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**Division of Environmental Remediation**

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**Amended Record of Decision  
BB&S Treated Lumber Corporation Site  
Southampton, Suffolk County, New York  
Site Number 1-52-123**

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**October 2009**

New York State Department of Environmental Conservation  
DAVID PATERSON, *Governor*      ALEXANDER B. GRANNIS, *Commissioner*

# **DECLARATION STATEMENT – AMENDED RECORD OF DECISION**

## **BB&S Treated Lumber Corporation Inactive Hazardous Waste Disposal Site Southampton, Suffolk County, New York Site No. 1-52-123**

### **Statement of Purpose and Basis**

The Amended Record of Decision (AROD) presents the selected remedy for the BB&S Treated Lumber Corporation site, a Class 2 inactive hazardous waste disposal site. The selected remedial program was chosen in accordance with the New York State Environmental Conservation Law and is not inconsistent with the National Oil and Hazardous Substances Pollution Contingency Plan of March 8, 1990 (40CFR300), as amended.

This decision is based on the Administrative Record of the New York State Department of Environmental Conservation (the Department) for the BB&S Treated Lumber Corporation inactive hazardous waste disposal site, and the public's input to the Proposed Amendment to the Record of Decision Amendment presented by the Department. A listing of the documents included as a part of the Administrative Record is included in Appendix B of the AROD.

### **Assessment of the Site**

Actual or threatened releases of hazardous waste constituents from this site, if not addressed by implementing the response action selected in this AROD, presents a current or potential significant threat to public health and/or the environment.

### **Description of Selected Remedy**

Based on the results of the Remedial Investigation and Feasibility Study (RI/FS) and Pre-Design Investigations (PDI) for the BB&S Treated Lumber Corporation site and the criteria identified for evaluation of alternatives, the Department has selected excavation and off-site disposal remedy to replace the on-site soil treatment remedy specified in the original ROD. The remedy will also eliminate the extraction and treatment component of the groundwater remedy by offering to fund and provide an alternate water source (AWS) to authorized homes and businesses as determined by the Department and the New York State Department of Health (NYSDOH).

The components of the remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance and monitoring of the remedial program.

2. The offer to immediately fund and provide an AWS to authorized homes and businesses as determined by the Department and the NYSDOH.
3. Excavation of on-site soil 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 exceeding the Department Technical and Administrative Guidance Memorandum (TAGM) 4046 SCO for total chromium. Transportation, pre-treatment (as necessary) off-site and disposal of soil determined to be a hazardous waste into a Resource Conservation and Recovery Act (RCRA) Subtitle C landfill permitted to accept hazardous waste. Contaminated soil characterized to be non-hazardous will 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 designed grades at the site.
4. Excavation of off-site soil exceeding unrestricted use SCOs for arsenic, hexavalent chromium, and trivalent chromium set forth in Part 375. All of 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 and 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 designed grades at the site.
5. Installation of additional off-site groundwater wells to monitor plume attenuation and migration. 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 monitor plume migration.
6. Development of a site management plan (SMP) since the remedy results in soil contamination above unrestricted levels remaining on-site. The SMP will include the following controls: (a) address residual contaminated soil 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 redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with Department 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 the NYSDOH and/or the Suffolk County Department of Health Services (SCDHS); and (d) require the site property owner to complete

and submit to the Department a periodic certification. The property owner will be required to provide a periodic certification, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department 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 the Department 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 maintained to restrict access and protect remedial components.

**New York State Department of Health Acceptance**

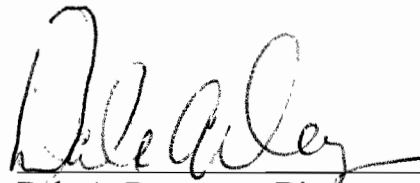
The NYSDOH concurs that the remedy selected for this site is protective of human health.

**Declaration**

The selected remedy is protective of human health and the environment, complies with State and Federal requirements that are legally applicable or relevant and appropriate to the remedial action to the extent practicable, and is cost effective. This remedy utilizes permanent solutions and alternative treatment or resource recovery technologies, to the maximum extent practicable, and satisfies the preference for remedies that reduce toxicity, mobility, or volume as a principal element.

OCT 27 2009

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Date



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Dale A. Desnoyers, Director  
Division of Environmental Remediation

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# AMENDED RECORD OF DECISION

**BB&S Treated Lumber Corporation Site  
Southampton, Suffolk County, New York  
Site No. 1-52-123  
September 2009**

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## 1.0 INTRODUCTION

On February 25, 2000, the New York State Department of Environmental Conservation (Department) signed a Record of Decision (ROD) which originally selected a remedy to clean up the BB&S Treated Lumber Corporation (BB&S) Site. The remedy selected at the time included the installation of on-site and off-site extraction wells to contain and capture the plume of contaminated groundwater. A long-term groundwater monitoring program would also be instituted. Remediation of impacted on-site and off-site soil would require excavation and consolidation within the lumber yard for treatment in a temporary plant using solidification/stabilization technology. All excavated areas would be backfilled with clean soil and re-seeded.

Pre-remedial design investigations (PDI) of groundwater have shown that the contaminant plume has reduced in concentration since completion of the ROD. Moreover, the Suffolk County Water Authority (SCWA) has since installed a public water line in the area making public water available to home and business owners situated downgradient of the site along Speonk-Riverhead Road, Fifth Avenue, and Old Country Road. In addition, the PDI have redefined the extent of contaminated soil requiring remediation. As a result, the planned excavation limits have since been expanded from those originally identified in the ROD to include additional volumes of impacted soil located both on-site and off-site.

With the increased soil volume now requiring remediation, the Department is replacing the on-site soil treatment remedy with an excavation and off-site disposal remedy. The remedy will also eliminate the extraction and treatment component of the groundwater remedy by offering to fund and provide an alternate water source (AWS) to authorized homes and businesses as determined by the Department and the New York State Department of Health (NYSDOH).

A public comment period was opened on June 22, 2009 in order to provide an opportunity for the public to comment on the proposed changes to the ROD remedy. The comment period was closed on August 31, 2009.

A public meeting on this site was held at the Incorporated Village of Westhampton Beach Office Meeting Room located at 165 Mill Road, Westhampton Beach, on July 14, 2009. At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD was presented. After the presentation, a question and answer period was held, during which time the public provided verbal comments on the proposal. During that meeting attendees requested additional time to receive, review, and comment on the PDI data gathered by the Department. On July 15, 2009 the Department announced in a press release that the comment period was being

extended by an additional thirty (30) days from July 30, 2009 to August 31, 2009. Verbal and written comments received during the comment period have been summarized and responses provided in the Responsiveness Summary (Appendix A).

The information here is a summary of what can be found in greater detail in reports that have been placed in the Administrative Record for the site (Appendix B). These documents are available at the following repositories:

Westhampton Free Library  
7 Library Avenue  
Westhampton Beach, NY 11978  
Phone: (631) 288-3335  
Hours: Monday - Friday 9:30 a.m. - 5 p.m.;  
Saturday 9:30 a.m. - 5 p.m.;  
Sunday 1 p.m. - 5 p.m.  
<http://wham.suffolk.lib.ny.us>

Department Region 1 Office  
50 Circle Road  
Stony Brook, NY 11790  
Phone: (631) 444-0240  
Please call for an appointment  
Hours: Monday - Friday  
8:30 a.m. - 4:45 p.m.

## **2.0 SITE INFORMATION**

### **2.1 Site Description**

As seen in Figure 1 the BB&S site is located in the Town of Southampton in eastern Suffolk County, Long Island. The approximately five-acre site was most recently used as a lumberyard for wholesale and retail lumber distribution (Best Building Supply and Lumber Company). In May 2009 the lumberyard ceased operations and filed for Chapter 11 bankruptcy. The site is currently being leased by the property owner to park tractor-trailers.

The site is located on Speonk-Riverhead Road, approximately 1.5 miles north of the Hamlet of Speonk. The site is found in a rural area considered part of the Central Pine Barrens Preserve (Pine Barrens). There are homes and businesses found within a half-mile radius of the site, including south of the site in the general direction of groundwater flow. There are some homes and businesses in the downgradient area that still utilize private water supplies, 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 expected at depths approximately 130-150 feet below ground surface (bgs) or greater.

### **2.2 Site History**

From the early 1980s to 1996, the site operated as a lumber treatment and storage facility. Lumber was pressure treated on-site using a chromated copper arsenate (CCA) solution. CCA is a 6 NYCRR Part 371 listed hazardous waste when spent or disposed of without treatment (code number F035). CCA was documented to be released to the environment through surface spills and sump leakage. A flame proofing solution containing zinc oxide was also used at the site for a time to treat lumber.

Releases of CCA to groundwater are believed to have occurred through leakage from the collection sumps and through malfunction of an on-site water supply well valve. Spills originating from the concrete pad most likely account for soil contamination noted in the vicinity of the metal and frame buildings and for contamination found in the on-site drainage ditch. Higher concentrations of CCA derived contaminants found off-site on the west side of Speonk-Riverhead Road within the Pine Barrens, across from a site drainage culvert, indicate larger surface discharges or spills in the past. Drippings from stored and treated lumber most likely account for soil contamination east of the former treatment area within the on-site lumber yard area.

BB&S conducted its own environmental study between 1985 and 1987 after the Suffolk County Department of Health Services (SCDHS) identified chromium contamination in an on-site water supply well. As a result, BB&S installed a network of on-site and off-site groundwater monitoring wells and three groundwater extraction wells. BB&S used the extraction wells to pump and treat groundwater at the site from 1987 to 1996. The groundwater treatment system frequently failed to meet surface water discharge requirements for chromium. Consequently, the Department placed the BB&S Site on the New York State Registry of Inactive Hazardous Waste Disposal Sites in 1993 and negotiated with BB&S to have the company perform a Remedial Investigation/Feasibility Study (RI/FS). BB&S declined to perform additional investigations. Therefore, the Department performed the RI/FS using state superfund monies. The original ROD for the site was issued on February 25, 2000. The Department initiated a PDI in April 2001 through April 2003 that included shallow soil sampling and groundwater profiling of the chromium plume. In the summer of 2003, work was suspended while the Department negotiated with BB&S after the company expressed an interest in implementing a remedy at the site. The negotiations failed, and in February 2005 the Department resumed its plan to design and implement the remedy. The majority of the PDI field work was completed between September 2005 and February 2006. Additional PDI activities were initiated by the Department in December 2007 and included an assessment of the existing groundwater treatment system installed by BB&S in 1987, on-site and off-site soil sampling, installation and sampling of four sentinel multi-level groundwater monitoring wells, survey 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 contaminated soil, and development of plans and specifications for the purpose of competitively bidding the cleanup remedy. More private water supply well sampling along Speonk-Riverhead Road and Fifth Avenue was conducted by the Department in April 2009 and June 2009 as part of initial long-term efforts to monitor groundwater plume migration and potential impacts to potable water supplies.

### **2.3 Nature and Extent of Site Contamination**

As described in the original ROD and other documents, many soil and groundwater samples were collected at the site to characterize the nature and extent of contamination. The primary contaminants of concern include inorganics (metals), specifically chromium (in both the hexavalent and trivalent forms) and arsenic. A total of 174 soil borings were advanced from 2001 through 2008 as part of the PDI, and approximately 500 soil samples were submitted for laboratory analysis for arsenic and chromium in order to further delineate the nature and extent of contaminated soil associated with the BB&S Site.



Chromium and arsenic are present in soil and exceed their respective soil cleanup objectives (SCOs) identified in 6 NYCRR Part 375, dated December 14, 2006 (Part 375) and Department Technical and Administrative Guidance Memorandum (TAGM) 4046. Chromium and arsenic are found exceeding their SCO values in surface, shallow and deep soil on-site; and in surface and shallow soil off-site just outside the eastern perimeter of the site and in an area referred to as a "drainage swale" (a zone of surface runoff). The off-site drainage swale begins at Speonk-Riverhead Road, near the BB&S Site former CCA treatment building and drip pad, and drains off-site in a southwestern direction. Analytical results identified elevated arsenic and chromium concentrations above SCO values that extend approximately 700 feet in the drainage swale west of the road. Copper was often found above its SCO value in soil where arsenic and chromium were also found. Zinc was also found in soil above its SCO value but to a lesser extent throughout the site.

The pre-existing site groundwater monitoring well network of 15 wells (8 on-site monitoring wells, 5 off-site monitoring wells, and 2 former recovery wells) was expanded in May 2008 with the installation of 14 new groundwater monitoring wells. Specifically, at that time the Department installed four off-site multi-level monitoring wells (MW-17 through MW-20) to further delineate the groundwater plume and assess downgradient groundwater quality. Also, two additional on-site shallow monitoring wells (MW-21 and MW-22) were installed within the former lumber treatment source areas to further characterize source area groundwater quality and to further delineate the vertical extent of soil contamination. Moreover, in August 2009 the Department installed 12 additional off-site multi-level groundwater wells to monitor plume attenuation (MW-23, MW-24, MW-25, MW-26). The initial round of groundwater sampling of these wells is expected to occur in early Fall 2009. The current groundwater monitoring network now consists of 41 wells (10 on-site monitoring wells, 29 off-site monitoring wells, and 2 former recovery wells).

The BB&S groundwater plume is currently known to extend at least 4,000 feet south of the site. The primary contaminant in groundwater is hexavalent chromium. Arsenic and copper were also detected in groundwater both on-site and immediately downgradient of the site. Copper and zinc were infrequently noted in groundwater above their Standard, Criteria, and Guidance (SCG) values.

As seen in Figures 2, 3, and 4 and summarized in Table 1 of the ROD Amendment, the main categories of contaminants that exceed their SCGs are metals. For comparison purposes, where applicable, SCGs are provided for each medium.

The following are the media which were investigated and a summary of the findings of the investigation. Chemical concentrations are reported in parts per billion (ppb) for water and parts per million (ppm) for soil.

