	3.3 J
BB&S-SODC-449-2.0'-BGS	04/27/11	66 J	54 J	1.6 J
BB&S-SODC-450-3.0'-BGS	04/27/11	19 J	22 J	1.1 UJ
BB&S-SODC-451-3.0'-BGS	04/27/11	64 J	58 J	2.2 J
BB&S-SODC-452-3.0'-BGS	04/27/11	261 J	406 J	1.9 J
BB&S-SODC-453-3.0'-BGS	04/27/11	17 J	13 J	1.1 J
BB&S-SODC-454-3.0'-BGS	04/27/11	121 J	114 J	1.3 J
BB&S-SODC-455-3.0'-BGS	04/27/11	38 J	37 J	1.1 UJ
BB&S-SODC-456-3.0'-BGS	04/27/11	18 J	22 J	1.1 J

FIGURE 6-3 SAMPLE LOCATION MAP AND ANALYTICAL RESULTS TABLE  
HAZARDOUS WASTE BOUNDARY AREA  
BB&S TREATED LUMBER CORPORATION SITE  
TOWN OF SOUTHAMPTON, SUFFOLK COUNTY, NY



# 7

## Remedial Performance

### 7.1 Other Remedial Actions

#### 7.1.1 Transport and Disposal of Project-Generated Waste Streams

Contaminated soil was excavated and transported to the appropriate disposal facilities for the three non-hazardous on-site locations (Phases 1, 2, and 3).

Excavated soils from the Hazardous Waste Boundary Area, Speonk-Riverhead Road crossing and off-site drainage swale (Phase 4) were managed as hazardous waste.

The record drawings prepared by L.K. McLean identify the locations and extent of the original boundaries and areas where excavations were performed. Topographical surveys conducted prior to, and after final soil excavation activities and following backfill placement, were used to determine the overall cut-and-fill quantities for remedial activities at the site. The surveys are included in Appendix G-2 and discussed in Sections 7.1.3 and 7.1.4.

EQNE utilized the firms identified in Table 7-1 to dispose of the hazardous and nonhazardous soils, metals (for recycling), contaminated dewatering fluids, and solid wastes generated at the BB&S site. The metal wastes selected for recycling were visually inspected by an EEEPC for contamination and, if necessary, decontaminated by EQNE prior to being transported off site.

**Table 7-1 BB&S Treated Lumber Site - Quantities of Materials, by Waste Stream, Disposed of at the Approved Facilities**

Disposal Materials	Disposal Locations	Amount of Materials Disposed
Nonhazardous soils	Brookhaven Landfill, Brookhaven, New York	17,859.22 tons
Hazardous soils	Waste Management's Secure Hazardous Waste Facility in Model City, New York	11,992.16 tons
Contaminated waters	DuPont Chamber Works Facility, Deepwater, New Jersey	8,950 gallons
Non-contaminated waste, sanitary waste, and recycled materials	Crown Recycling and Sanitation, Inc., Calverton, New York	59.65 tons

EQNE utilized the following haulers to transport the hazardous and non-hazardous soils, liquids, nonhazardous solid waste, and metal (for recycling) generated at the BB&S site:

- Page Transportation, Inc. (hazardous soils);
- Goulet Trucking (hazardous soils);
- U.S Bulk Transport, Inc. (hazardous soils);
- EQNE, Inc. (dewatering and decontamination fluids waste);
- Double Nickel Contracting, Inc. (nonhazardous solid waste); and
- Crown Recycling and Sanitation, Inc. (metal and equipment recycling and contractor-derived sanitary wastes).

Letters from EQNE to disposal facility owners and acceptance letters from disposal facility owners are provided in Appendix T. Manifests and bills of lading are grouped by vendor, month, and waste stream are provided in Appendices U-1 through U-4.

### **7.1.2 Waste Profiles for Disposal Facility Acceptance**

Prior to performing bulk soil excavations, EQNE collected waste characterization soil samples. The analytical results for these samples were used to generate waste profiles, which were submitted to the selected waste disposal facilities. The number of characterization samples collected from each of the proposed phases of work was based on the estimated volume of soils to be removed from each area. Each sample was analyzed for the required target contaminants, including PCBs, TCLP VOCs, TCLP sVOCs, TCLP metals, ignitability, corrosivity, and reactivity. Based on the sample results, waste profiles were submitted to and approved by the appropriate disposal facilities.

The waste profiles and approvals are provided in Appendix T. No waste profiles were required for the disposal of nonhazardous solid waste or for the recycling of metals at the Crown Recycling facility. All solid wastes delivered to Crown Recycling were visually inspected for loose debris and waste prior to transport.

### **7.1.3 Volume of Soils Excavated**

The Contract documents, estimated that 10,400 cubic yards of nonhazardous soil and 8,000 cubic yards of hazardous soil needed to be excavated at the BB&S site. During the remedial work, the volumes of soils removed were calculated using the pre-construction topographic surveys and the final post-construction surveys. A final survey was performed once the excavation limits had been reached in each of the remedial phases and the Hazardous Waste Boundary Area.

The volumes of soils excavated were calculated daily by EEEPC based on the measurements obtained from the licensed surveyor. These volume estimates were used to evaluate bid item quantities and in the Contractor's application for progress payments.

Per the Contract Documents, the bid items for the excavation of soils were paid on a cubic-yard basis. The descriptions of the bid items were:

- Bid Item UC-3A: Excavation of Nonhazardous Soils and Debris; and
- Bid Item UC-3B: Excavation of Hazardous Soils and Debris.

For the BB&S site, EQNE excavated a total of 11,346 cubic yards of nonhazardous soil and 7,640 cubic yards of hazardous soil.

#### **7.1.4 Volumes of Waste Transported and Disposed, by Specific Waste Streams**

Soil excavation was measured and paid for on an in-place cubic yard basis. However, the disposed soil was paid for by scale weight, in tons.

The Contract Documents estimated the weight of nonhazardous soils requiring transport and disposal to be 16,275 tons and the weight of hazardous soils requiring transport and disposal to be 12,400 tons. The soils transported and disposed of were weighed by scale prior to leaving the site. The disposal of dewatering fluids was handled on a lump sum basis per the bid item (LS-5). Decontaminated metal and debris were also lump sum items.

Table 7-2 shows the total quantities of each bid item unit cost (UC) of material removed from the site. The bid items were defined as follows:

UC-4 Handling, Transport, and Off-site Disposal of Nonhazardous Soils and Debris

UC-5 Handling, Transport, and Off-site Disposal of Hazardous Soils and Debris

LS-5 Dewatering

LS-3 Former Drip Pad Building Floor Slab Restoration

LS-6 Removal/Disposal of Former Reverse Osmosis Treatment Equipment and Boiler Room Equipment (CCA Building)

LS-8 Frame Storage Building Modifications

As shown in Table 7-2, the tonnage of the nonhazardous soil disposed of was approximately 10% greater than the tonnage estimated in the Contract; and the ton-

nage of the hazardous soil disposed of was approximately 9.5% less than the tonnage estimated in the Contract.

**Table 7-2 BB&S Treated Lumber Site - Total Weight of Disposed Waste, by Type**

Bid Item	Bid Quantity	Units	Actual Quantity
UC-4 Nonhazardous Soils	16,275	Tons	17,859.22
UC-5 Hazardous Soils	12,400	Tons	11,992.16

Key:

UC = Unit Cost

### 7.1.5 Certificates of Disposal and/or Destruction

A summary of the manifests and weighs of disposed materials, by waste stream, and certificates of Disposal and/or Destruction are provided in Appendices U-1 through U-4.

## 7.2 Project Documentation Sampling

Pre- and post-construction samples were collected by EQNE at the support zones and CRZs located on the Main Site and the remote CRZ located at Phase 4. The preconstruction samples were collected by EQNE on September 29, 2010, and witnessed by EEEPC, and the sampling locations were surveyed by L.K. McLean. The samples were analyzed by York Analytical, Inc. (York) to establish the baseline level of contaminants prior to the contractor establishing work zones at the site.

The presence and locations of targeted contaminants was documented in previous remedial investigations (AECOM 2007) and in waste characterization samples collected by EQNE prior to excavation in each phase of work. When the analytical results compiled by ChemTech indicated that contaminant levels had been reduced to levels below the SCOs and that final excavation limits had been achieved, L.K. McLean performed post-excavation surveys to document the extent of soil removal for each excavation.

Baseline samples were collected in support and operations areas prior to and after the performance of remedial work. The results from these samples were used to determine whether these areas had been contaminated as a result of the work performed. The baseline sample results indicated that contaminants were present at concentrations above the SCOs in soil beneath the Site Representative's Trailer. Excavation was performed in this location to remove the contaminated soil. The post-excavation sample analytical results for this area indicated that the SCOs had been met. Baseline analytical results are provided in Appendix H-1, and the post-excavation analytical results are provided in Appendix H-5.

## 7.3 Construction Support Sampling

### 7.3.1 Contaminated Soil Waste Characterization

As previously discussed in Section 6, hazardous and nonhazardous areas were delineated based on the horizontal and vertical limits depicted on the Contract

Drawings. The site was initially surveyed by L.K. McLean and staked out by EQNE prior to waste characterization sampling. A sampling map and sample designations for compositing were submitted for Site Representative review and acceptance (see Appendix H-1). Samples were then collected manually with hand tools for shallow excavations (6 inches bgs) and with a backhoe bucket for deeper excavations, in accordance with the sampling plan. The sampling tools were decontaminated with distilled water and hexane between each sampling.

At each sampling location, the suspected contaminated soil was placed in a stainless steel pan, homogenized, and then transferred to 4- or 8-ounce amber jars. A mixture of hexane and distilled water was poured onto an absorbent pad; the bucket was wiped out with the absorbent pad, and the pads were then placed into a plastic garbage bag for disposal by EQNE as contaminated waste.

The following numbers of waste characterization samples were collected:

- Five samples in Phase 1
- Seven samples in Phase 2
- Five samples in Phase 3
- Six samples in Phase 4

### **7.3.2 Waste Profiles**

Based on the analytical results for waste characterization samples collected by EQNE at the on-site and off-site areas, waste profiles were developed by EQNE for submittal to and approval by the disposal facilities. Waste characterization analytical results, waste profiles, and disposal facility acceptance documents are presented in Appendix T. The waste streams and the receiving disposal facilities are identified in Table 7-1.

### **7.3.3 Drum Characterization**

Prior to EQNE mobilizing to the site, 16 drums of unknown content were present at the site; the drums were associated with past groundwater sampling and well drilling operations. The characterization, transport, and disposal of these drums and their contents, which needed to be performed during the initial stages of the project, were not included in the original Contract Scope of Work. NYSDEC directed EnviroTrac to obtain samples to characterize the drummed waters and wastes for disposal. Samples of the drummed material from the three building locations were collected and submitted for waste characterization analysis prior to their transport and disposal. Further discussion regarding characterization, transport, and disposal of these wastes is provided in Section 7.7.4.

### **7.3.4 Confirmation and Documentation Sampling – Callout Lab Services - H2M**

As discussed in Section 6, end-point/confirmation and documentation soil samples were collected and analyzed as required by Supplementary Specification, Section XI, Section 01425 - Sampling. The Contractor collected confirmatory samples at post-excavation locations as described in the specifications and as directed by the Engineer (EEEP) to determine whether residual contaminant concentrations in soil were at or below the SCOs. The final sample analytical results were intended to confirm that the SCOs had been achieved (however, see Section 7.7.1) and also enable the Engineer to verify the limits of excavation for payment purposes. The Contract Documents estimated that approximately 630 soil samples needed to be collected for end-point/confirmatory and documentation analyses.

Initially, sample analysis was provided by EQNE's subcontracted laboratory, ChemTech. However, the Contract's quantity limit of analyses was almost reached during the first three phases of the work as a result of necessary re-excavation and resampling operations to achieve the soil SCOs. NYSDEC decided that NYSDEC's Standby Callout Laboratory, H2M, would be used to provide analytical services for the balance of the project. A total of 420 analyses were performed by H2M to complete the documentation samples from the Hazardous Waste Boundary Area, the Speonk-Riverhead Road crossing, and Phase 4, including the re-excavation areas. In total, 1,050 end-point/ confirmatory or documentation samples were collected as part of the remedial work performed under the Contract Documents.

The final analytical results for the remediation areas are provided in Tables 6-1 through 6-4; the analytical reports from ChemTech and H2M are provided in Appendices H-2 through H-4; and the DUSRs for both sets of analytical results are provided in Appendices R-1 and R-2.

### **7.3.5 DUSR Review of Analytical Data**

EQNE's QA firm, Preferred Environmental Services, Inc., selected Nancy J. Potak (Greensboro, Vermont) to prepare the DUSRs for the confirmatory and documentation analytical deliverables for this Contract. Category A deliverables were required for analytical results that had to be evaluated against the project SCOs. Nancy J. Potak certified that the data packages for the samples collected at the site contained the required deliverables consistent with the requirements outlined in the Supplementary Specifications, Section XI, Section 01425 – Sampling, Appendix A. The sample-specific analyses performed included arsenic, chrome, and hexavalent chrome. The analyses were performed using EPA Standard Methods SW-6010/7471 for metals in compliance with the prescriptive requirements of the standards.

Nancy J. Potak further certified that the data was validated according to the protocols and QA requirements of the analytical methods detailed in the Contractor's

QAPP and by the project specifications. The reviewer noted no discrepancies in the chains-of-custody for sample handling, preservation, and transport to the laboratory as stipulated for the designated samples. In addition, Nancy J. Potak reviewed the following items for the DUSR:

- Sample data package narrative and deliverables compliance;
- Holding times;
- Surrogate compound recoveries;
- Matrix spike/matrix spike duplicate (MS/MSD) recovery summary forms;
- Laboratory check sample/laboratory check duplicate (LCS/LCSD) recovery summary forms;
- Positive results reported for method blanks;
- Gas chromatography (GC)/mass spectroscopy (MS) tuning summary forms;
- Initial and continuing calibration summaries; and
- Internal standard area and retention time summary forms.

DUSRs were submitted to EEEPC at the completion of the analytical services provided by the Contractor's approved analytical laboratories. DUSR submittals were delivered to and reviewed by EEEPC. Electronic (.pdf) copies of the DUSRs prepared by Nancy J. Potak are provided in Appendix R-1.

Section 6.3 discusses the validation of the analytical data. EEEPC provided independent data validation for the analytical services provided by NYSDEC's Standby Callout laboratory, H2M. EEEPC's DUSRs for the H2M analyses are provided in Appendix R-2.

## **7.4 Project Area Restoration**

As specified with the Contract Documents, excavations in each phase of work, with the exception of the road crossing, were to be restored to the proposed grading plans with imported clean common and/or select fill. Supplementary Specifications, Section XI, Division 2, Section 02920 – Fill Materials, Topsoil, Seeding, and Mulch, established requirements for the installation and compaction of clean fill materials and restoration of the site.