### **On-Site Soil**

Based on the RI and PDI data, an estimated 12,700 cubic yards (CY) of soil will require excavation and off-site disposal to obtain compliance with Part 375 SCOs to protect the groundwater for arsenic (16 ppm) and hexavalent chromium (19 ppm). Since there is no

Part 375 SCO for total chromium associated with the protection of groundwater due to its low solubility, the SCO for total chromium has been determined by utilizing TAGM 4046 (50 ppm).

Of 102 soil samples collected for hexavalent chromium analyses during the RI and PDI, all but two results were non-detect or well below 19 ppm. One of the two samples was collected from beneath the former treatment building where the concrete cap will be maintained, and the second was from the off-site drainage swale and within the current planned excavation limits. Many of the soil samples collected were of impacted soil with total chromium concentrations as high as 1,300 ppm on-site and 1,180 ppm off-site (refer to Table 1). Based on these results, the SCO of 50 ppm for total chromium identified in the ROD will reach compliance with the 19 ppm hexavalent chromium SCO and, therefore, will be considered to be protective of the groundwater quality for chromium.

Figure 2 is a map that depicts the lateral and vertical limits of the on-site soil to be excavated and removed in order to obtain compliance with the established SCO's for arsenic and chromium based on analytical results for all samples collected in the on-site area both during the RI and PDI. Based upon evaluation of this figure, the volume of impacted soil in on-site areas requiring remediation is estimated at 12,700 CY. As further indicated on Figure 2, shallow soil arsenic and chromium contamination has been detected around the former CCA treatment building and concrete drip pad building, and along the northern and eastern perimeter of the site (refer to Figure 2 for the concrete drip pad, former CCA treatment building, and vehicle maintenance shop locations). This delineation is consistent with that depicted in the RI and FS. The on-site area with the most widespread impacted soil appears to surround the former CCA treatment building and concrete drip pad. Impacted soil was detected up to a depth of 5 feet below grade near most of the perimeter of these structures. Since deep excavation adjacent to the buildings has the potential to cause structural damage, the estimated removal volume assumes that no more than one foot of material will be excavated from within four feet of these buildings. Contaminated soil remaining below this depth in these areas determined to be exceeding the SCOs will be demarcated with a visual barrier (e.g., geotextile fabric), and then capped with an asphalt and/or geomembrane material as an apron around the buildings to prevent precipitation/runoff from being able to infiltrate through the residual impacted soil. The amount of on-site soil contamination to remain in these areas for future site management under an environmental easement has been estimated at 14,000 CY.

During the PDI soil borings were drilled beneath the contaminant source area to a depth of approximately 40 feet bgs at most locations. Specifically, borings were drilled through the concrete drip pad, inside the former CCA treatment building, and inside the vehicle maintenance shop. Based upon review of the analytical data generated, samples from two borings installed through the concrete drip pad exhibited the highest concentrations detected in site soil, with 1,410 ppm of arsenic and 1,300 ppm of chromium at a depth of 4 feet bgs, and elevated concentrations of arsenic to a depth of 8 feet bgs. In addition, deeper soil samples collected beneath the former CCA treatment building exhibited elevated concentrations of arsenic at 23 feet bgs (233 ppm) to 39 feet bgs (47.1 ppm).

In general, soil samples collected along the northern and eastern sides of the site exhibited impacted soil to a depth of 1 to 3 feet bgs. The concentrations of metals in samples from these locations ranged from non-detect to 231 ppm for arsenic and 1.5 ppm to 320 ppm for chromium.

### **Off-Site Soil (Drainage Swale)**

Based on the RI and PDI data, an estimated 5,700 CY of off-site soil will require excavation and off-site disposal to obtain compliance with Part 375 unrestricted use SCOs for arsenic (13 ppm), trivalent chromium (30 ppm) and hexavalent chromium (1 ppm). Excavation to these SCOs will also be protective of the groundwater. The majority of off-site soil requiring remediation is located from the western property boundary across Speonk- Riverhead Road within the drainage swale (5,600 CY). Approximately 100 CY of soil located outside of the eastern property boundary will also require remediation.

Figure 3 depicts the lateral and vertical limits of off-site (drainage swale) soil to be excavated and removed to obtain compliance with the SCO's for arsenic and chromium based on analytical results for all samples collected during the RI and PDI. The map depicts the total volume of soil to be removed from the drainage swale and is representative of approximately 5,600 CY. Analytical results identified concentrations of arsenic up to 672 ppm and chromium up to 1,180 ppm in surface soil from this area.

Figure 3 also shows that arsenic and chromium exceed their SCOs and are essentially confined laterally near the longitudinal axis of the base of the swale (i.e., did not extend laterally out of the swale) extending approximately 600 feet west from the culvert discharge point where discharge of CCA waste from the site to the drainage swale originated. The most elevated detections of arsenic and chromium were found at depths of 1 and 4 feet bgs. There were 15 samples collected from the drainage swale and analyzed for hexavalent chromium. The samples were collected from the surface down to a depth of 2 feet bgs. Thirteen samples were found to be non-detect and only two samples had detections of 2 ppm and 3 ppm. The PDI sampling rationale was based on the RI surface and subsurface hexavalent chromium results being non-detect or very low even in areas of high total chromium concentrations, suggesting the hexavalent chromium overall has readily chemically reduced to the trivalent state.

### **Groundwater**

The PDI groundwater analytical results generated from sampling between 2005 and 2008 indicate that the chromium concentrations along the axis of the contaminant plume have decreased since completion of the RI in 1998. Chromium concentrations in on-site monitoring wells detected during the RI were reported as high as 10 ppm at the time, whereas during the PDI the maximum concentrations decreased to below 1 ppm. The groundwater sample results from monitoring recently conducted in 2008 revealed total chromium and hexavalent chromium concentrations in either or both the total matrix or filtered samples from 17 of the monitoring well samples exceeded applicable New York State Ambient Water Quality Standards for groundwater (NYSGWS) of 50 parts per billion (ppb). Arsenic was detected above the NYSGWS of 25 ppb without an accompanying chromium exceedance in one well (MW-4).

The highest total chromium concentration was detected in downgradient deep well MW-19D (818 ppb in June 2008), located approximately 0.75 miles south of the site, near the intersection of Speonk-Riverhead Road and Old Country Road (see Figure 4). The highest hexavalent chromium concentration was detected in downgradient intermediate depth well MW-17I (600 ppb in June 2008 and 700 ppb in September 2008), located approximately 1/3 of a mile south of the site at 1480 Speonk-Riverhead Road (see Figure 4). Both of these wells were resampled in September 2008 due to high turbidities in June 2008, which appears to have caused sample parameters to be biased high. The highest hexavalent chromium detected in an on-site well was 476 ppb in well MW-21. Contaminant concentrations detected during the 2008 sampling round were noticeably lower than those detected during the previous sampling round (October, 2005), and indicate a continued significant decrease since completion of the RI. The decreasing contaminant trends at the BB&S Site reflect an attenuating plume in the former source area and likely indicate decreasing contaminant loading rates from former source area soils to groundwater. The highly elevated chromium concentrations in samples from downgradient wells MW-17I and MW-19D indicate the contaminant plume has expanded vertically downgradient of the site, to depths of 130 feet or more bgs.

The volatile organic compound (VOC) results for all groundwater samples collected during the 2008 monitoring well sampling event were non-detect. This data indicates that groundwater, downgradient and within the known limits of the BB&S plume, has not been impacted with VOCs.

Private water supply wells within the range of 0.25 - 1.0 miles south of the site are in the potential path of the plume. In January 2001 and February 2001 the private water supply well of a Non-Community Water Supplier (NCWS) located approximately 1500 feet downgradient of site was sampled by the SCDHS. Sampling of the water supply at that time detected 325 ppb of total chromium. The SCDHS transmitted the sampling data to the owner in writing and further recommended that the business connect to the existing public water supply line. It was further recommended at the time that bottled water be used at that location for consumptive purposes until a permanent remedy was found. The business was removed from the NCWS inventory in 2001 due to a non-qualifying population (< 25 persons). Following occupancy of the property by a new landscaping business in 2006, the water supply was sampled again by the SCDHS. Total chromium was again detected at a concentration of 69 ppb. This facility was re-evaluated for but did not meet the criteria to be regarded as a NCWA. The business has since connected to the public water supply existing along Speonk-Riverhead Road.

In June 2008, April 2009, and June 2009 the Department collected tap water samples from private water supply wells located within or near the chromium groundwater plume downgradient of the site. In all samples analyzed, site related contaminants of concern (i.e., arsenic, chromium and copper) were not detected or detected at concentrations less than applicable maximum contaminant levels (MCL), as established by the NYSDOH. Although the most recent residential well sampling and analysis effort in the area did not find any private water supply wells contaminated above MCLs, monitoring of plume migration indicates a possible future impact to the remaining private drinking water supplies.

## **2.4 Summary of Human Exposure Pathways**

This section describes the types of human exposures that may present added health risks to persons at or around the site. A more detailed discussion of the human exposure pathways can be found in Section 6.0 of the RI report that can be found at the document repositories listed on page 2 of the ROD Amendment. An exposure pathway describes the means by which an individual may be exposed to contaminants originating from a site. An exposure pathway has five elements: [1] a contaminant source; [2] contaminant release and transport mechanisms; [3] a point of exposure; [4] a route of exposure; and [5] a receptor population.

The source of contamination is the location where contaminants were released to the environment (any waste disposal area or point of discharge). Contaminant release and transport mechanisms carry contaminants from the source to a point where people may be exposed. The exposure point is a location where actual or potential human contact with a contaminated medium may occur. The route of exposure is the manner in which a contaminant actually enters or contacts the body (e.g., ingestion, inhalation, or direct contact). The receptor population is the people who are, or may be, exposed to contaminants at a point of exposure.

An exposure pathway is complete when all five elements of an exposure pathway exist. An exposure pathway is considered a potential pathway when one or more of the elements currently does not exist, but could in the future.

Pathways which are known to or may exist on and off the site include:

- ingestion, direct contact, and inhalation of soils or dusts when disturbing surface or subsurface soil as part of typical work (i.e., moving piles with equipment), repairs (i.e., utility trench), or recreational activities (i.e., off-roading); and
- ingestion of or direct contact with groundwater from private drinking water supply wells.

## **2.5 Summary of Environmental Assessment**

This section summarizes the assessment of existing and potential future environmental impacts presented by the site. Environmental impacts include existing and potential future exposure pathways to fish and wildlife receptors, as well as damage to natural resources such as aquifers and wetlands. The Fish and Wildlife Impact Analysis, which is included in the RI report, presents a detailed discussion of the existing and potential impacts from the site to fish and wildlife receptors.

The following environmental exposure pathways and ecological risks have been identified:

- Absorption of contaminants into plant roots and/or animal ingestion of contaminated plants.

Site contamination has also impacted the groundwater resource in the Upper Glacial Aquifer consisting primarily of brown to gray sand and gravel to a depth of approximately 120-150 feet bgs. Groundwater in the Upper Glacial Aquifer primarily flows south from the site toward the Atlantic Ocean. The Town of Southampton has been designated as a sole source aquifer.

The sole source aquifer designation means that Southampton has only one groundwater resource for its drinking water supply.

## 2.6 Original Remedy

Based on the results of the RI/FS for the BB&S site and the criteria identified for evaluation of alternatives, the Department selected extraction and treatment of the groundwater plume, and solidification/stabilization with on-site placement of contaminated surface and shallow soil. The components of the February 2000 remedy are as follows:

- A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance, and monitoring of the remedial program. Any uncertainties identified during the RI/FS would have been resolved.
- Installation of extraction wells on and off-site both to capture the source area of the plume and to intercept the plume at its leading edge where chromium concentrations exceed its SCG of 50 ppb. All collected groundwater would have been piped back to the BB&S property, where a chemical precipitation treatment system in a new building and a reinjection gallery would be constructed. As a contingency plan, any existing household or business in the vicinity of the site whose private water supply becomes impacted by chromium or other site-specific contaminants of concern would have had treatment installed at the point of use.
- Installation of off-site groundwater wells to monitor plume migration. The new off-site wells would have included sentinel groundwater monitoring wells between the contaminant plume or recovery wells and downgradient water supply wells.
- Site fencing would have been repaired and maintained to restrict access and protect remedial components.
- Excavation of on-site and off-site soil where chromium concentrations exceed the TAGM 4046 SCO of 50 ppm (estimated at 5,300 cy). All excavated soil would have been brought into the lumberyard and treated above ground surface within a temporary plant by solidification/stabilization technology. Treated soil would have been placed on site and covered with clean soil and/or the new treatment building or pavement. All excavated areas would have been backfilled with clean soil and reseeded.
- Designation of a Corrective Action Management Unit (CAMU). In order to complete the selected remedy component for soil, ex-situ solidification/stabilization, it would have been necessary to designate a portion of the BB&S property as a CAMU. Generally speaking, a CAMU is an area of the facility that is approved by the Department for the purpose of managing and implementing the treatment requirements of the chosen remedial action. A CAMU is based on federal regulations and promotes the use of on-site treatment of contaminated soil. Without the use of this mechanism, the treated soil could not be placed back into the ground on-site even after contaminants are treated by solidification/ stabilization. Use of a CAMU would have promoted on-site remediation and reduced off-site disposal. The dimensions, location, and maintenance/monitoring program for the CAMU would have been determined during remedial design, in accordance with procedures outlined in 6 NYCRR Part 373-2.19 (**Final Status Standards For Owners and Operators Of Hazardous Waste Treatment, Storage and Disposal Facilities**).

in 6 NYCRR Part 373-2.19 (**Final Status Standards For Owners and Operators Of Hazardous Waste Treatment, Storage and Disposal Facilities**).

- Implementation of the remedy would have resulted in untreated hazardous waste remaining at the site, since a long period of time would have been required to clean up the groundwater plume. A long-term monitoring program would have been instituted. This program would have consisted chiefly of periodic sampling of existing on-site monitoring wells and new off-site wells. This monitoring would have begun as soon as possible and would have continued during and after installation of the selected groundwater collection and treatment system. This program would have monitored the effectiveness of the groundwater remediation and would have been a component of future operation and maintenance for the site.