Imported fill samples were obtained from the Sagaponack Sand and Gravel, Inc., facility located in Bridgehampton, New York. The samples were analyzed for physical properties and grain size by York, and the analytical results were reviewed and evaluated by EEEPC. The analytical results indicated the common



fill to be acceptable for unrestricted use and grain sizing for the fill areas at the site. Due to VRQ issues encountered with Sagaponack Sand and Gravel, Inc., an alternative supplier of imported clean fill, East Coast Mines, Inc. (East Quogue, New York), was requested to provide analytical and gradation information. The fill from East Coast Mines, Inc., was deemed acceptable for use at the site. The analytical and gradation results were supplied for shop drawing (Shop Drawing Submittal Nos. 29, 37, and 37A) and were found to be in conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

#### **7.4.1 Backfill Placement at Excavated Areas**

Delivery of common backfill and stockpiling to the Main Site (Phases 1, 2, and 3) began on December 16, 2010. Stockpiling of backfill stopped after the EQNE requested demobilization on January 31, 2011, due to adverse weather conditions. Upon return to the site by EQNE in April 18, 2011, initial backfill placement from the stockpiled area was started. The backfill material placement included grading and compaction of the common fill to achieve the contours per the grading/drainage plan was performed by EQNE and Terry Contracting and Materials, Inc. Once backfilling had achieved the proposed grades after rolling, compaction testing was performed by Soil Mechanics Drilling Corp. The compacted fill requirements established for the site were 95% of the Modified Proctor maximum dry density method. The results of the on-site compaction tests performed by Soil Mechanics Drilling Corp. for EQNE are provided in Appendix S-1.

The placement of common fill at Phase 4 was not performed under the EQNE contract at the direction of NYSDEC due to contract cost considerations. Instead, common fill for Phase 4 was stockpiled on the Main Site and later placed by the NYSDEC Callout Contractor, EnviroTrac. The restoration of Phase 4 by EnviroTrac is discussed in Sections 7.6.1.1 and 7.7.11.

EEEPC provided construction oversight of EnviroTrac's placement and grading of the common fill within Phase 4. The results of the on-site compaction testing performed by Soil Mechanics Drilling Corp. for EnviroTrac are provided in Appendix S-2.

For all areas where compaction of common fill was required the Contract Document compaction requirements were achieved.

#### **7.4.2 Erosion Control Matting, Topsoil, Soil Supplements, and Seeding**

Supplemental Specification, Section XI, Section 02920 - Fill Materials, Topsoil, Seeding, and Mulch established the requirements for the installation of erosion control matting, topsoil, and seeding for the restoration at the site. EQNE submitted the name and location of each proposed source of topsoil material, along with samples, for review by EEEPC.

Only limited areas of the project site required the application of erosion control matting, topsoil, and seeding; these areas included the Phase 4 area, on the right-of-way along the road frontage on the Main Site, and off-site properties along the east property line of the Main Site. Erosion control mats were used in Phase 4 on the side slopes of the swale, and along the road frontage on the Main Site. The erosion control matting specifications were supplied as a shop drawing (Shop Drawing Submittal No. 41) for review and conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

The location and analytical results submitted for the initial source of imported topsoil proposed by EQNE indicated the source materials were contaminated with pesticides. Shop drawings submittals were rejected, and alternative topsoil sources were proposed by EQNE. A second round of location sampling and analysis was performed with the same results, indicating pesticide contamination, and the shop drawings were again rejected. EQNE then proposed to use topsoil obtained from Terry Contracting. Sampling was monitored by EEEPC's site representative. The analytical results proved acceptable for imported materials for unrestricted use. The analytical results for topsoil materials were submitted as a shop drawing (Shop Drawing Submittal Nos. 39, 39A, and 39B) for review and conformance with Contract Documents. The topsoil materials were accepted for use in accordance with Contract requirements. The Shop Drawing Submittal log is provided in Appendix E-1.

The seed mixture provided by EQNE was obtained from New England Plant, Inc., of Amherst, Massachusetts. The seed was a mix of 42% timothy grass, 25% clover, 16% orchard grasses, and 17% native grasses and flower seeds, as required by the project specification. Documentation of the seed bags delivered to the site was reviewed by the EEEPC. The seed mix was applied by hydroseeding. The hydroseeding application was performed by Triton Builders of Glen Cove, New York. Information regarding the seed mixture, the method of application, and the hydroseeding subcontractor was submitted as a shop drawing (Shop Drawing Submittal Nos. 48 and 48A) for review and conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

EEEPC monitored the installation of the erosion control matting and the application of topsoil and the seed mixture with respect to quality, moisture content, and required application rates. Topsoil and mulch deliveries were received and stockpiled at the project site until application could be performed. Delivery tickets for topsoil, mulch, seeds, and fertilizer, including EEEPC's topsoil delivery log, are provided in Appendix E-1.

The placement of erosion control matting, topsoil, and seed mixture at Phase 4 was not performed under the contract due to contract cost and future payment considerations. Instead, the materials for Phase 4 were stockpiled on the Main Site for future placement by EnviroTrac. EEEPC observed the stockpiling and covering of the materials for future use and completion by EnviroTrac.

In September 2011, NYSDEC authorized EnviroTrac to perform the Phase 4 restoration work. EEEPC monitored the performance of the restoration work. EnviroTrac provided a sHASP along with preconstruction submittals (see Appendix E-2). The Phase 4 restoration field work was initiated on September 14, 2011, and completed on October 14, 2011. Additional discussion of the restoration work performed at Phase 4 is provided in Section 7.7.11. EEEPC's DORs for the Phase 4 work are provided in Appendix K-2.

#### **7.4.3 Permanent Site Fencing Installation**

New permanent fencing had to be installed along the east and west property lines of the Main Site. Information regarding fencing materials, concrete for the posts, and the installation subcontractor was submitted as a shop drawing (Shop Drawing Submittal Nos. 45, 45A, and 45B) for review and conformance with Contract Documents. Triton Builders was approved and installed the permanent site fencing. The Shop Drawing Submittal log is provided in Appendix E-1.

A total of 1,829 linear feet of new permanent fencing was installed at the site; the estimated length of fencing identified in the Contract was 1,890 linear feet.

#### **7.4.4 Monitoring Well Decommissioning and Replacement**

For the project, two monitoring wells were decommissioned: MW-21, located at the south end of the former Drip Pad Building, and RW-1, located along the south property line. The well decommissioning work was performed by EQNE's subcontractor, Delta Well and Pump Company, of Ronkonkoma, New York. Information regarding the well materials, bentonite, and the installation subcontractor was submitted as a shop drawing (Shop Drawing Submittal Nos. 46 and 45A) for review and conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

A total of 224 linear feet of monitoring well was decommissioned at the site; the estimated length of well identified in the Contract was 210 linear feet.

The additional footage was due to the decommissioning of monitoring well MW-21, which was not part in the original Contract work. Documentation of the monitoring well decommissioning is provided in Appendix V.

#### **7.4.5 New Monitoring Well Installation**

During the project, two new monitoring wells, MW-27i and MW-27s were installed at the south property line of the site. (The designation "i" denotes an intermediate well, and "s" denotes a shallow well.) The monitoring well installation work was performed by EQNE's subcontractor, Delta Well and Pump Company. Information regarding the well materials, concrete, and installation subcontractor was submitted as a shop drawing (Shop Drawing Submittal Nos. 46 and 46A) for review and conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

The monitoring wells were installed and completed as a lump sum item (LS-9). Documentation of the installation of new replacement wells is provided in Appendix V.

#### **7.4.6 Monitoring Well Improvements**

The Contract Drawings required that improvements be made on a number of on-site and off-site monitoring wells on a unit price basis per well. These improvements included the installation of new well casings, concrete pads, well labels/tags, and locks and keys.

Information regarding the new well casing materials, concrete, tags, and locks for the well revitalization program was submitted as a shop drawing (Shop Drawing Submittal Nos. 46 and 46A) for review and conformance with Contract Documents. The Shop Drawing Submittal log is provided in Appendix E-1.

A total of 20 monitoring wells were revitalized per the Contract Documents, and seven new steel protective casings were installed in and around the site per the schedule on the Contract Drawings.

#### **7.4.7 Demobilization of Equipment and Support Facilities**

Site services provided by the Contractor were terminated upon Substantial Completion of the Contract, and the Contractor's (EQNE's) office trailers were turned over to EnviroTrac on August 16, 2011. Although the office complex was turned over to EnviroTrac, it is important to note that both EEEPC and EQNE personnel remained on site until Final Completion of the construction activities was achieved on Tuesday, September 6, 2011.

Copies of Substantial and Final Completion documents from NYSDEC are provided in Appendices W-1 and W-2.

### **7.5 Project Completion**

#### **7.5.1 Substantial Completion**

Section VIII, Article 13.6, of the General Conditions provided requirements for Substantial Completion under the terms of the Contract. When the Contractor "considered all or part of the work ready for its intended use, the Contractor shall notify NYSDEC and [the] Engineer in writing that the work, or specified part thereof, is substantially complete" and shall "request that the Engineer issue a Certificate of Substantial Completion for the Work." Within a reasonable time thereafter, not to exceed 30 days, NYSDEC, the Engineer, and the Contractor "shall make an inspection of the Work" to determine the status of completion.

Substantial Completion was requested by EQNE on July 28, 2011, and EEEPC subsequently scheduled an inspection with representatives of NYSDEC, EQNE, and EEEPC. The letter of acknowledgement for Substantial Completion inspection was issued to EQNE by EEEPC on August 12, 2011. The inspection was performed on August 24, 2011. EEEPC, in conjunction with NYSDEC, prepared

a punch-list of remaining work items and an Estimate of Cost Value for Final Completion on August 27, 2011. While the Substantial Completion inspection indicated that the field effort was substantially complete, a number of outstanding post-construction critical project submittal items still needed to be provided before Final Project Completion could be granted. In a letter dated September 29, 2011, EQNE was informed by NYSDEC that the date of Final Completion was determined to be September 21, 2011, and that NYSDEC was providing EQNE with a Certificate of Substantial Completion. Appended to NYSDEC's September 29, 2011, letter was a list of completed work items, including final grading of various areas; completion of backfill; procurement and transfer of erosion control matting, topsoil, and seed to NYSDEC; and the remaining project submittals. Upon acceptance of the punch-list, the Contractor (EQNE) completed the remedial work and removed its equipment and materials. The post-construction submittals identified by EQNE were to be submitted to NYSDEC by October 18, 2011, avoiding potential assessments of liquidated damages. Letters pertaining to Substantial Completion are provided in Appendix W-1.

### **7.5.2 Final Completion**

Section VIII, Article 13.9, of the General Conditions provided requirements for Final Completion under the terms of the Contract, stating that, "Upon written notice from the Contractor that the entire work or an agreed portion thereof is complete, Engineer shall make a final inspection with NYSDEC and Contractor and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies."

In the Final Contract completion letter dated October 13, 2011, EQNE was notified by NYSDEC that the date of Final Completion was determined to be September 21, 2011, and that EQNE could submit a Payment Request for any remaining costs and for release of retainage associated with the original Contract amount. A part of the Payment Request was the submission of Prime and Subcontractor Certification's Payment affidavits. On June 4, 2012, EQNE prepared and submitted CAP No. 9 and the Release of Retention CAP requesting final payment of project costs applicable to Change Order No. 2. NYSDEC subsequently approved and processed the Release of Retention CAP on September 27, 2012.

The one-year difference between final project completion and final payment was due to the delay in reaching an agreement on the final costs of Change Order No. 2. Change Order No. 2 was submitted to NYSDEC by EEEPC on February 22, 2012. The Final CAP and Release of Retention CAP could not be submitted by EQNE until Change Order No. 2 was accepted by NYSDEC. Change Order No. 2 was not executed for inclusion in the Contract until September 20, 2012.

The Final Completion Checklist items were essentially completed by September 15, 2011; however, payment issues with several subcontractors were not resolved

until November 26, 2011. Based on the performance of the Contract work, no formal liens were filed against the project; however, at the time of this writing, NYSDEC had not received the required Final Payment Release and Payment Affidavit from EQNE.

Letters pertaining to Final Completion are included in Appendix W-2.

## **7.6 Changes to the Contract**

### **7.6.1 Changes to the Project Scope**

Major revisions to the BB&S Project Scope of Work are discussed in the following subsections. For a detailed list and description of the scope revisions, refer to Change Order No. 2, which is provided in Appendix P-2.

#### **7.6.1.1 Elimination of the Restoration Work in Phase 4**

The higher costs associated with the re-excavation work in Phase 4 (to achieve the SCOs) resulted in the need to evaluate project cost savings by NYSDEC. EEPC compared the excavation and disposal costs for the re-excavation work performed in Phase 4 on a daily basis against the overall adjusted Contract price. It was important to NYSDEC that the overall adjusted Contract price of \$5,331,500 not be exceeded. This maximum value was based on the original Contract price of \$4,981,500.

Phase 4 included the excavation work and the purchase and stockpiling of common fill, erosion control matting, topsoil, and seeding. (PCO No. 015 accounted for the purchase and stockpiling of the common fill and topsoil for future project use.)

Upon completion of the excavation work and the restoration material stockpiling, NYSDEC decided to eliminate the restoration work from the EQNE Contract. The restoration work was then issued to the NYSDEC Callout Contractor, EnviroTrac, to complete. EEPC monitored the follow-up work performed by EnviroTrac in the Phase 4 restoration for project completion.

Additional information regarding the Phase 4 restoration performed by EnviroTrac is provided in Section 7.7.13.

#### **7.6.1.2 Changes to the Project Schedule and Change Order No. 1**

The original Contract time for EQNE was 300 calendar days to Substantial Completion, resulting in a Substantial Completion date of May 10, 2011. Construction delays in the project schedule were incurred due to the adverse weather conditions and increases from changes in the scope of work in excavated areas.

Change Order No. 1 added 104 additional calendar days to the project schedule due to adverse winter weather conditions, at no increase in Contract cost. With the additional days, the Substantial Completion date was recalculated to be August 22, 2011, and the Final Completion date was recalculated to be September



21, 2011. A fully executed copy of Change Order No. 1 is presented in Appendix P-1.

### **7.6.2 Changes to the Project Schedule and Change Order No. 2**

Change Order No. 2 added 55 additional calendar days to the project schedule due to changes and additions in the actual scope of work. These included:

- Re-excavation work in Phases 1, 2, and 3 – 24 days;
- Winter Demobilization and Remobilization – 13 days; and
- Additional Site Improvement beyond the Scope of Work – 18 days

Based on the additional Contract time added by Change Order No. 2, the Substantial Completion date was recalculated to be October 16, 2011, and the Final Completion date was recalculated to be November 15, 2011.

Change Order No. 2 was submitted on February 22, 2012, during completion of the remediation, for a total of \$355,783.55 over EQNE's original bid. The changed conditions or additional work necessitating this Change Order are discussed throughout Section 7 of this report. A summary of Change Order No. 2 is provided in the list below.