### **3.0 DESCRIPTION OF CHANGES**

#### **3.1 New Information**

Early in the PDI process, some on-site and off-site areas were re-sampled to better define the nature and extent of impacted soil and groundwater that will require remediation. PDI groundwater data collected in the summer of 2008 has shown that the contaminant plume has attenuated since issuance of the ROD. The highest contaminant concentrations are now found in the downgradient groundwater monitoring wells and also appear to have migrated vertically to depths of at least 130 feet or more bgs. Remaining private water supply wells nearest the site and within the plume were most recently sampled by the Department 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 water quality standard of 50 ppb that are known to cause adverse health effects.

Furthermore, since issuance of the ROD, a public water line was installed by the SCWA in June 2001 along Old Country Road and Speonk-Riverhead Road, making public water available to residents and businesses located immediately downgradient of the site to the south.

Based upon subsequent soil data gathered and evaluated during the PDI, the planned on-site and off-site excavation limits have been redefined and expanded from those originally identified in the ROD. Specifically, the total approximate volume of on-site and off-site soil determined to require remediation has been increased from 5,300 CY to 18,400 CY, a 247% increase in volume of 13,100 CY. Also, the amount of on-site soil contamination located adjacent to and beneath the former CCA treatment area and concrete drip pad that is currently inaccessible and will remain for future site management has been estimated at 14,000 CY.

Following issuance of the ROD in 2000, the Department and the NYS Office of the Attorney General initiated negotiations with an adjacent property owner located immediately south of BB&S Site in order to obtain access associated with the testing of existing groundwater recovery wells on the property previously installed by BB&S and the installation of new groundwater recovery wells required by the ROD. The property owner continued to deny the Department access to the property to carry out the ROD remedy, causing the Department to evaluate other remedial alternatives for the groundwater and prolonging completion of remedial design activities.

### 3.2 Changes

The groundwater extraction and treatment remedial alternative selected for the site in the original ROD has been eliminated and replaced with a comprehensive groundwater monitoring program including taking necessary actions to offer, fund and provide an AWS in accordance with Department program policy **Assistance for Contaminated Water Supplies, dated July 2008 (DER-24)** to authorized homes and businesses as identified by the Department and the NYSDOH. The major factors considered in making this decision are as follows:

- While the contaminant plume has migrated downgradient of the site and has migrated vertically to depths of 130 feet or more bgs, the PDI groundwater sample data shows that contaminant levels have decreased significantly at the BB&S Site since issuance of the ROD, indicating reduced contaminant loading to groundwater in the former lumber treatment source area and residual impacted soil at the site.
- Implementation of soil remedial actions planned for the BB&S Site can be expected to further reduce or eliminate future contaminant loading to groundwater, which will promote increased attenuation rates of the groundwater plume.
- The ROD groundwater remedial scenario will not feasibly remove contaminants that are now migrating further downgradient of the site. Based on the lateral and vertical expanse of the plume downgradient of the site, the cost to implement a combined on-site and off-site groundwater remedial scenario is currently estimated to be in the range of \$8 to \$10 million to construct.
- A public water supply is now available to potentially impacted properties located downgradient of the BB&S Site. The estimated cost to fund and provide an AWS to authorized homes and businesses is approximately \$160,000.

Also, the on-site soil treatment remedy identified within the original ROD will be replaced with an excavation and off-site disposal remedy. The major factors considered in making this decision as follows:

- The PDI redefined the extent of contaminated soil requiring remediation. As a result, the planned excavation limits have since been expanded from those originally identified in the ROD to include additional impacted soil located both on-site and off-site. Based on results from the PDI the volume of soil identified for remediation is being increased by 13,100 CY from the ROD. Under this amendment an estimated 12,700 CY of on-site contaminated soil will be excavated and disposed of off-site. The amount of on-site soil contamination located adjacent to and beneath the former CCA treatment area and concrete drip pad that is currently inaccessible and will remain for future site management has been estimated at 14,000 CY. An estimated 5,700 CY of off-site contaminated soil, located primarily within the drainage swale, will also be excavated and disposed of off-site.



- The updated estimated present worth cost to complete the soil remedy as prescribed in the ROD taking into account the revised excavation limits (18,400 CY) is \$11.7 million. The estimated present worth cost for the amended remedy associated with the off-site disposal of 18,400 CY of soil is \$7.6 million. Based on this analysis, the Department has amended the soil remedy to the off-site disposal option.

#### 4.0 EVALUATION OF CHANGES

##### 4.1 Remedial Goals

Goals for the cleanup of the site were established in the original ROD. The goals selected for this site are to:

- Eliminate, to the extent practicable, ingestion of groundwater affected by the site that does not attain NYSDOH Part 5 Drinking Water Standards.
- Eliminate, to the extent practicable, exposures to workers from shallow contaminated soil on-site.
- Eliminate, to the extent practicable, exposures to the public from shallow contaminated soil on-site and off-site.
- Eliminate, to the extent practicable, the exposure of wildlife to shallow contaminated soil on-site and off-site.

##### 4.2 Evaluation Criteria

The criteria used to compare the remedial alternatives are defined in the regulation that directs the remediation of inactive hazardous waste sites in New York State (Part 375). For each criterion, a brief description is provided. A detailed discussion of the evaluation criteria and comparative analysis is contained in the original Feasibility Study dated August 1999.

**The first two evaluation criteria are called threshold criteria and must be satisfied in order for an alternative to be considered for selection.**

1. **Protection of Human Health and the Environment.** This criterion is an overall evaluation of each alternative's ability to protect public health and the environment.

For groundwater, both the amended remedy and the ROD remedy will result in an untreated portion of the plume being left to migrate and monitor. Under both scenarios, protection of public health will be achieved through monitoring well and private water supply monitoring and the provision of an AWS to authorized homes and businesses as identified by the Department and the NYSDOH. The amended remedy will be protective of the environment in that the site groundwater contamination has recently been determined to be attenuating. In addition, there are no surface water bodies, fish, wildlife, or vegetation in danger of being affected by the groundwater.

With regard to the amended soil remedy, excavation and off-site disposal will be protective of human health and the environment since contaminated soil will be removed from the site, off-site from the drainage swale and the eastern side of property boundary. The solidification/stabilization and on-site placement of contaminated surface and shallow soil required in the ROD remedy would have been protective of human health and the environment by covering the contamination with a protective cover. However, the on-site treatment and placement remedy would have left the treated, contaminated media in place requiring long-term site management. The amended off-site disposal remedy will be more protective of the environment than the ROD on-site treatment remedy because less residual contamination will remain that could potentially provide an ongoing source of contamination to the groundwater. The on-site area with the most widespread impacted soil appears to surround the former CCA treatment building and concrete drip pad. Impacted soil was detected up to a depth of 5 feet below grade near most of the perimeter of these structures. Since deep excavation adjacent to and beneath the buildings has the potential to cause structural damage, the estimated removal volume assumes that no more than one foot of material will be excavated from within four feet of the buildings and there will be no excavation below the footprint of the buildings. Contaminated soil remaining below this depth exceeding the SCOs will be demarcated with a visual barrier (e.g. geotextile fabric), and then capped with an asphalt and/or geomembrane material as an apron around the buildings to minimize the potential for human exposure and to prevent precipitation/runoff from being able to infiltrate through the residual impacted soil. The amount of on-site soil contamination to remain in these areas for future site management has been estimated at 14,000 CY. The excavation depths from both alternatives will be sufficient in protecting human health and ecological receptors because potential surface soil exposures will be eliminated. The engineering and institutional controls will reduce the potential for contact with remaining subsurface contaminated soil below the former CCA treatment area.

- 2. Compliance with SCGs.** Compliance with SCGs addresses whether a remedy will meet environmental laws, regulations, and other standards and criteria. In addition, this criterion includes the consideration of guidance which the Department has determined to be applicable on a case-specific basis.

The relevant soil cleanup objectives at the BB&S site are in compliance with Part 375 SubPart 6 Remedial Program SCOs and TAGM 4046. On-site soil compliance with Part 375 groundwater protection SCOs for arsenic (16 ppm) and hexavalent chromium (19 ppm) will be achieved. There is no Part 375 SCO for total chromium associated with the protection of groundwater due to its low solubility. Therefore, the SCO has been determined by utilizing TAGM 4046 (50 ppm). For off-site soil compliance with unrestricted use SCOs for arsenic (13 ppm), trivalent chromium (30 ppm), and hexavalent chromium (1 ppm) will be achieved (Table 2).

Groundwater, drinking water and surface water SCGs identified for the BB&S site are based on NYSGWS and Part 5 of New York State Sanitary Code. For groundwater, the SCG for total chromium is 50 ppb and arsenic is 25 ppb. Once the source is removed, the groundwater standards will be met over time.

The proposed remedy will not be effective for remediation of contaminated groundwater, as groundwater treatment is not part of the amended remedy. However, given the recent reductions in groundwater contaminant concentrations, the amended remedy will monitor the remedial goals by evaluating the changes over an extended period of time to verify that selected downgradient locations are experiencing a decrease in contaminated groundwater concentrations. The original ROD remedy would have been expected to achieve the remedial action objectives for a significant portion of the contaminated groundwater. However, any contamination remaining adjacent to and below the former CCA treatment area and the former drip pad area (refer to Figure 2) has a potential to leach from site soil and provide a potential ongoing source of groundwater contamination. The amount of on-site soil contamination to remain in this area has been estimated at 14,000 CY. Additionally, it is assumed that groundwater contamination located downgradient of the site will not meet SCGs as the plume will not be captured for remediation but will expect to continue to decrease in concentration.

**The next five “primary balancing criteria” are used to compare the positive and negative aspects of each of the remedial strategies.**

- 3. Short-term Effectiveness.** The potential short-term adverse impacts of the remedial action upon the community, the workers, and the environment during the construction and/or implementation are evaluated. The length of time needed to achieve the remedial objectives is also estimated and compared against the other alternatives.

With regard to the amended and original ROD soil remedies, both remedies will have short-term impacts. The impacts associated with excavation activities will be more significant with the on-site treatment and placement alternative, which will require more handling of the contaminated media. In addition, the on-site treatment and placement alternative would have left the contaminated media in place and will have posed various degrees of short-term impacts to on-site workers, visitors, the public, and the environment from disturbance and/or transport. The amended remedy eliminates this impact.

For groundwater, the amended remedy will not be expected to generate contaminant releases. However, the original ROD remedy involves intrusive construction work which could cause releases of contamination during excavation activities. The amended groundwater remedy will be expected to potentially pose minor disruptions to off-site areas (installation of outpost and monitoring wells). The ROD remedy would be expected to pose significant disruptions to existing site activities and operations during construction of the treatment building.

- 4. Long-term Effectiveness and Permanence.** This criterion evaluates the long-term effectiveness of the remedial alternatives after implementation. If wastes or treated residuals remain on-site after the selected remedy has been implemented, the following items are evaluated: 1) the magnitude of the remaining risks; 2) the adequacy of the engineering and/or institutional controls intended to limit the risk; and 3) the reliability of these controls.

The original ROD remedy would be considered a reliable and permanent remedy for site-contaminated groundwater and an adequate and reliable remedy for protecting human health and the environment (in terms of affecting habitat or vegetation) due to groundwater. The ROD remedy would establish long-term effectiveness for the shallow and intermediate portion of the aquifer related to metals because those areas of the plume would have been captured and treated. Portions of the downgradient contaminant plume that would not be captured for treatment would have continued to attenuate and institutional controls would have been imposed. For the amended remedy institutional controls will be imposed upon groundwater use at the site which will comply with NYSDOH and SCDHS use and development restrictions.

For remediation of impacted soil, the amended soil remedy is considered to be a reliable remedy for site contaminated soil as a significant portion of the metals contaminated soil will be removed. On-site contaminated soil located in inaccessible areas will remain on-site indefinitely and potentially impact the groundwater. Therefore, both the amended remedy and the original ROD remedy are reliable remedies for mitigating environmental impacts associated with on-site subsurface soil contamination. An institutional control with an environmental easement on the site will be implemented for the amended remedy to limit the risks associated with the contaminated soil left on-site adjacent to and below the former CCA treatment area and the former drip pad area located along the western perimeter of the site.

The amount of on-site soil contamination to remain in this area has been estimated at 14,000 CY. Also with respect to the amended remedy, to address future construction or excavation, a soil management plan (SMP) will be developed.

For groundwater, the amended remedy will not be considered a permanent long-term site remedy for contaminated groundwater because the groundwater will not be actively remediated. Despite this, the amended remedy will provide controls that will monitor the presence of metals in the groundwater in the vicinity and downgradient of the site. In addition, the amended remedy will include monitoring the progress (effectiveness over time) of natural attenuation including the contamination levels, the extent of contamination and the natural processes.

- 5. Reduction of Toxicity, Mobility or Volume.** Preference is given to alternatives that permanently and significantly reduce the toxicity, mobility or volume of the wastes at the site.

The amended soil remedy will provide for the greatest reduction of toxicity, mobility and volume of contaminants in soil, as a significant portion of the contamination will be removed from the site. The solidification/stabilization and on-site placement of contaminated surface and shallow soil ROD remedy would have also reduced the toxicity and mobility, but not the volume of contaminated soil by leaving the treated media in place on-site.

For groundwater, the amended remedy will not reduce the toxicity, mobility and volume of groundwater contaminants, as treatment of the contaminants is not part of this proposal. The original ROD remedy provides for the greatest reduction of toxicity, mobility and volume of contaminants in groundwater, as a significant portion of the contamination would have been captured and treated. Additionally, any residual waste generated on-site as part of the groundwater treatment process would have been disposed of off-site. On the other hand, recent sampling of the groundwater indicates that the contaminant plume is attenuating since completion of the ROD in 2000.

- 6. Implementability.** The technical feasibility and administrative feasibility of implementing each alternative are evaluated. Technical feasibility includes the difficulties associated with the construction of the remedy and the ability to monitor its effectiveness. For administrative feasibility, the availability of the necessary personnel and materials is evaluated along with potential difficulties in obtaining specific operating approvals, access for construction, institutional controls, and so forth.

Both the amended and original ROD soil remedies can be implemented on a technical basis, although they are complicated by the presence of an on-site business utilizing the existing buildings and former lumberyard area. Both remedies will remediate surface and subsurface soil by excavation of contaminated soil using conventional excavation equipment and standard construction methods.