- New Access Gate
- Re-excavation work to meet project SCOs (Phases 1 and 2)
- Removal of additional contaminated wallboard (CCA Building)
- Adverse winter weather work conditions
- Differing subsurface site conditions – concrete slab (Drip Pad Building)
- Winter demobilization and remobilization
- Concrete pipe encasement (Drip Pad Building)
- Additional concrete foundation work (Frame Storage Building)
- Foundation wall improvement (Drip Pad Building)
- Site drainage improvement and larger catch basin
- Re-excavation work to achieve the SCOs (Phases 2 and 3)
- Limited final grading and restoration work (Phase 4)

- Additional erosion control matting and placement (Main site)
- Re-excavation work to achieve the SCOs (Phase 4)
- Additional epoxy surface coating (CCA Building)
- Overtime reimbursement per Contract requirements
- Surveying credit (Phase 4 Final ALTA Survey)
- Credit (Final Project As-built Drawings)

The final project cost, including Change Order No. 2 and the unit quantity adjustments, totaled \$5,181,653.05, for a 4% increase over the original Contract amount of \$4,981,500. The revisions to the project scope are documented in executed Change Order No. 2, which is presented in Appendix P-2.

### 7.6.3 Contract Quantities and Costs

The total cost of several unit-cost bid items changed due to changes in schedule and quantity, including excavation and disposal of waste types not previously identified in the Contract Documents. A comparison of EQNE's bid with the estimated bid quantities versus the actual quantities and cost of those bid items that changed is presented in Table 7-3.

**Table 7-3 BB&S Treated Lumber Site - Estimated vs. Actual Quantities and Cost**

Bid Payment Item No.	Bid Item Description	Estimated Quantity	EQNE Bid	Actual Quantity	Actual Cost
UC-1	Site Services	200 Days	\$240,000.00	191	\$229,200.00
UC-2	Health and Safety Services	200 Days	\$200,000.00	169	\$169,000.00
UC-3A	Excavation of Non-Hazardous Soils & Debris	10,400 CY	\$104,000.00	11,346 CY	<b>\$113,460.00</b>
UC-3B	Excavation of Hazardous Soils & Debris	8,000 CY	\$80,000.00	7,639.67 CY	\$76,396.70
UC-4	Handling, Transport, and Off-site Disposal of Non-hazardous Soils and Debris	16,275 Tons	\$651,000.00	17,859.22 Tons	<b>\$714,368.80</b>
UC-5	Handling, Transport, and Off-site Disposal of Hazardous Soils and Debris	12,400 Tons	\$2,170,000.00	11,992.16 Tons	\$2,098,628.00
UC-6	Common Fill	10,200 CY	\$357,000.00	9,567 CY	\$334,845.00
UC-7	Topsoil	2,100 CY	\$84,000.00	738 CY	\$ 29,520.00
UC-8	Post-excavation Confirmatory Sampling and Analysis	630 Each	\$141,750.00	614 Each	\$138,150.00
UC-9	Well Decommissioning	210 Feet	\$6,300.00	224 Feet	<b>\$6,720.00</b>
UC-10	Restoration – Gravel Surface	28,250 SY	\$113,000.00	26,903 SY	\$107,612.00
UC-11	Restoration – Establish Turf	12,600 SY	\$25,200.00	6,867 SY	\$13,734.00
UC-12	Erosion Control Mat	2,500 SY	\$15,000.00	0 SY	\$ 0.00
UC-13	Stone Filling	100 CY	\$10,000.00	109 CY	<b>\$10,900.00</b>



**Table 7-3 BB&S Treated Lumber Site - Estimated vs. Actual Quantities and Cost**

Bid Payment Item No.	Bid Item Description	Estimated Quantity	EQNE Bid	Actual Quantity	Actual Cost
UC-14	Chain Link Fencing	1,890 LF	\$28,350.00	1,829 LF	\$27,435.00
UC-15	Monitoring Well ID Tags, Locks, and Keys	20 Each	\$6,000.00	20 Each	\$6,000.00
UC-16	Monitoring Well Steel Casings	7 Each	\$4,900.00	7 Each	\$4,900.00
LS-1	Site Preparation (limited to 5% of total bid)	1 LS	\$365,000.00	LS	\$365,000.00
LS-2	Former CCA Treatment Building and Floor Pit Modifications	1 LS	\$60,000.00	LS	\$60,000.00
LS-3	Former Drip Pad Concrete Floor Slab Restoration	1 LS	\$40,000.00	LS	\$40,000.00
LS-4	Culvert Replacement and Paving	1 LS	\$25,000.00	LS	\$25,000.00
LS-5	Dewatering	1 LS	\$150,000.00	LS	\$150,000.00
LS-6	Removal/Disposal of Former Reverse Osmosis Treatment System and Boiler Room Equipment	1 LS	\$20,000.00	LS	\$20,000.00
LS-7	Geo-membrane Apron – on-site buildings	1 LS	\$40,000.00	LS	\$40,000.00
LS-8	Frame Storage Building Modifications	1 LS	\$35,000.00	LS	\$35,000.00
LS-9	Monitoring Well Installation	1 LS	\$10,000.00	LS	\$10,000.00
<b>Totals</b>			<b>\$4,981,500</b>		<b>\$4,825,869.50<sup>1</sup></b>

Notes:

<sup>1</sup>Does not include Change Orders.

Bold = Cost over bid amount

Italic = Cost under bid amount

Key:

CY = Cubic yards

LF = Linear feet

LS = Lump sum

SY = Square yards

#### 7.6.4 Contractor Payments

EQNE submitted 10 CAPs during the Contract period, including a final release of retention in accordance with the Contract Documents. EEEPC evaluated the accuracy of each CAP for quantities and percentage of completion of individual bid items in the Contract according to Section XII – Measurement for Payment in the Contract Documents. The individual Change Order items were reviewed for Contractor accuracy prior to inclusion in the CAP. When errors were encountered, the EEEPC discussed them with the Contractor to discuss the discrepancy and requested the Contractor to revise and resubmit the request. After the CAP was accepted and recommended for payment by EEEPC, each CAP was submitted to NYSDEC for processing. Table 7-4 provides a list of the CAPs submitted by EQNE for the BB&S project. Copies of the EEEPC-approved CAPs submitted to the NYSDEC for approval are included in Appendix Q.

**Table 7-4 BB&S Treated Lumber Site – Contractor Applications for Payments (CAPs)**

CAP No.	Date Submitted to NYSDEC	Amount
1	10/19/2010	\$304,760.00
2	12/10/2010	\$396,737.48
3	1/19/2011	\$464,525.11
4	2/8/2011	\$490,012.66
5	5/25/2011	\$728,208.58
6	8/26/11	\$893,450.07
7	11/4/11	\$1,264,322.13
8	1/30/12	\$235,594.78
9 <sup>1</sup>	9/25/12	\$352,225.71
Final <sup>2</sup>	9/25/12	\$51,816.53
<b>Total</b>		<b>\$5,181,653.05</b>

<sup>1</sup> – Includes Change Order No. 2

<sup>2</sup> – Release of Retention Payment

### 7.6.5 Certified Payrolls

For work performed under the BB&S Treated Lumber Contract, NYSDEC required that the Contractor and its subcontractors pay at least the prevailing wage and pay or provide the prevailing supplements, including premium rates for over-time pay, as issued by the New York State Department of Labor.

EQNE submitted certified payrolls in conformance with prevailing wage rates published in the Contract Documents (and updated annually to EEEPC) with each CAP. Current wage rates were included in the Contract Documents under Section XIII. EEEPC provided verification that the proper wage rate for individual EQNE employees and the subcontractors working on the project were accurate before approving each CAP.

A copy of each CAP along with appropriate certified payroll data is presented in Appendix Q.

## 7.7 Issues and Concerns

### 7.7.1 Confirmatory Soil Sample Analytical Results above the Soil Cleanup Objectives

The test results for nine samples collected after the soil excavation was complete indicate that the remaining material in three general areas exceeded the SCOs. Three of the samples were collected from the Phase 1 Area, four were collected from the Phase 2 Area, and two were collected from the Phase 4 Area. The following sections list the specific samples that exceeded the SCOs and describe recommendations for additional excavation to meet the project requirements.

### 7.7.1.1 Phase 1 - Samples EP201B, EP213B, and EP476

The analytical results and excavation depths of these three samples are provided in Table 7-5. As shown in Table 7-5, the analytical results for the three samples exceeded the on-site SCO for arsenic.

**Table 7-5 Confirmatory Soil Sample Results for End-point Samples EP201B, EP213B, and EP476 (Phase 1)**

Sample	Arsenic (mg/kg)	Chromium (mg/kg)	Hexavalent Chrome (mg/kg)	Depth of Excavation (feet)	Date Collected
EP201B	18	25	0.25J	2	1/10/11
EP213B	25	30	0.1J	5.5	1/10/11
EP476	17	23J	1.9J	1	5/9/11
<b>On-site SCO Values</b>	<b>16</b>	<b>50</b>	<b>19</b>		

Note:

Values in darkened cells exceed the SCO values.

Key:

J = Estimated value below the reporting limit

### Efforts Required to Achieve Project Requirements

Sampling locations EP201B and EP213B are next to each other (See Figure 6-1). The total surface area represented by these two sampling locations is approximately 900 square feet. The area is currently covered by approximately 2 to 5.5 feet (average depth of 3.5 feet) of clean fill soil, which would need to be removed and stockpiled. This would be followed by the excavation and disposal of the additional soil contaminated at levels above the SCOs. Based on the work done in nearby areas, it is estimated that the SCOs would likely be achieved with 12 inches of additional excavation. Upon receipt of acceptable confirmation sample results, the stockpiled clean soil cover and additional material would be re-placed over the re-excavated area.

For EP476, the surface area represented by this sample is approximately 900 square feet. The area is currently covered by 12 inches of clean fill soil, which would need to be removed and stockpiled. This would be followed by the excavation and disposal of the additional soil contaminated at levels above the SCOs. Based on work done in nearby areas, it is estimated that the SCOs would likely be achieved with 6 inches of additional excavation. Upon receipt of acceptable confirmation sample results, the stockpiled clean soil cover and additional material would be re-placed over the re-excavated area.

### 7.7.1.2 Phase 2 - Samples EP356, EP365, EP367, and EP370

The analytical results and excavation depths of these four samples are provided in Table 7-6. As shown in Table 7-6, the analytical results for these four end-point samples exceeded the SCO for arsenic, and the results for sample EP356 also exceeded the SCO for chromium.

**Table 7-6 Confirmatory Soil Sample Results for End-point Samples EP-356, EP365, EP367, and EP370 (Phase 2)**

Sample	Arsenic (mg/kg)	Chromium (mg/kg)	Hexavalent Chrome (mg/kg)	Depth of Excavation (feet)	Date Collected
EP356	102	129	0.2J	1	1/11/11
EP365	39	41	0.16J	1	1/11/11
EP367	19	20	0.1J	1	1/11/11
EP370	19	15	0.22J	1	1/11/11
<b>On-site SCO Values</b>	<b>16</b>	<b>50</b>	<b>19</b>		

Note:

Values in darkened cells exceed the SCO values.

Key:

J = Estimated value below the reporting limit

### Efforts Required to Achieve Project Requirements

The total surface area represented by these four sampling locations (see figure 6-1) is approximately 3,600 square feet (four areas, 900 square feet each). These areas are currently covered by 12 inches of clean fill soils, which would require removal and stockpiling. This would be followed by the excavation and disposal of the soil contaminated at levels above the SCOs. Based on work done in nearby areas, it is estimated that the SCOs would likely be achieved with 6 additional inches of excavation. Upon receipt of acceptable confirmation sample results, the stockpiled clean soil cover and additional material would be re-placed over the re-excavated area.

#### 7.7.1.3 Phase 4 (West Side of Speonk-Riverhead Road) - Samples EP632SA and EP564

The analytical results and excavation depths for these two samples are provided in Table 7-7. As shown in the table, the analytical results for sample EP632SA exceeded the off-site SCO for hexavalent chromium, and the analytical results for sample EP564 exceeded the off-site SCOs for arsenic and chromium.

**Table 7-7 Confirmatory Soil Sample Results for End-point Samples EP632SA and EP564 (Phase 4)**

Sample	Arsenic (mg/kg)	Chromium (mg/kg)	Hexavalent Chrome (mg/kg)	Depth of Excavation (feet)	Date Collected
EP632SA	1.7	9.4J	2.6	1	8/1/11
EP564	72	64	1.1U	1	6/13/11
<b>On-site SCO Values</b>	<b>13</b>	<b>30</b>	<b>1</b>		

Note:

Values in darkened cells exceed the SCO values.

Key:

U = Not Detected

### **Efforts Required to Achieve Project Requirements**

The surface area represented by sampling locations EP632SA and EP564 (see figure 6-2) is approximately 1,800 square feet (two areas, 900 square feet each). The area is currently covered by 12 inches of clean fill soils, 6 inches of topsoil, and seeded, which would require removal and stockpiling. This would be followed by the excavation and disposal of the soil contaminated above the SCOs. Based on work done at nearby areas, it is estimated that the SCOs would likely be achieved with 6 inches of additional excavation. Upon receipt of acceptable confirmation sample results, the stockpiled clean fill and additional materials would be re-placed over the re-excavated area, the fill would be covered by 6 inches of topsoil, and the area would be reseeded.

#### **7.7.2 Weather Conditions during Construction**

Weather conditions at the site during the construction phase of the project are documented in the EEEPC DORs prepared and submitted daily to the NYSDEC PM. The DORs for the EQNE project are provided in Appendix K-1.

Due to unforeseen delays in awarding the contract and in the NTP process, EQNE did not mobilize until September 20, 2010. The timing of the construction phase resulted in the Contractor working through the late fall of 2010 and during difficult winter conditions in early 2011. These conditions included freezing overnight temperatures and accumulation of substantial rain and snowmelt in excavated areas. Significant snowfall events during the winter of 2011 caused the project to be suspended under FO No. 10 on February 7, 2011, with remobilization occurring on April 11, 2011. PCO No. 008 accounted for the additional \$33,094 cost incurred with the demobilization and remobilization.

#### **7.7.3 Missing Daily Red Line Drawings**

Difficulties were encountered at the closure of the project when project “red-line” drawings, which documented the work in the field program on a daily basis, were found to be missing from the final closure documents. These drawings could not be found by EQNE staff and a credit PCO was negotiated for \$4,775 as part of Change Order No. 2. Other limited as-built drawings have been provided in this document to supplement information for work in and around the on-site buildings. These are provided in Appendix G-4.

#### **7.7.4 Evaluation of Surface Glass – North Side of the On-site Metal Storage Building**

During a progress meeting inspection walk, a large amount of green and white glass shards was noted on the ground on the north side of the Metal Storage Building located at the southeast corner of the property. This area was located in the Phase 1 area of the project. Based on historical issues encountered during previous NYSDEC projects, the suspicious material was evaluated for radioactivity due to prior military deposition activities around the project area. NYSDEC directed EEEPC to check the waste glass for potential radioactivity. On Decem-

ber 8, 2010, a Ludlum Alpha/Beta1 Radiation meter with pancake probe was shipped to the site for use by EEEPC personnel. Initial background readings were taken from around the site. Once calibration readings were taken, a general walk-over of the waste glass area was performed. No readings above the initial background readings were noted (refer to EEEPC DOR 12/8/10 in Appendix K-1). The screening information results were then passed onto NYSDEC and EQNE to allow them to proceed with the excavation in the waste glass area. The surface glass and underlying soils affected by the glass were disposed of as nonhazardous waste in the Town of Brookhaven Landfill in Brookhaven, New York.