In order to complete the ROD remedy component for soil (ex-situ solidification/stabilization) it would have been necessary to designate a portion of the BB&S property as a CAMU, and thus be subject to long-term site management and potential long-term impacts to current and future on-site business operations. Although the planned excavation limits have been expanded the amended soil remedy will result in a short-term impact to any on-site business during remedial construction. Long-term impacts originating from the amended remedy, primarily involving the monitoring of groundwater contaminant levels and an annual certification ensuring that institutional and engineering controls are in place, will be minimal.

In terms of administrative concerns, these alternatives can be implemented and will require coordination and approval by Town of Southampton, Suffolk County agencies and utility companies as well as site occupants. An institutional control in the form of an environmental easement on the site will be imposed to preclude contact with remaining contaminated media on-site. There are no anticipated, specific problems associated with obtaining permits or approvals from the various agencies and other concerns.

For groundwater, both the amended remedy and the original ROD remedy can be implemented on a technical basis. Implementation of the ROD remedy would have been more complicated than the amended remedy due to on-site business operations. The materials and services necessary for these remedial alternatives are readily available. In terms of administrative concerns, these alternatives can be implemented through the required coordination and approval by numerous Town of Southampton, Suffolk County agencies and utility companies. For both remedies there are no anticipated problems from the various agencies associated with obtaining permits or approvals and imposing

institutional controls upon groundwater use at the site to comply with SCDHS use and development restrictions.

- 7. Cost-Effectiveness.** Capital costs and annual operation, maintenance and monitoring costs are estimated for each alternative and compared on a present worth basis. Although cost-effectiveness is the last balancing criterion evaluated, where two or more alternatives have met the requirements of the other criteria, it can be used as the basis for the final decision.

The original ROD provided an estimated present worth cost to construct and operate the on-site groundwater pump and treat remedial scenario at approximately \$3.7 million. Adjusting that cost for an estimated 4% per year inflation increase, the current present worth cost for the on-site remedial scenario is now estimated to be at least \$5.7 million. The on-site remedial scenario also would have not removed contaminants that are migrating further downgradient of the Site. Based on the lateral and vertical expanse of the plume downgradient of the Site, the cost to implement a combined on-site and off-site groundwater remedial scenario is estimated to be in the range of \$8 to \$10 million.

The cost estimate for the amended groundwater remedy associated with long term on and off-site monitoring of the attenuation of the contaminant plume is \$1.4 million. The SCWA public water line provides additional benefits and remedial options at no additional cost to the Department.

The cost estimate for the amended soil remedy associated with off-site disposal of hazardous soil into a permitted RCRA Subtitle C landfill and non-hazardous soil into a RCRA Subtitle D permitted landfill is \$7.6 million. On the other hand, the cost for construction and long-term on-site management for 30 years in a CAMU cell in accordance with the ROD is estimated at \$11.7 million.

**This final criterion is considered a modifying criterion and is considered after evaluating those above. It is focused upon after public comments on the proposed ROD amendment have been received.**

- 8. Community Acceptance.** Concerns of the community regarding the changes to the ROD have been evaluated. A responsiveness summary has been prepared that describes public comments received and the manner in which the Department has addressed the concerns raised (Appendix A).

## **5.0 SUMMARY OF ROD CHANGES**

The Department has amended the ROD for the BB&S Site. The changes include:

1. Based upon the elimination of the extraction and treatment component, a revision of soil SCOs for the protection of groundwater in accordance with Part 375. Implementation of this revision will result in a volume increase of on-site soil requiring remediation from 4,000 CY to 12,700 CY. In addition, the revision will result in a volume increase of off-site soil requiring remediation from 1,300 CY to an estimated 5,700 CY (Table 3).

2. The elimination of the groundwater extraction and treatment component. An existing public water supply will be offered to authorized homes and businesses as identified by the Department and the NYSDOH. The cost estimate for the amended groundwater remedy associated with long term on-site and off-site monitoring of the attenuation of the contaminant plume is \$1.4 million, an estimated savings of approximately \$6.6 million or more over a 30 year period from the ROD remedy (Table 4).
3. The revision of the remedial technology for impacted soil is based upon PDI data, revised soil SCOs, and cost savings. The amended soil remedy includes the off-site transportation, pre-treatment (as necessary) and disposal of hazardous and non-hazardous soil exceeding SCOs at an estimated cost of \$7.6 million, an estimated savings of at least \$4 million from the ROD remedy (Table 4).
4. The imposition of an institutional control at the on-site area of the site in the form of an environmental easement to limit the risks associated with the contaminated soil left on-site adjacent to and below the former CCA treatment area and the former drip pad area located along the western perimeter of the site. The amount of on-site soil contamination to remain in this area has been estimated at 14,000 CY.

The estimated present worth cost to carry out the amended remedy is \$9,000,000. The estimated present worth to complete the original remedy is \$21,700,000. The cost to construct the amended remedy is estimated to be \$6,700,000 and the estimated average annual cost for 30 years is \$70,000 (Table 4).

5. Development of a SMP.

The elements of the amended remedy are as follows:

1. A remedial design program to verify the components of the conceptual design and provide the details necessary for the construction, operation and maintenance and monitoring of the remedial program.
2. The offer to immediately fund and provide an AWS to authorized homes and businesses as identified by the Department 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 a hazardous waste into a RCRA Subtitle C landfill permitted to accept hazardous waste. Contaminated soil characterized as non-hazardous will 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 designed 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. All of 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 and 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 designed 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 soil 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 redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with Department 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 the NYSDOH and/or the SCDHS; and (d) require the site property owner to complete and submit to the Department a periodic certification. The property owner shall provide a periodic certification, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department 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 the Department 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.

## **6.0 HIGHLIGHTS OF COMMUNITY PARTICIPATION**

As part of the remedial program, a number of citizen participation activities were undertaken in an effort to inform and educate the public about environmental conditions at the BB&S Site. The following public participation activities were conducted for the site:



1. A repository for documents pertaining to the site was established at the Department headquarters in Stony Brook, New York, and also at the Westhampton Free Library, Incorporated Village of Westhampton Beach, New York.
2. A site mailing list was established which included nearby property owners, local political officials, local media and other interested parties.
3. In January 1996, a Fact Sheet announcing the start of the RI/FS and a public meeting was mailed to the site contact list.
4. In February 1996, a public meeting was held in Eastport, New York, concerning the work plan for the RI/FS.
5. In November 1996, a second Fact Sheet was mailed to the site contact list to summarize preliminary RI results and to announce a public meeting.
6. In December 1996, a second public meeting was held in Eastport, New York, to present preliminary RI results.
7. In September 1999, a Fact Sheet was sent to the site contact list announcing the release of the PRAP.
8. A public meeting was held on September 21, 1999, in Eastport, New York, to solicit comments on the PRAP.
9. In February 2000 a Responsiveness Summary was prepared as part of the final ROD and made available to the public, to address the comments received during the public comment period for the PRAP.
10. In April 2004, a Fact Sheet providing an update on the ongoing PDI was mailed to the site contact list.
11. In March 2008, a Fact Sheet announcing the start of the remedial design was mailed to the site contact list.
12. A Fact Sheet was mailed to all persons on the contact list on June 19, 2009 announcing the availability of the June 2009 proposed amendment to the ROD and the associated public meeting.
13. A public meeting was held on July 14, 2009 at the Incorporated Village of Westhampton Beach Office Meeting Room located at 165 Mill Road, Westhampton Beach.

A public comment period for the proposed amendment to the ROD was established, beginning on June 22, 2009 and originally scheduled to end on July 30, 2009. During the public meeting attendees requested additional time to receive, review, and comment on the PDI data gathered by the Department. On July 15, 2009 the Department announced in a

press release that the comment period was being extended an additional 30 days from July 30, 2009 to August 31, 2009. A Responsiveness Summary (Appendix A) was prepared and included as part of this document, to address the comments received during the public comment period for the proposed amendment to the ROD. A notice describing the Department's final decision was sent to all persons on the mailing list on October 30, 2009.

**TABLE 1**  
**Nature and Extent of Contamination**  
**1996-2008**

<b>ON-SITE SURFACE SOIL</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppm)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppm)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	1.21 - 298	13	96/162
	Total Chromium	2.20 - 695	30	70/162
	Hexavalent Chromium	ND - 17	1	9/30

<b>OFF-SITE SURFACE SOIL (DRAINAGE SWALE)</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppm)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppm)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	0.56 - 672	13	40/91
	Total Chromium	1.09 - 1180	30	31/91
	Hexavalent Chromium	ND - 41	1	11/12

<b>ON-SITE SUBSURFACE SOIL</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppm)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppm)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Volatile Organic Compounds (VOCs)</b>	Acetone	ND - 0.093	0.05	2/9
	Tetrachloroethene	ND - 0.019	1.3	0/9
<b>Inorganic Compounds</b>	Arsenic	ND - 1410	13	57/231
	Total Chromium	0.52 - 1300	30	37/231
	Hexavalent Chromium	ND - 35	1	4/54
	Copper	95.5 - 463	50	4/4

<b>OFF-SITE SUBSURFACE SOIL (DRAINAGE SWALE)</b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppm)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppm)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND - 439	13	55/140
	Total Chromium	0.92 - 771	30	53/140
	Hexavalent Chromium	2.20 - 5.5	1	2/2

**TABLE 1**  
**Nature and Extent of Contamination**  
**1996-2008**

<b>ON-SITE SHALLOW GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 478	25	6 of 11
	Total Chromium	ND to 771	50	8 of 11
	Hexavalent Chromium	ND to 760	50	6 of 11
	Copper	ND to 386	200	2 of 11
	Iron	ND to 35,200	300	7 of 11

<b>OFF-SITE SHALLOW GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 2.8	25	0 of 9
	Total Chromium	ND to 389	50	4 of 9
	Hexavalent Chromium	ND to 110	50	3 of 9
	Copper	ND to 40.8	200	0 of 9
	Iron	ND to 33,900	300	5 of 9

<b>ON-SITE INTERMEDIATE GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 236	25	1 of 2
	Total Chromium	ND to 978	50	2 of 2
	Hexavalent Chromium	ND to 11	50	0 of 2
	Copper	ND to 109	200	0 of 2
	Iron	5,460 to 42,100	300	2 of 2

**TABLE 1**  
**Nature and Extent of Contamination**  
**1996-2008**

<b>OFF-SITE INTERMEDIATE GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 11.1	25	0 of 6
	Total Chromium	ND to 677	50	3 of 6
	Hexavalent Chromium	ND to 700	50	2 of 6
	Copper	ND to 73.1	200	0 of 6
	Iron	ND to 93,200	300	5 of 6

<b>ON-SITE DEEP GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 3.6	25	0 of 1
	Total Chromium	ND to 23.2	50	0 of 1
	Hexavalent Chromium	ND to 90	50	1 of 1
	Copper	ND to 6.1	200	0 of 1
	Iron	ND to 5,300	300	1 of 1

<b>OFF-SITE DEEP GROUNDWATER<sup>c</sup></b>	<b>Contaminants of Concern</b>	<b>Concentration Range Detected (ppb)<sup>a</sup></b>	<b>SCG<sup>b</sup> (ppb)<sup>a</sup></b>	<b>Frequency of Exceeding SCG</b>
<b>Inorganic Compounds</b>	Arsenic	ND to 126	25	1 of 4
	Total Chromium	ND to 818	50	2 of 4
	Hexavalent Chromium	ND to 10	50	0 of 4
	Copper	ND to 923	200	1 of 4
	Iron	138 to 436,000	300	4 of 4

<sup>a</sup> ppb = parts per billion, which is equivalent to micrograms per liter, ug/L, in water;

ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

<sup>b</sup> SCG = standards, criteria, and guidance values. Established for UNRESTRICTED USE per 6 NYCRR Part 375.

<sup>c</sup> Shallow Groundwater Zone = water table to 70 feet bgs;

Intermediate Groundwater Zone = 70 feet bgs to 100 feet bgs;

Deep Groundwater Zone = 100 feet bgs to 130 feet bgs;

ND = non-detect

**TABLE 2**  
**Comparison of Soil Cleanup Objectives**

ON-SITE SOIL	Contaminant	*Original ROD SCO <sup>a</sup> (ppm) <sup>b</sup>	**ROD Amendment SCO <sup>a</sup> (ppm) <sup>b</sup>
<b>Inorganic Compounds</b>	Hexavalent Chromium	NS	19
	Trivalent Chromium	NS	NS
	Total Chromium	50	***50
	Arsenic	30	16

NS = Not Specified;

<sup>a</sup> SCO = soil cleanup objectives;

<sup>b</sup> ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

\* Established using Department Technical and Administrative Guidance Memorandum (TAGM) 4046, dated January 1994;

\*\* Established for the **PROTECTION OF GROUNDWATER** using NYCRR Part 375, dated December 14, 2006;

\*\*\* SCO established using TAGM 4046. SCO for Total Chromium is not specified in NYCRR Part 375.

OFF-SITE SOIL	Contaminant	*Original ROD SCO <sup>a</sup> (ppm) <sup>b</sup>	**ROD Amendment SCO <sup>a</sup> (ppm) <sup>b</sup>
<b>Inorganic Compounds</b>	Hexavalent Chromium	NS	1.0
	Trivalent Chromium	NS	30
	Total Chromium	50	30
	Arsenic	30	13

NS = Not Specified;

<sup>a</sup> SCO = soil cleanup objectives;

<sup>b</sup> ppm = parts per million, which is equivalent to milligrams per kilogram, mg/kg, in soil;

\* Established using Department Technical and Administrative Guidance Memorandum (TAGM) 4046, dated January 1994;

\*\* Established for **UNRESTRICTED USE** per 6 NYCRR Part 375, dated December 14, 2006.