#### **7.7.5 Purge Water Drums from Prior Groundwater Samplings**

Sixteen drums were located around the site at the startup of the remedial construction project, including eight in the Drip Pad Building, two in the former CCA Building, and six in the Wood Frame Storage Building. The drums were filled with purge waters and drill cuttings from prior well installations and groundwater sampling events conducted during the investigation and pre-design phases of the project. To reduce the need for a PCO to EQNE, NYSDEC directed its Standby Callout Contractor, EnviroTrac and AARCO Environmental of Lindenhurst, New York, to characterize and profile the drums at the site. Upon waste profile acceptance, the drums were prepared for shipment and removed from the site on October 6, 2010. The drums were shipped to the Michigan Disposal Waste Treatment Plant in Belleville, Michigan, for treatment and disposal. Copies of the complete report, including the waste profiles and shipping manifests, are provided in Appendix X.

#### **7.7.6 Additional Sampling and Soils Removal – Southeast Corner of the Site**

During the review of the Contract Drawings and the initial topographic survey performed by L.K. McLean, it was discovered that a portion of the southeast corner of the property in the Phase 1 area of the project was not included in the contaminated soil remediation program (see Figure 1-3). At the direction of NYSDEC, soil sampling was performed by EnviroTrac on October 13, 2010, to evaluate the extent of soil contamination, specifically CCA. The samples were analyzed by TestAmerica Laboratories, Inc., of Edison, New Jersey, a Callout Laboratory for NYSDEC. EEEPC provided evaluation of the analytical results (see Appendix H-6), which indicated that CCA contamination was above the SCOs and extended beyond the original limits of work on the property. Additional sampling was performed by EnviroTrac on November 12, 2010, to further evaluate the horizontal and vertical limits of CCA-contaminated soils in the southeast corner of the site and along the south access road (Green Road). The additional samples were also analyzed by TestAmerica Laboratories, Inc.

The results were discussed with EQNE, and additional soils excavation and disposal were required. Since unit costs for excavation, sampling, soil disposal, backfill, and restoration were established in the bid, the additional area was included

as part of the overall Contract scope of work. No additional PCO costs had to be prepared for the work.

The end-point sample analytical results for this additional area in Phase 1 are included in the results presented in Section 6.4.1 and Table 6-1.

#### **7.7.7 Additional Well Discovered - Southeast Corner of the Site**

During clearing and grubbing of the site in Phase 1, a previously unknown monitoring well was discovered in the southeast corner of the site (initially referred to as MW-27A; now referred to as Monitoring Well BB&S-1). EQNE was instructed to protect the above-grade well structure until further evaluation could be performed. At the direction of the NYSDEC PM, physical measurements of the well were taken, and depth of water and bottom of well measurements were performed by EnviroTrac personnel and reviewed by EEEPC.

Groundwater samples were collected from the well on October 13, 2010, to evaluate the potential groundwater contamination in this area of the site. The samples were tested for chlorinated volatile organic compounds and metals. The analytical results did not indicate the presence of any contaminants at concentration above NYSDEC groundwater standards. The analytical results are provided in Appendix H-7.

NYSDEC will include this well as part of the future site management.

#### **7.7.8 Relocation of Owner's Building Supplies in Excavation Areas and Building Locations**

Once EQNE mobilized to the site, it was found that building supplies were still located where building improvements and excavations were going to be performed. The owner was contacted and given a time frame to move the remaining building supplies. After several unsuccessful attempts to contact the owner, NYSDEC called EnviroTrac in to move the remaining building supplies that would interfere with the contract work. The building supplies were moved to areas of the site not affected by the remedial work. EnviroTrac completed the removal of the building supplies by November 29, 2010.

EnviroTrac's work reduced the potential for a change order claim by EQNE for delays and access to the site.

#### **7.7.9 Northern Property Line, Extent of Contamination Evaluation**

When the limits of work were established using the project site coordinates, the limits along the northern property line were found to be outside the northern fence line. At the direction of NYSDEC, the state's Standby Callout Contractor, EnviroTrac, was called in on December 9, 2010, to take soil samples along the area outside the northern fence line in Phase 3. The analytical results indicated that, except in one roadway area, the contaminant concentrations in soil in that area were below the SCOs. This is the location where tractor trailers moved site trail-



ers for staging and storage. (See Appendix H-8 for the analytical results for this area.) During the remedial excavation work in Phase 3, end-point samples were collected after the required vertical depth excavations were performed. Additional excavation work was completed on the roadway beyond the original limits of excavation work. As shown in Table 6-1, the analytical results for endpoint samples from this phase indicated the excavation achieved the required on-site SCOs.

#### **7.7.10 Drip Pad Drainage Repairs**

It was discovered during the clearing and grubbing phase of work that the roof of the Drip Pad Building had no controlled roof collection and drainage due to prior damage to the gutter and downspout system. Drainage issues were not apparent prior to construction due to the presence of heavy vegetative cover and trees around the building. The proposed excavation work around the building required the area to be stripped of all vegetative cover. During rain events, runoff from the roof would damage newly placed cover soils and groundcover. Under PCO No. 013 performed by EQNE, gutter and downspout improvements were made to convey rainwater away from the building and into the subsurface storm sewer system. The runoff improvement provided protection of the newly placed stone, HDPE liner, and common fill around the building foundations. The Record drawings of the Drip Pad runoff system are provided on Drawing G-3.

#### **7.7.11 Analytical Services Performed by the Callout Laboratory**

Due in part to the large number of additional excavations in the phases of the project, the original quantity of end-point and confirmation samples stipulated in the remedial contract was inadequate. As an alternative to extending the quantity of units with the remedial contract, NYSDEC directed EQNE to use the services of the NYSDEC's Callout Laboratory, H2M. Samples collected in Phase 2 and Phase 4 of the project were picked up by H2M for analysis. The initial analytical results were compared with those performed by the ChemTech, the subcontracted lab of EQNE. For samples collected in close proximity to those analyzed by ChemTech, the analytical results obtained by H2M were comparable. H2M continued to perform analyses of end-point and confirmation samples until completion of the project into Phase 4, analyzing 302 samples. The analytical results for the end-point and confirmation samples collected during the project are provided in Appendix H-4.

#### **7.7.12 April 2011 Additional Drum Removal**

During the remedial work performed in the CCA, Drip Pad, and Frame Storage buildings, an additional 14 drums of unclassified wastes were staged for transportation and disposal. The drummed wastes were not originally part of the EQNE Contract scope of work and, therefore, would be a PCO to the Contract. As an alternative, NYSDEC's Callout Contract – EnviroTrac, was directed to perform characterization and profiling of the wastes for transportation and off-site disposal.



The 14 drums were accepted for disposal at EQNE's Detroit, Inc., facility, located in Detroit, Michigan. The 14 drums were transported to EQNE's Detroit facility on April 5, 2011.

A report of the disposal activity was prepared and issued to NYSDEC on April 5, 2011. Copies of the Land Disposal Restriction and Certification forms and the completed manifests are provided in Appendix Y.

#### **7.7.13 Phase 4 Area Restoration by the Callout Contractor**

The initial goal of the excavation work at the off-site Phase 4 area was to enable NYSDEC to delist of this area from its Registry of Inactive Hazardous Waste Disposal Sites. To achieve this goal, additional excavation work was performed and then verified with confirmation samples. The cost of the additional excavation and disposal work was evaluated on a weekly basis against the overall contract costs. Anticipating Contract cost overruns, NYSDEC decided to use its Callout Contractor, EnviroTrac, to perform the restoration work at Phase 4. The Phase 4 excavations areas were surveyed, and the survey data were incorporated in the final topographic survey submittal by EQNE. The common fill, erosion control matting, and topsoil required in the Contract to perform the final restoration for the Phase 4 area were stockpiled by EQNE in a designated clean area of the Main site until EnviroTrac could mobilize to the site to perform the restoration work. On August 19, 2011, EQNE completed excavation work in Phase 4.

Before the restoration work could be performed by EnviroTrac, a number of pre-construction submittals needed to be reviewed by EEEPC. The submittal log for the EnviroTrac work is provided in Appendix E-2. The submittals included a Work Plan, sHASP, list of subcontractors, and proposed schedule of completion. Shop drawing submittals included only an end section of the drainage line from the roadway and Main site drainage. Upon finalization of the required submittals, EnviroTrac mobilized to perform the Phase 4 restoration work on September 14, 2011. The Phase 4 restoration work by EnviroTrac was completed on October 14, 2011. The scope of work required EnviroTrac to submit post-construction documents, including a final topography survey and compaction results. The log of post-construction submittals is provided in Appendix E-2, the final topographic survey completed after Phase 4 restoration is provided in Appendix G-5, compaction results are provided in Appendix S-2, and a final report on the work performed by EnviroTrac is provided in Appendix Z.

#### **7.7.14 Installation of On-site Retention/Detention Ponds**

##### **7.7.14.1 South Detention Pond**

During the excavation work in Phase 1 in November 2010, surface water ponding issues were encountered in the southeast corner of the site. Although a SWPPP was in place and operating during the remedial construction, stormwater detention became a viable solution to the localized ponding due to the lack of any swales or discharge points from the site into the ROW of Speonk-Riverhead Road. The solution discussed at the December 2, 2010, progress meeting (Progress Meeting

No. 5) and coordinated with EQNE was the creation of a low-point retention area, or sump, to allow surface water collection and percolation back into soils off the remedial area but remaining on site. The additional work effort was accepted by EQNE at a no additional cost or time change to allow continued and expedited efforts to complete the remedial excavation work.

#### **7.7.14.2 North Retention Pond**

In early September 2011, Hurricane Irene generated large volumes of surface water runoff from the north end of the site, which had to be discharged through the road crossing into the off-site Phase 4 area swale. At that time, the north area of the Main Site was still in a freshly growing vegetative state and subject to quick runoff flows. The severity of the storm created flooding and washouts along the west side of Speonk-Riverhead Road, the west catch basin, and the off-site Phase 4 swale. Repairs were performed at the three damaged areas, but it was apparent that additional retention of surface water from the Main Site was required.

EEEPC provided surface runoff calculations and a drawing on the general size and location of a proposed north retention pond for the Main Site. The area of the pond was selected based on general contours, location, and the volume of water from a 10-year storm event with a 24-hour duration. The retention pond was located in the remediated Phase 3 a portion of the of the Main Site. NYSDEC's Standby Callout Contractor, EnviroTrac, was directed to install the retention pond per the drawing provided by EEEPC. The submittal log for the EnviroTrac work is provided in Appendix E-3. The submittals included a work plan, sHASP, list of subcontractors, and proposed schedule of completion. Shop drawing submittals included piping from an existing on-site catch basin, installation of a new catch basin and grating, erosion control matting, and seed mix. Work on the north retention pond began on February 6, 2012, and was completed on March 16, 2012. L.K. McLean provided stakeout of the layout of the pond and the cuts and fills to achieve the storage volume requirements. The log of post-construction submittals is provided in Appendix E-3. The final topographic survey completed after retention pond installation is provided in Appendix G-6. A final report of the work performed in this area by EnviroTrac is provided in Appendix AA.

#### **7.7.15 Final ALTA Survey**

An American Land Transfer Association (ALTA) survey was required for the environmental easement created to facilitate management of the remaining hazardous wastes at the site. EQNE was a required to complete the ALTA survey as part of the Contract Documents. The ALTA survey is also a part of the institutional controls (ICs) of the Final Site Management Plan (SMP), which dictates how the site is monitored and maintained once the engineering controls (ECs) are in place.

Due to additional work being performed by EnviroTrac, EQNE delayed the ALTA survey work beyond the final completion of the remedial construction contract. At the direction of NYSDEC, the ALTA survey deliverable document was

transferred to EnviroTrac, and a credit PCO of \$2,000 (PCO No. 022) was made to the Contract by EQNE.

The final ALTA survey was completed by EnviroTrac through L.K. McLean. The ALTA survey was finalized on May 9, 2012, and has been incorporated as part of the Environmental Easement in the SMP. A copy of the final ALTA survey for the site is provided in Appendix BB.

## **7.8 Institutional Controls**

### **7.8.1 Phases 1, 2, and 3 (Main Site)**

Based on the endpoint/confirmatory sample analytical results, the SCOs established for Phase 1 were achieved, with the exception of three sampling areas. Additional remediation will be performed in these areas to achieve the SCOs. The analytical results for the remedial work performed in Phase 1 met the Part 375.6 “Commercial” cleanup guidelines, with the exception of the three areas mentioned above. However, imposition of an environmental easement or environmental notice will be required if residual soils or groundwater contamination remains after remedial actions are completed. Such ICs would be provided under the site management and monitoring program.

The work in the Phase 2 area included a mix of non-hazardous and hazardous soils cleanup. Based on previous investigations (AECOM 2007), a zone of residual hazardous waste remains beneath the on-site buildings, where improvements would be performed. The SCOs established for the Phase 2 areas outside the delineated hazardous zone met residual soil guidelines based on the endpoint/confirmatory analytical results. The analytical results for Phase 2 met the Part 375.6 “Commercial” cleanup guidelines, with the exception of the four areas mentioned above. Additional remediation will be performed in these areas to achieve the SCOs. However, imposition of an environmental easement or environmental notice will be required if residual soils or groundwater contamination remains after remedial actions are completed. Such ICs would be provided under the site management and monitoring program.

Based on the endpoint/confirmatory sample analytical results, the SCOs established for Phase 3 were achieved. The analytical results for Phase 3 met the Part 375.6 “Commercial” cleanup guidelines.

For the area delineated as the “hazardous waste boundary area,” next to Phase 2, the documentation sample analytical results confirmed that the area will remain under an “environmental easement” and will be under the site management program. The site management program will establish inspection, monitoring, and maintenance guidelines to protect human health and safety from the remaining contamination.

**7.8.2 Speonk-Riverhead Road Crossing**

The road-crossing area on Speonk-Riverhead Road was delineated as “hazardous.” The limits of work were established and only endpoint/confirmatory analytical documentation was completed. However, imposition an environmental easement is required because residual soils or groundwater contamination remains after remedial actions are completed. ICs are provided under the site management and monitoring program.

**7.8.3 Phase 4 – West Site**

The SCOs established for the off-site Phase 4 area, west of Speonk-Riverhead Road, met the Part 375.6 “Unrestricted Residential” guidelines. Once the two areas of Phase 4 identified in Section 7.7.1 (see part C) have been remediated, the analytical results, validation of analytical data, and site sample mapping will be used to delist the area from the Registry of Inactive Hazardous Waste Disposal Sites.

**7.9 Contractor and Subcontractor Affidavits**

Final Waiver of Liens Affidavits from EQNE and its subcontractors are provided in Appendix CC.

# 8

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