**TABLE 3**  
**Comparison of Contaminated Soil Excavation Volume Estimates**

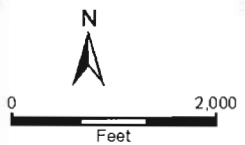
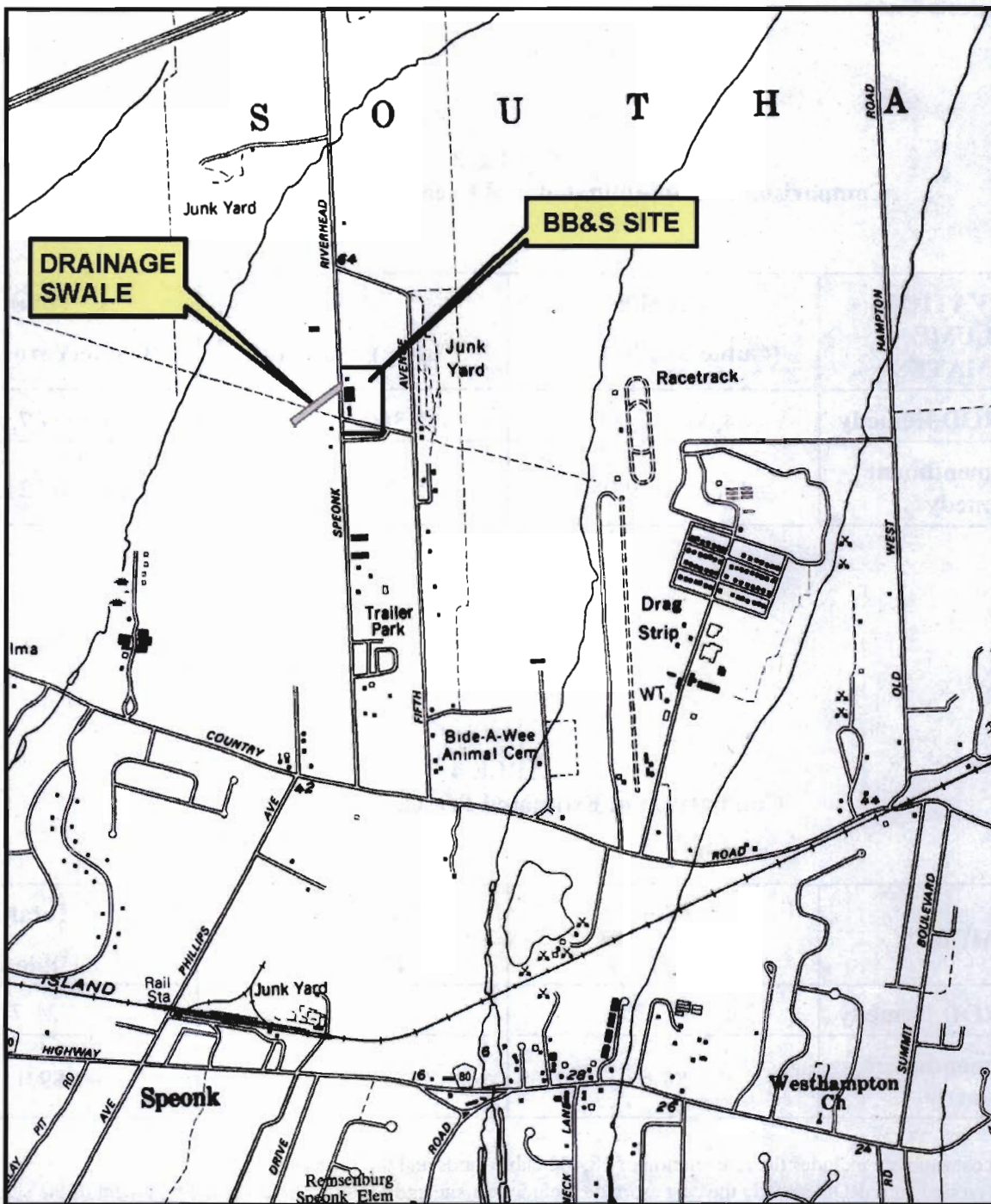
<b>EXCAVATION VOLUME ESTIMATES</b>	<b>On-Site (Cubic Yards/Tons)</b>	<b>Off-Site (Cubic Yards/Tons)</b>	<b>Total (Cubic Yards/Tons)</b>
<b>Original ROD Remedy</b>	4,000 / 6,000	1,300 / 1,950	5,300 / 7,950
<b>ROD Amendment Remedy</b>	12,700 / 19,050	5,700 / 8,550	18,400 / 27,600

**TABLE 4**  
**Comparison of Estimated Present Worth Costs**

<b>REMEDY</b>	<b>*Soil (Million)</b>	<b>Groundwater (Million)</b>	<b>Total (Million)</b>
<b>Original ROD Remedy</b>	\$11.7	**\$10.0	\$21.7
<b>ROD Amendment Remedy</b>	\$7.6	\$1.4	\$9.0

\* For soils the cost estimate includes the remediation of 18,400 cubic yards and long term site management;

\*\* For original groundwater ROD remedy the cost estimate includes on-site and off-site collection and treatment of the site contaminant plume as currently defined in addition to long term operation and maintenance of treatment system.



**FIGURE 1  
SITE LOCATION MAP  
BB&S TREATED LUMBER SITE  
NYSDEC SITE ID 1-52-123**

AECOM

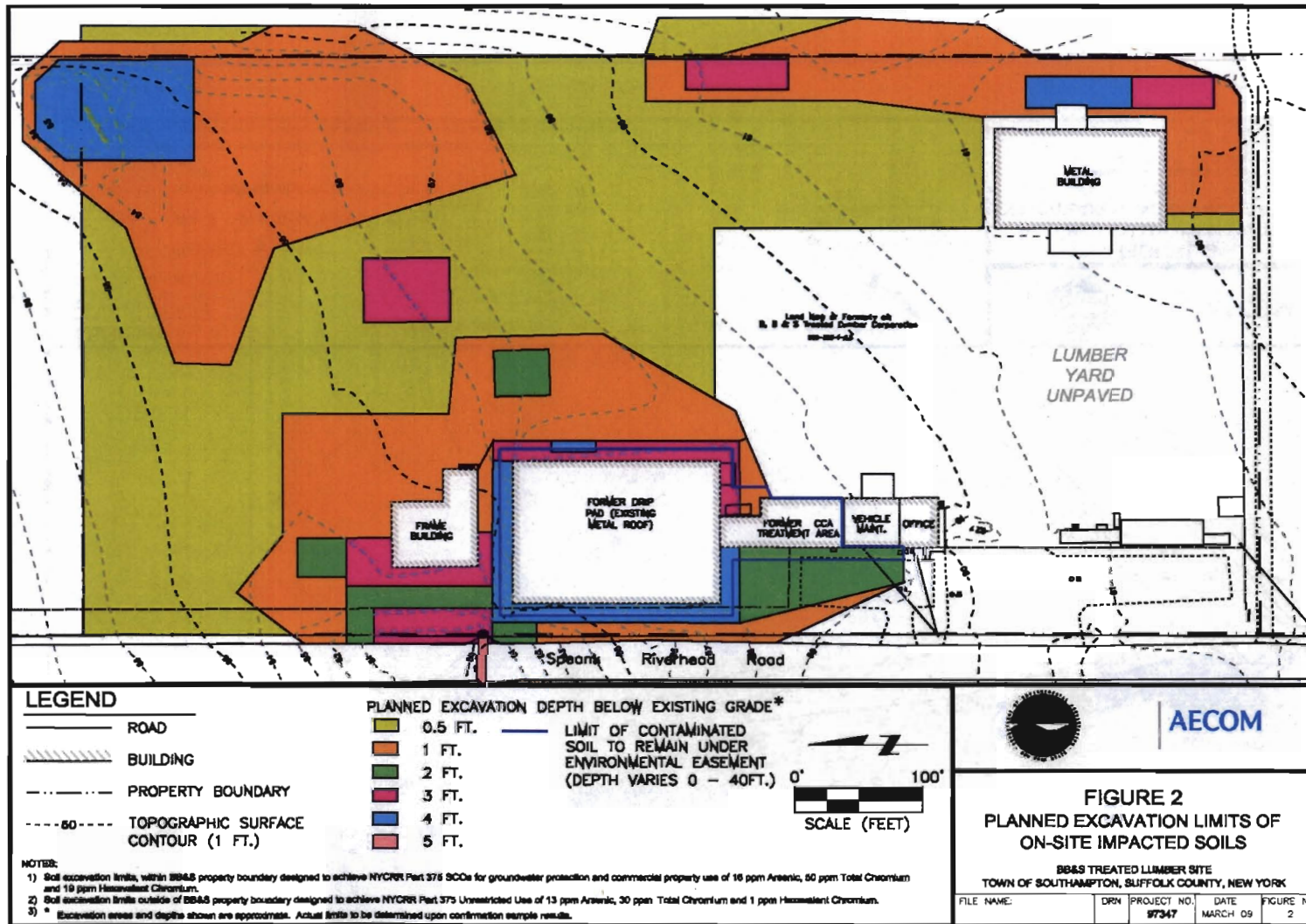
97347\_Site\_Location.mxd

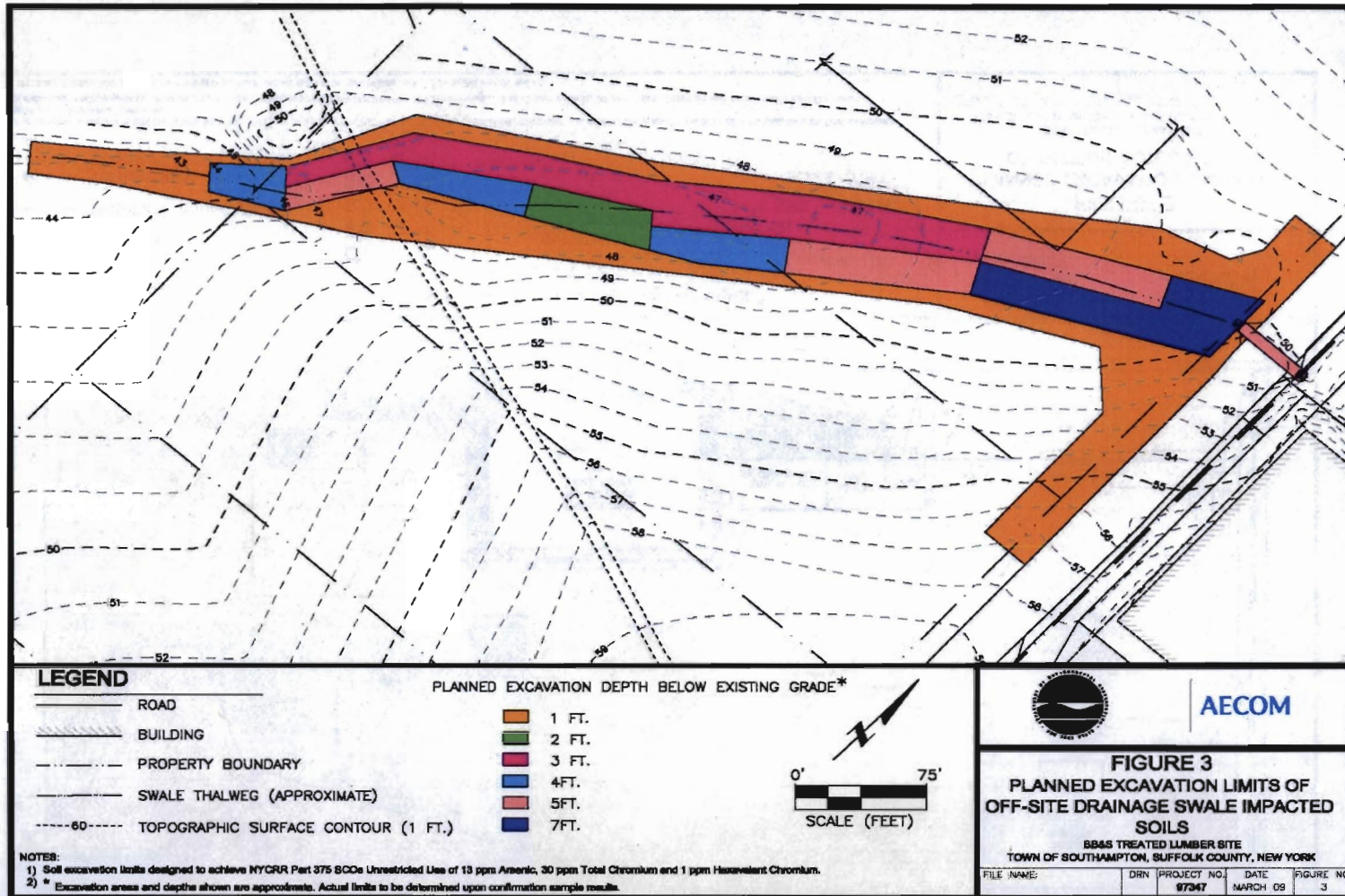
NOTE:  
STUDY AREA FOUND ON NYS 7.5 MIN.  
EASTPORT QUADRANGLE.

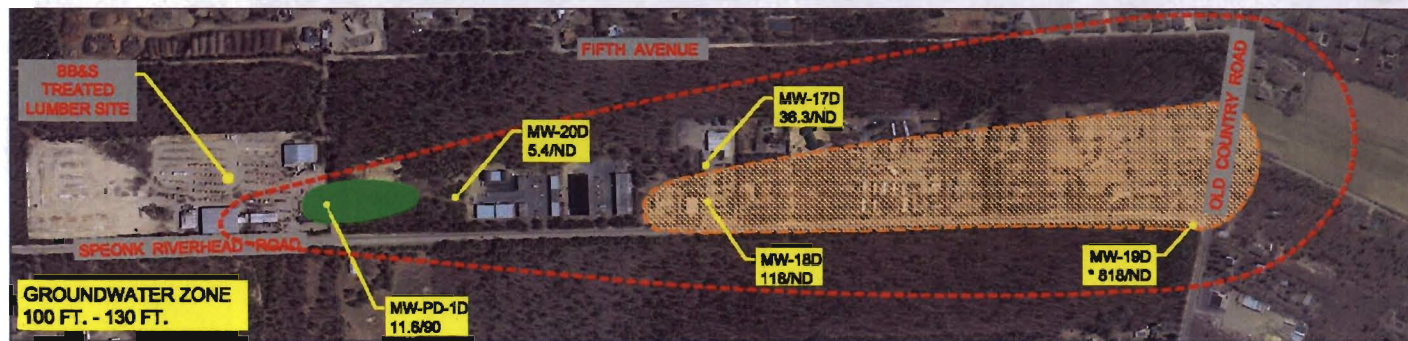
MARCH, 2009

FIGURE 1









MW-22  
134/11

Monitoring well location with reported Total Chromium / Hexavalent Chromium concentration (ppb) (June 2006)

Approximate Total Chromium Plume Limit > 60 ppb

Approximate Hexavalent Chromium Plume Limit > 50 ppb

Estimated Limit of Detectable Hexavalent Chromium

Note: Lines dashed where inferred

DATE	BY	REVISION

**AECOM**

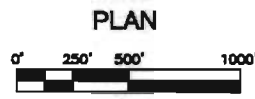
MARKY TERRY  
 400 WEST 140TH STREET, SUITE 100  
 LAYTON, UTAH 84040-1010  
 801.466.7000

**BB&S TREATED LUMBER SITE  
 NYDEC SITE NO. 1-02-123  
 SPEONK, NEW YORK  
 ESTIMATED CHROMIUM GROUNDWATER  
 PLUME LIMITS  
 JUNE 2006**

PROJECT BOUNTY DATE (M / Y)	REVISION
PROJECT ID	0240
FILE NUMBER	
DATE OF ISSUE	
SHEET NO.	4
DRAWING NO.	

FIGURE 4

**MAP SOURCE INFORMATION:**  
 Background Imagery from NYS Office of Cyber Security & Critical Infrastructure Coordination  
 Geographic Information Systems Clearinghouse, dated 2007.



\* : Total Chromium results possibly bias high due to sample turbidity.  
 Well retested in October 2006 with Total Chromium results = 42.1 ppb.

# APPENDIX A

## Responsiveness Summary

The image shows a large, heavily blurred and low-resolution scan of a table. The table is intended to be a Responsiveness Summary, but the text within it is completely illegible. The table structure is faintly visible, suggesting multiple columns and rows, but no specific data or headers can be discerned.

# RESPONSIVENESS SUMMARY

**BB&S Treated Lumber Corporation  
Town of Southampton  
Suffolk County, New York  
Site No. 1-52-123**

The Proposed Amendment to the Record of Decision (PAROD) for the BB&S Treated Lumber Corporation (BB&S) site, was prepared by the New York State Department of Environmental Conservation (the Department) in consultation with the New York State Department of Health (NYSDOH) and was issued to the document repositories on June 19, 2009. The PAROD outlined the amended remedial measure proposed for the contaminated soil and groundwater at the BB&S Treated Lumber Corporation site.

The release of the PAROD was announced by sending a notice to the public contact list, informing the public of the opportunity to comment on the proposed amendment to the ROD remedy.

A public meeting was held on Tuesday, July 14, 2009, which included a presentation of the original February 25, 2000 ROD remedy, the circumstances that have led to proposed changes in the ROD remedy, as well as a discussion of the proposed amendment to the ROD remedy. The meeting provided an opportunity for citizens to discuss their concerns, ask questions and comment on the proposed amendment to the ROD remedy. These comments have become part of the existing Administrative Record for this site. The public comment period was to have ended on July 30, 2009, however it was extended to August 31, 2009 at the request of the public.

This responsiveness summary responds to all questions and comments raised during the public comment period. The following are the comments received, with the Department's responses:

**COMMENT 1:** Will all new information gathered on this site be made available to the public? Where will it be summarized and published?

**RESPONSE 1:** Yes. Detailed information on past site investigations and the cleanup plan have been and will continue to be made available for your review at repositories previously established at the Department's Region 1 Office in Stony Brook, New York and at the Westhampton Free Library located in Westhampton Beach, New York. Also, site information can be found on the Department's web site at <http://www.dec.ny.gov/chemical/8431.html>.

**COMMENT 2:** Will the end of the comment period be over prior to public availability of the Pre-remedial Design Investigation (PDI) site data ?

**RESPONSE 2:** No. Per comments received by the Department at the July 14, 2009 public meeting the Department announced, in a press release on July 15, 2009, that the comment period was being extended an additional thirty (30) days from July 30, 2009 to August 31, 2009. The time extension was to provide the public sufficient time to receive and review the July 2009 Supplemental PDI Report.

**COMMENT 3:** Are the Soil Cleanup Objectives (SCOs) that have been developed for the protection of groundwater in 6 NYCRR Part 375, dated December 14, 2006 (Part 375) and used to determine if a property can be used for future development (be it residential, commercial, or industrial), based on a site-specific basis or are these general numbers used throughout the state?

**RESPONSE 3:** The SCOs are applicable statewide and do not account for many site specific considerations which could potentially result in higher SCO values. SCOs are set well below those levels that are known to cause health effects. Thus, soil concentrations that are higher than the SCOs are not necessarily a health concern. The degree of public health concern when a SCO is exceeded depends upon several factors, including (among others) the magnitude of exceedance, the accuracy of the exposure estimates, other sources of exposure to the chemical, and the strength and quality of the available toxicological information on the chemical.

**COMMENT 4:** Are the safety standards the same for Speonk as they are for Buffalo?

**RESPONSE 4:** If the commenter is asking if the goal of the program is the same in Speonk as in Buffalo, the answer is yes.

**COMMENT 5:** When excavation begins on the site, it seems that on a dry day, a lot of dust will be released into the air. How will the Department prevent this type of event?

**RESPONSE 5:** This is a concern that the Department and the NYSDOH are well aware of, and have published procedures to address fugitive dust during construction. As part of the requirements for a Health and Safety Plan (HASP) the remedial contractor will be required to develop and implement a Community Air Monitoring Program subject to Department and NYSDOH approval. As part of that program the Contractor is responsible for developing action levels for dust control. To protect on-site personnel and the neighboring community the Contractor's HASP will include provisions for suspending work and implementing mitigation measures based upon instrument monitoring results and observation. Moreover, the Department will have on-site inspectors during remedial activities to oversee and document critical activities such as movement of contaminated soil by the contractor.

**COMMENT 6:** Will the excavated soil be put in sealed containers prior to being trucked out?

**RESPONSE 6:** The remedial contractor will have the option of excavating and temporarily staging the soils prior to off-site disposal or placing the excavated soil directly into transport vehicles for immediate disposal in accordance with appropriate protocols. Soils may be temporarily staged in storage units or within lined and covered stockpiles in accordance with appropriate provisions set forth in the remedial action contract documents currently being developed by the Department.

**COMMENT 7:** I bought property about 10 years ago without being told about this contamination. There has been a lot of buying and selling of property in this area, and most people do not know about the contamination under the ground. Is there any method of alerting a potential buyer of contamination on or adjacent to the property? Are there any laws regulating this type of necessary disclosure?

**RESPONSE 7:** A Citizen Participation Program already has been established as required in Part 375, Subpart 375-1.10 to facilitate the remedial process and enable citizens to participate more fully in decisions that affect their health. The Department requires the provision of opportunities for citizen involvement and encourages consultation with the public early in that process before the Department forms or adopts final positions. A Citizen Participation Plan (CPP) was developed for this project and has been placed into the document repositories. The CPP includes a site contact list. Additionally parties can request to be added to the site contact list over time.

The commenter may seek legal counsel as to what obligations parties have to disclose information before selling property. Additionally, the New York State Department of State's webpage provides helpful information: see <http://www.dos.state.ny.us/lcns/legamd.htm>.

**COMMENT 8:** It seems that if the buyer of property on or adjacent to the site does not do his or her due diligence, they may become responsible for the cleanup. Is this true?

**RESPONSE 8:** In accordance with Part 375, Subpart 375-2.2.i a "Responsible Party" means any of the following, subject to the defenses, exemptions, and/or limitations set forth at Environmental Conservation Law (ECL) 27-1323:

- (1) Any person who currently owns or operates a site or any portion thereof;
- (2) Any person who owned or operated a site or any portion thereof at the time of disposal of the contaminant;
- (3) Any person who generated any contaminants disposed at a site;
- (4) Any person who transported any contaminants to a site selected by such person;
- (5) Any person who disposed of any contaminants at a site;
- (6) Any person who arranged for:
  - (i) the transportation of any contaminants to a site; or,
  - (ii) the disposal of any contaminants at a site; and
- (7) Any other person who is responsible according to the applicable principles of statutory or common-law liability pursuant to ECL 27-1313(4) and/or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).

**COMMENT 9:** The Department should be able to contact everyone in the area about the contamination in the community. Why were people not notified about this site?

**RESPONSE 9:** See the Response to Comment 7 above.

**COMMENT 10:** Why is a moratorium not placed on buying and selling properties affected by the site due to this contamination?

**RESPONSE 10:** The comment is beyond the scope of this decision document.

**COMMENT 11:** The only time I was given information on this site was through a letter that was dated June 16, 2009. Why was this the first time I heard about this site if it has been ongoing since the 1980s?

**RESPONSE 11:** See the Response to Comment 7 above.

**COMMENT 12:** The Department should use the Southampton Town government to find out how to contact property owners who are affected by the site and get P.O. Box addresses. The Town government must send out tax collection information to everyone, so they should have all addresses in their system.

**RESPONSE 12:** See the Response to Comment 7 above. Since the July 14, 2009 public meeting the Department has reached out to the Speonk-Remsenburg Civic Association (SRCA) for assistance in updating the current site contact list.

**COMMENT 13:** The SRCA sends out their mailings to all the P.O. boxes in the Remsenburg-Speonk district. You can contact us to further delineate your mailing list.

**RESPONSE 13:** The Department appreciates the offer for assistance. Also, see the Response to Comments 7 and 12 above.

**COMMENT 14:** On Figure 2 shown in the PowerPoint presentation during the July 14, 2009 public meeting (the figure showing levels of soil contamination on-site requiring remediation by color coding), what is the large white area adjacent to the treatment building? Why is the area white?

**RESPONSE 14:** Figure 2 uses a variable color code overlay on a white background base map to depict the planned lateral and vertical limits of excavation on the lumberyard property. The white area depicts the portion of the site where the soil was determined to comply with site SCOs and not subject to soil remediation.

**COMMENT 15:** Some residents would like to thoroughly review the PDI report document prior to submitting comments. Will it be available soon so we can comment on it?

**RESPONSE 15:** See the Response to Comment 2 above.

**COMMENT 16:** When referring to the cost tables of the ROD, and when comparing the original ROD to the amended ROD, why is the cost of soil removal less for the amended ROD, even though you are removing more soil now?

**RESPONSE 16:** The cost estimate for the amended soil remedy does not involve construction and long term on-site management of a Corrective Action Management Unit (CAMU) cell. The \$7.6 million cost estimate for the amended soil remedy is associated with off-site disposal of hazardous soil to a Resource Conservation and Recovery Act (RCRA) Subtitle C permitted facility and non-hazardous soil to a permitted landfill. On the other hand, the cost for construction and long-term on-site management for 30 years in a CAMU cell in accordance with the ROD is currently estimated at \$11.7 million.

**COMMENT 17:** The Department stated during the public meeting that they are in the process of connecting eight (8) houses to the existing public water line running up Speonk-Riverhead Road, Fifth Avenue and along Old Country Road. What about future development? Is there any control over off-site groundwater contamination? How are people notified about contaminated groundwater under their property prior to purchase? This should not be a buyer beware situations. People should be notified of what they are buying.



**RESPONSE 17:** All applications for future development within the Town of Southampton are to be reviewed by the Town of Southampton Planning Board. If the Planning Board identifies the Department as an Involved Agency we will be provided an opportunity to review and provide comment on the proposed action as it pertains to the BB&S Site. Also see Response to Comment 7 above.

**COMMENT 18:** Are there any restrictions of groundwater use on properties over the BB&S plume? Residents and potential property buyers should be notified of any current or future restrictions.

**RESPONSE 18:** In accordance with the amended remedy institutional controls will be imposed upon groundwater use on-site. These controls will not be inconsistent with NYSDOH and the Suffolk County Department of Health Services (SCDHS) use and development restrictions.

A public water supply is now available to potentially impacted properties located downgradient of the BB&S Site. Also, as part of the amended remedy, the Department installed and sampled additional off-site groundwater wells in October 2009 to monitor plume attenuation. The new off-site wells include sentinel groundwater monitoring wells between the contaminant plume and downgradient water supply wells. Long-term monitoring of a select number of groundwater wells and downgradient private water supply wells will continue to evaluate plume migration. Also see the Response to Comment 7 above.

**COMMENT 19:** The problem in these types of contaminated sites seems to be a lack of coordination between Town Hall and Suffolk County, who seem to be making decisions without coordination with the Department. Many development projects and other construction projects are being proposed and approved without the Department's input. The Department should coordinate with Southampton and Suffolk County in making decisions over contaminated sites.

**RESPONSE 19:** The law requires the municipality to contact the Department and obtain our approval prior to approving an action on a site impacted by an environmental easement. Additionally, it is recommended that the municipality contact the Department for adjacent properties. Also see the Response to Comment 17 above.

**COMMENT 20:** Is the Department testing groundwater for volatile organic compounds (VOCs) on all groundwater monitoring wells?

**RESPONSE 20:** Yes, all monitoring wells associated with the remedial program at the BB&S Site are also being tested for VOCs in addition to site-related inorganic contaminants (metals).

**COMMENT 21:** Is the estimated rate of groundwater plume migration (1 foot/day), the same for all contaminated groundwater elevations currently being monitored (70 feet below ground surface (bgs), 100 feet bgs, and 130 feet bgs)?

**RESPONSE 21:** There is some variability in the horizontal hydraulic conductivity between various zones within the Upper Glacial Aquifer due to varying sediment grain size. However, the rate of horizontal groundwater migration is anticipated to be relatively similar within the zones because the zones are hydraulically connected to each other and to the same discharge area.

**COMMENT 22:** What is the rate of horizontal migration of groundwater contamination?

**RESPONSE 22:** Due to a relatively low retardation factor for the BB&S site contaminants and groundwater, the horizontal rate of groundwater contaminant migration in the Upper Glacial Aquifer is estimated to be similar or only slightly less than the groundwater migration rate of approximately 1 foot per day.

**COMMENT 23:** I heard that there was once a BB&S retail store along Montauk Highway years ago. Is there any chance of contamination from that satellite operation?

**RESPONSE 23:** The Department is not aware of any CCA wood treatment activities that occurred at that location. A retail operation would not be likely to cause environmental impacts similar to the actual process that occurred and was documented at the BB&S site.

**COMMENT 24:** In order to ensure accurate mailing addresses for property owners, the Department should contact the voter registration agency. No mailing list is more comprehensive than them.

**RESPONSE 24:** See Responses to Comments 7 and 12 above.

**COMMENT 25:** It was stated during the public presentation that approximately 20,000 cubic yards (CY) of contaminated soil would be excavated and disposed of off-site as part of the amended remedy. What type of material is being put back to fill in the site? Where is the material coming from?

**RESPONSE 25:** The excavated material will be replaced with material exhibiting similar geotechnical and physical properties. As part of technical specifications being developed for the remedial action the contractor will be required to obtain certification from the backfill suppliers that all fill materials to be supplied for use on this project are clean (meet analytical criteria specified). The Department shall utilize Part 375 as the basis for acceptance of the fill materials. Certification must be received from the contractor and approved by the Department prior to delivery and placement of specified fill materials.

**COMMENT 26:** The SCDHS wishes to inform anyone who has a private well that has not been tested to contact them for testing.

**RESPONSE 26:** Comment noted.

**COMMENT 27:** It was mentioned that there is contamination existing at depths of 40 feet bgs. Is this contamination in groundwater or soil? Where is the deepest soil contamination?

**RESPONSE 27:** Groundwater contamination has been detected at depths of approximately 130 feet bgs. On the other hand, deep soil samples collected on-site during the PDI beneath the former CCA treatment building exhibited elevated concentrations of arsenic at 23 feet bgs (233 ppm) to 39 feet bgs (47.1 ppm).

**COMMENT 28:** Will the building that has contamination under it be covered under an environmental easement? Are all the other areas apart from the standing building structure being remediated to Part 375 SCOs?

**RESPONSE 28:** Yes. The on-site area with the most widespread impacted soil surrounds the former CCA treatment building and concrete drip pad. Impacted soil was detected up to a depth of 5 feet below grade near most of the perimeter of these structures. Since deep excavation adjacent to the buildings has the potential to cause structural damage, the estimated removal volume assumes that no more than one foot of material will be excavated from within four feet of the buildings. Contaminated soil remaining below this depth exceeding the SCOs will be demarcated with a visual barrier (e.g., geotextile fabric), and then capped with an asphalt and/or geomembrane material as an apron around the buildings to prevent precipitation/runoff from being able to infiltrate through the residual impacted soil. The amount of on-site soil contamination to remain in these areas for future site management has been estimated at 14,000 CY. All other areas on-site exceeding the Part 375 groundwater protection SCOs for arsenic and hexavalent chromium and the TAGM 4046 SCO for total chromium will be remediated. Also see Response to Comment 18 above.

**COMMENT 29:** Will there be an environmental easement on-site for the restricted use of groundwater as a potable source of water? Is this restriction limited to on-site use?

**RESPONSE 29:** The amended remedy includes the imposition of an institutional control on-site in the form of an environmental easement that will (a) require compliance with the approved site management plan; (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 the NYSDOH and/or the SCDHS; and (d) require the site property owner to complete and submit to the Department a periodic certification. The property owner shall provide a periodic certification, prepared and submitted by a professional engineer or such other expert acceptable to the Department, until the Department 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 the Department 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. This restriction is limited to the on-site groundwater. Also see Response to Comment 18 above.

**COMMENT 30:** It was my understanding that there was one monitoring well on the site that was contaminated and another right next to it that was not. How did that happen? How do groundwater monitoring wells work?

**RESPONSE 30:** Without knowing which monitoring wells are being specifically referred to, in general contaminant concentrations detected within monitoring wells are dependent upon location of the monitoring well and the depth of monitoring well in relation to the source of the contamination. For instance if a monitoring well is installed upgradient of the suspected source area you would expect the concentrations of contaminants to be very low or non-detect. On the other hand, monitoring wells installed downgradient and in the path of the groundwater contaminant plume would expect to see higher levels of contaminant concentrations. Similarly, a

shallow groundwater monitoring well may detect contamination before a deeper groundwater monitoring well since it takes time for the contaminant to migrate vertically downward.

A monitoring well is an excavation or structure created in the ground by digging, driving, boring or drilling to access groundwater in underground aquifers. Monitoring wells are often small diameter wells (1 inch or 2 inches) used to monitor the water surface elevation or sample the groundwater for chemical constituents. Wells can vary greatly in depth, water volume and water quality. Monitoring wells can also be completed at multiple levels, allowing discrete samples or measurements to be made at different vertical elevations at the same map location.

**COMMENT 31:** When it rains, is groundwater contamination affected? Does the contamination get pushed to lower elevations in the groundwater table?

**RESPONSE 31:** Where contaminants are present on the BB&S Site without impervious surface cover, infiltrating rainwater can leach contaminants downward to the water table where they begin to migrate downgradient. When the remediation is completed, contaminated soil above the water table will be removed or capped to prevent future leaching to the aquifer. Downgradient of the site, where infiltrating groundwater does not contact or leach contaminants in the unsaturated zone, no additional impact to groundwater occurs. The addition of unimpacted groundwater into the aquifer can act to dilute groundwater contaminant levels in the upper portions of the aquifer.

**COMMENT 32:** Is the intent of the removal of the contaminated soil to prevent further groundwater contamination?

**RESPONSE 32:** Yes, that is one of the remedial goals. The overall remedial goal is to meet all New York State Standards, Criteria, and Guidance (SCGs) and be protective of human health and the environment. At a minimum, the amended remedy will eliminate or mitigate all significant threats to public health and/or the environment presented by the hazardous waste disposed at the site through the proper application of scientific and engineering principles.

**COMMENT 33:** How many trucks will be necessary to remove the contaminated soil? How long will the operation take?

**RESPONSE 33:** The total estimated weight of contaminated soil to be trucked off-site is estimated at about 30,000 tons. This will require an estimated 1,250 truck loads. It is expected that the complete restoration project will take between 6 months and 1 year to complete, although the length of time to remove the contaminated soil will be less than that and anticipated to last 3 to 6 months.

**COMMENT 34:** This area already has issues with truck traffic due to several other construction and demolition sites in the general area and no direct access to Sunrise Highway. How will this be addressed?

**RESPONSE 34:** The remedial contractor will be required to develop and implement a Transportation Plan subject to Department approval before implementation. As part of that plan the contractor is responsible for determining the type and number of vehicles to be used during remedial activities, developing appropriate travel routes, and obtaining any required federal, state, and local transportation permits.

**COMMENT 35:** Was any Gardiner's Clay found in the deep soil borings detailed as part of past and present BB&S site investigations?

**RESPONSE 35:** No, not to date.

**COMMENT 36:** The main building is where the treatment of the wood took place. The contamination probably went into the wells and then into the soil. Is that correct? Why is it not possible to demolish the building now to excavate the contaminated soil underneath it?

**RESPONSE 36:** According to historic site information gathered by the Department, releases of CCA to groundwater are believed to have occurred through leakage from the collection sumps and through malfunction of an on-site water supply well valve. Spills originating from the concrete pad most likely account for soil contamination noted in the vicinity of the metal and frame buildings and for contamination found in the on-site drainage ditch.

The Department does not typically demolish structurally sound buildings, particularly if they are currently in use. The feasibility of demolishing any of the site buildings will be evaluated during site management.

**COMMENT 37:** Does bankruptcy protect BB&S from paying for the cleanup?

**RESPONSE 37:** The Department's approach to bankruptcy issues is beyond the scope of this decision document. As a general matter the Department approaches bankruptcy issues on a case by case basis in light of the specific facts involved.

**COMMENT 38:** Are attempts to reach out to the public focused only on those in the immediate area, or do you attempt to reach a larger group of people?

**RESPONSE 38:** See Responses to Comments 7 and 12 above.

**COMMENT 39:** Is the Department going to go after the identified responsible parties to recover cleanup costs? What happens next in paying for the cleanup?

**RESPONSE 39:** Yes. Responsible parties are liable for monies expended by the State in taking response actions at sites where hazardous substances have been released, including investigative, planning, removal, and remedial work. Also see Response to Comment 8 above.

**COMMENT 40:** There was mention during the public meeting that there was one home situated downgradient and situated along Fifth Avenue that had a detection of a site related contaminant in their private water supply well below maximum contaminant levels (MCLs) as established by the NYSDOH. What happens to that property owner? What is their remedy? Would the best answer be that the entire Town be connected to public water supply due to the vast number of contaminated groundwater plumes, or do we have to wait until the residents health is affected before something is done? It seems like there is nothing but groundwater plumes in this area. Can all of these separate sites be looked at as a whole when discussing hookup to public water?

**RESPONSE 40:** In accordance with the amended remedy the Department has offered to fund and provide an alternate water supply (AWS) to that particular home. The offer includes a connection to the existing public water supply. Construction associated with that particular connection has been initiated and is expected to be completed in December 2009 since it also involves an extension to the existing water main.

The quality of drinking water supplies is regulated by the federal Safe Drinking Water Act and the New York State Sanitary Code. The Department is responsible for responding to releases of contamination into the environment which could impact the quality of drinking water supplies. When individual water supplies become contaminated, the Department in consultation with the NYSDOH may direct or take emergency actions to provide a temporary or permanent AWS.

In October 2009 the Department installed and sampled additional off-site groundwater wells to monitor plume migration and attenuation in relation to this site. The new off-site wells include sentinel groundwater monitoring wells between the contaminant plume and known downgradient private water supply wells. Based upon the data that is generated from future sampling of these wells the Department and NYSDOH will determine if the provision of an AWS is warranted on a case by case basis.

**COMMENT 41:** Is the Department investigating all four plumes in the Speonk area?

**RESPONSE 41:** The Department is aware of two plumes in the vicinity of the BB&S Site. Specifically, the Department is investigating the groundwater plumes associated with the BB&S site (Site No. 1-52-123) and the Speonk Groundwater Plume site (Site No. 1-52-185) in the Speonk area.

**COMMENT 42:** Ideally, the current cleanup plan is going to work and the contamination will be taken care of. Following the immediate cleanup plan, will there be ongoing monitoring to make sure everything is clean? What happens if some of the monitoring wells get unexpected hits? What is Department's procedure if this happens?

**RESPONSE 42:** A site management plan (SMP) will be developed since the amended remedy results in contamination above unrestricted levels remaining on-site. The SMP will include the following controls: (a) address residual contaminated soil 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 redevelopment. The plan will require soil characterization and, where applicable, disposal/reuse in accordance with Department 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. If the concentrations in the monitoring wells increase, the Department will evaluate what, if any, additional actions are required. Also see response to Comment 40 above.

**COMMENT 43:** I am concerned that since it took so long for us to get to this point, that if there is still a problem in the future, what is the Department's plan to deal with it in a timely manner? Will it be a new project and will we have to go through this entire process again from the start, or can the issue be addressed immediately?

**RESPONSE 43:** It is the objective of the Department to address any unexpected delays to the tentative project schedule in a timely manner. The Department anticipates completing remedial design of the amended remedy in the Fall 2009. Following public advertisement of the remedial construction contract documents the project is anticipated to be awarded by the Department in the Spring 2010 pending the availability of state funding. Remedial construction activities are expected to continue for approximately one year.

**COMMENT 44:** Is it possible for the public to see and comment on the SMP when it is developed?

**RESPONSE 44:** The SMP will be developed with input from the NYSDOH, Town of Southampton, and Suffolk County officials. A copy of the SMP will be made available to the public at the document repositories identified in the amended ROD. The public will be notified of its' availability through the issuance of a project fact sheet.

**COMMENT 45:** I heard that the soil, after being removed, would be made into concrete. Couldn't we excavate the soil, mix it with cement on-site in order to stabilize the contamination and reduce dust, and then haul it away? I am concerned that the dust will migrate to my property, affecting my garden and health.

**RESPONSE 45:** Any pretreatment of the soil prior to landfilling is planned to occur off-site. The potential for dust emissions at the site from stabilizing soil would be at least as great as that for trucking the soil off-site.

**COMMENT 46:** When it comes to complaining about on-site remediation work that may not be up to par, I am not sure about calling in about the potential violations because I do not want to call attention to the contamination. I am torn between my property investment and the public health.

**RESPONSE 46:** The public is encouraged to contact the Department with any comments or concerns that they may have during implementation of the amended remedy. The Department will have a project trailer and an on-site inspector during all major remedial activities to oversee and document critical activities.

**COMMENT 47:** Is the groundwater contamination too far gone to be cleaned? Do we know how far the groundwater contamination goes? Why can't we clean the water now?

**RESPONSE 47:** The Pre-Design Investigation has determined that the contaminant plume has migrated downgradient of the site at least as far as Old Country Road to the south and has migrated vertically to depths of 130 feet or more bgs. Based upon the current lateral and vertical extent of contamination it is no longer feasible to collect and treat groundwater in accordance with the original ROD remedy.

Both the amended remedy and the original remedy for groundwater will result in an untreated portion of the plume. However, under both scenarios, protection of public health will be achieved through monitoring and the provision of an AWS to authorized homes and businesses as identified by the Department and the NYSDOH. The amended remedy will be protective of

the environment in that the site groundwater contamination has recently been determined to be attenuating. In addition, there are no surface water bodies, fish, wildlife, or vegetation currently in danger of being affected by the groundwater.

The original ROD provided an estimated present worth cost to construct and operate the on-site groundwater pump and treat remedial scenario at approximately \$3.7 million. Adjusting that cost for an estimated 4% per year inflation increase, the current present worth cost for the on-site remedial scenario is now estimated to be at least \$5.7 million. The on-site remedial scenario also would not have removed contaminants that are migrating further downgradient of the Site. Based on the lateral and vertical expanse of the plume downgradient of the Site, the cost to implement a combined on-site and off-site groundwater remedial scenario is estimated to be in the range of \$8 to \$10 million and is no longer feasible. The cost estimate for the amended groundwater remedy associated with long term on and off-site monitoring of the attenuation of the contaminant plume is \$1.4 million. The SCWA public water line has provided additional benefits and remedial options.

**COMMENT 48:** Will the Department be testing all clean fill that is coming in to backfill the site following excavation activities? Will the public be able to see the testing records and reports stating it is clean? In the past there have been times when people provided material that was not what it claimed to be so we are concerned.

**RESPONSE 48:** See the Responses to Comments 1 and 25 above. Also, testing records and reports associated with the backfill will be made available upon request during implementation of remedial activities and as part of a Final Engineering Report (FER) following completion of remedial activities. A copy of the FER will be made available to the public at the document repositories identified in the amended ROD. The public will be notified of its' availability through the issuance of a project fact sheet.

**COMMENT 49:** Does the Department regulate all waste coming in to all sites? Does it include West Hampton Mining Aggregates? There are about three or four sites up Speonk-Riverhead Road that dump fill. How do we know that these facilities are safe?

**RESPONSE 49:** Typically mining business operations require a state permit for operation. It is recommended that the Department's Region 1 Permit Administrator located in Stony Brook at (631) 444-0365 be contacted to obtain any information regarding those business operations.

**COMMENT 50:** It seems that the longer we wait to take action at a site, the more negative impacts there are due to groundwater plumes. What can we learn from our experience with the Speonk Groundwater Plume? What new methods can be used to prevent this from happening again? We need to do it better and faster. We don't want to come back five years from now and find out it is too late to do anything again. What can we do? What are the lessons learned?

**RESPONSE 50:** Comment noted. The Department has addressed this site pursuant to all applicable laws and regulations. Between 2000 through 2007, remedial design and construction activities were delayed at this site primarily due to a breakdown in negotiations for access to adjacent lands required to implement the original ROD groundwater extraction and treat remedy. Following issuance of the ROD in 2000, the Department and the NYSOAG initiated negotiations



with a property owner located south of BB&S Site in order to obtain access associated with the testing of existing groundwater recovery wells previously installed by BB&S and the installation of new groundwater recovery wells required by the ROD. The negotiations were unsuccessful causing the Department to evaluate alternate remedial alternatives for the groundwater and prolonging completion of remedial design activities.

**COMMENT 51:** How can we alert people to these types of sites and notify them about the concerns they should have?

**RESPONSE 51:** See Responses to Comments 1, 7 and 12 above.

**COMMENT 52:** The public comment period is not long enough since the public cannot see the necessary data to comment on.

**RESPONSE 52:** See response to Comment 2 above.

**COMMENT 53:** Will the extension of the comment period delay the hookup to public water supply?

**RESPONSE 53:** No. The connections to the public water supply have already been initiated. Specifically, all homes and businesses identified for connection along Speonk-Riverhead Road have been completed. The one home identified for connection on Fifth Avenue has been initiated and is expected to be completed in December 2009 since it also involves an extension to the existing water main.

**COMMENT 54:** How will the public be notified if the comment period is extended? Could you contact those who have attended the meetings on this site using our contact information on the sign in sheets (including e-mail and physical addresses)?

**RESPONSE 54:** See response to Comment 2 above. Also, on July 15, 2009 the Department announced in a press release that the comment period was being extended an additional thirty (30) days from July 30, 2009 to August 31, 2009. The press release was also posted on the Department's public web site and sent to persons whom provided their e-mail address at the July 14, 2009 public meeting.

**Robert J. Mozer (CPG) and Suzanne T. Collins (President) representing the Speonk Remsenburg Civic Association, Inc. (SRCA) jointly submitted a letter (dated August 29, 2009) which included the following comments:**

**COMMENT 55:** The SRCA would like to see the proposed remedy, with some appropriate modifications, implemented as quickly as possible such that further migration of impacted soil can be eliminated and exposures to site-related contaminated soil and groundwater can be controlled.

**RESPONSE 55:** Agreed. See response to Comment 43 above.

**COMMENT 56:** We strongly urge the Department to reach out proactively to the SCDHS and the Town of Southampton prior to and during the remedial process as these agencies should be made aware of certain concerns.

**RESPONSE 56:** Comment noted. The Department has been working with the SCDHS and the Suffolk County Water Authority during the PDI and remedial design for this site, and is committed to continue to do so. Town of Southampton officials have been made part of the Department's existing site contact list and received and will continue to receive site related mailings from the Department.

**COMMENT 57:** It has recently come to our attention that the SCDHS Groundwater Investigation Unit and their vital community service program is in jeopardy of being eliminated. We strongly urge you to utilize their services and find a way to reimburse them for their efforts.

**RESPONSE 57:** This comment is beyond the scope of this decision document.

**COMMENT 58:** The Town of Southampton is responsible for the maintenance of the Speonk-Riverhead Road, which bisects and is part of the area of impacted soil; a road-paving project that is likely to disturb this soil is planned for 2009. Furthermore, the Town is responsible for reviewing/approving subdivisions and construction projects in the affected area, portions of which are undergoing active development apparently without regard to the environmental impacts from BB&S. During this approval process, restrictions can be imposed that would further reduce potential exposure to site-related contaminants. Frankly, these agencies are in a better position to address these concerns than the Department. Further, we are very concerned about protecting residents in homes that may be developed over the plume in the future.

**RESPONSE 58:** See Response to Comment 19 above.

**COMMENT 59:** The amount of soil proposed to be removed and disposed offsite will require a considerable number of trucks to traverse our community during the removal. A comparable number of trucks would be required to import backfill for the excavation areas. The Department must confirm that a mandatory truck route will be established that does not pass through residential areas. The Department must also confirm that appropriate measures will be in place (truck wash, covers, dust monitoring and control measures, etc.) to ensure that our community is not impacted by fugitive dust from either the excavation areas or the trucks.

**RESPONSE 59:** See Responses to Comments 33 and 34 above.

**COMMENT 60:** Drawing 2A of the July 2009 Supplemental PDI Report, which shows the onsite soil removal areas, appears to include soil removal in large areas that do not exceed applicable Department guidance (e.g. locations SP-32-98, SBPD-153, SP-29-98, SBPD-17, SP-21-98, SP-15-98, SBPD-151, SBPD-35, SP-16-98, SBPD-29, SBPD-30, and others). It is not clear why removal of this soil is required. Removal of soil that already meets applicable guidance does not make sense and will increase both project costs and impacts on our community. Please explain why removal in these areas is needed.

**RESPONSE 60:** The soil excavation limits depicted include the few samples identified in the comment that did not exhibit contaminant levels in excess of the SCOs. The reason for this is that based on the nature of contaminants and the means by which the contaminants were dispersed at the lumber yard, the distribution of contaminants in shallow soil across the lumber yard is not uniform. It was not feasible to collect a sufficient number of remedial investigation/PDI sample points to justify omitting the relatively small areas where contaminant concentrations in soil may comply with the SCOs, without leaving some soil behind that exceed the SCOs. This condition was more pronounced with the Part 375 groundwater protection levels. In summary, the Department believes the proposed expanded excavation limits provides a better, conservative remedial design approach for the site.

**COMMENT 61:** Soil at off-site location SP-25-98 (northeast of site) does not meet applicable guidance; however, no removal is planned according to Drawing 2A within the July 2009 Supplemental PDI Report. Removal of all off-site soil that does not meet applicable guidance must be performed.

**RESPONSE 61:** The Department concurs that sample result for location SP-25-98 exceeds the SCO for the site. The location was inadvertently omitted when the excavation limits were expanded to meet the Part 375 Unrestricted Use SCO for off-site properties (sample result complied with the original ROD). Drawing 2A of the July 2009 Supplemental PDI Report and Figure 2 within this Amended Record of Decision have been modified accordingly to show the planned excavation of soil from this sample location.

**COMMENT 62:** Soil at off-site locations along both the east and west sides of the Speonk-Riverhead Road is impacted with chromium and/or arsenic and is targeted for removal. These roadsides are public property maintained by the Town of Southampton. Furthermore, the Department should be aware that the Town has advised the SRCA that it plans to repave Speonk-Riverhead Road in 2009, including installation of bike lanes. This Town road work will involve contacting, grading, and/or removal of soil along both roadsides by Town and/or contractor personnel, and will most likely disturb the impacted soil targeted for removal. Furthermore, paving personnel may come into contact with this contaminated soil during the course of their work. The Department should immediately advise the Town of this condition in the form of a site HASP such that appropriate personal protective measures can be implemented for the workers and the soil targeted for removal may be properly managed during this work.

**RESPONSE 62:** The Department had not been notified by the Town of Southampton regarding proposed road work along Speonk-Riverhead Road in the vicinity of the site. However, based upon comments received, the Department contacted the Town of Southampton to discuss the scope and schedule to perform the road work in more detail. According to the highway superintendent, the Town of Southampton has not started paving yet but plans to later in the Fall 2009. Those plans will be reviewed by the Department to evaluate any potential concerns.

**COMMENT 63:** The Department should advise the Town of Southampton that the planned remediation will include excavation of a seven-foot wide five-foot-deep trench across the Speonk-Riverhead road to remove impacted materials associated with the drainage pipe.

**RESPONSE 63:** See Response to Comment 62 above. Additionally, the selected remedial contractor will be required to work with the Town of Southampton for the culvert replacement work in the area of the site. A copy of the remedial action contract documents, including the technical specifications and contract drawings associated with this work, will be provided to the Town of Southampton once they have been finalized by the project engineer.

**COMMENT 64:** Based upon review of figures provided by the Department within the July 2009 Supplemental PDI Report it appears that soil on five tax lots for a distance of approximately 600 feet to the west of the Speonk-Riverhead Road is impacted with arsenic and/or chromium in excess of applicable guidance and is targeted for removal. As shown on Drawing 2B and as observed by SRCA personnel, the impacted soil on at least one of these lots has already been disturbed by construction activities conducted in 2008. At least one additional lot is posted as being for sale and a large subdivision is planned nearby. The Department should contact the owners of these properties to advise them of the presence of impacted soil such the owners may be aware of this condition and the need for no further disturbance until the impacted soils are remediated. The Town of Southampton, which issues building permits, should also be made aware of these conditions such that appropriate measures may be taken in the event that the owner of an affected lot proposes land clearing or construction

**RESPONSE 64:** The owners of the parcels in question were notified in writing by the Department regarding our concerns over the construction activities observed in the area of the drainage swale. Follow-up conversations and field visits by Department representatives also insured that known impacted soil in those areas was not disturbed. Also see response to Comment 19 above.

**COMMENT 65:** It should be noted that the full depth of arsenic and/or chromium impact has not been delineated at a number of locations (e.g., SBPD-01, SBPD-108, SBPD-43, SRR-6, SP-34-98, etc.). We understand that post-remediation sampling will be conducted to verify that all of the impacted soil has been removed; sampling should clearly include those areas where vertical delineation has not been completed.

**RESPONSE 65:** Excavation floor sampling will be conducted to confirm the removal of the vertical extent of impacted soil in all the excavation areas.

**COMMENT 66:** Groundwater impacted with chromium and arsenic exceeding Department groundwater standards is now found at least 4,000 feet south of the site (intersection of Speonk-Riverhead Road and Old Country Road) where it is present at the most elevated concentrations at the deepest interval sampled (120 to 130 feet below grade). The lateral and vertical limits of this plume have not been identified along Old Country Road (particularly along the apparent centerline of the plume), nor has any sampling been conducted to the south where the plume presumably extends beneath residential areas and a farm with an apparent active irrigation well. An immediate priority of this remedial program must be to install a monitoring network that completely delineates the plume. Provision for expanding this monitoring network must also be made as the plume continues to migrate downgradient. Confirmation of the presence and depth of the Gardiners Clay is also required if it is to be assumed that this unit will restrict further downward migration of the plume.

**RESPONSE 66:** The sentinel groundwater monitoring well network for the site was recently expanded by the Department with the installation of 12 additional wells. Specifically, 4 multi-level well clusters have been recently installed just south of Old Country Road toward the Montauk Highway in the direction of the site contaminant plume. Monitoring well depths range from the top of the water table to approximately 130 feet below ground surface. Sampling of these new wells and select existing site sentinel wells for metals and volatile organic compounds occurred in October 2009. The necessity for installing additional sentinel wells downgradient of the site and to investigate deeper into the aquifer will be considered as noted following review of that data.

**COMMENT 67:** All existing water supply wells in the plume vicinity should be identified and sampled. While supply well sampling appears to have been conducted north of Old Country Road, older homes that may also have water supply wells are present to the south in the path of the plume. A farm with at least one operational irrigation well is also present immediately south of Old Country Road. We recommend that the Department work with the SCDHS to identify and sample all water supply wells in the path of the plume between Old Country Road and Montauk Highway such that provisions may be made, if necessary, to provide public water to any additional affected parties. As the SCDHS has already been conducting such sampling with respect to the nearby Speonk Solvent Plume, existing water supply data may already be available through this agency.

**RESPONSE 67:** The Department is committed to continue to work with the SCDHS on this project as part of long term site management activities. As provided in the amended remedy for the site, remaining private water supply wells in the vicinity of the plume will be incorporated into the SMP for long term monitoring. Based upon data generated during site management, the necessity to provide an AWS at a particular location will be evaluated on a case by case basis with the assistance of the NYSDOH and SCDHS in accordance with existing Department guidance policy.

**COMMENT 68:** The SRCA is aware of at least one proposed rezoning/subdivision project presently contemplated in the vicinity of the plume. As part of the approval process, the Town of Southampton can impose restrictions on such projects, including a prohibition against use of groundwater, if it is made aware of the plume. The Department should provide the Town with sufficient information regarding the plume location, extent, and anticipated migration path such that the Town has the opportunity to impose groundwater-use restrictions on properties in the path of the plume during the project-approval process. This will help prevent future exposure.

**RESPONSE 68:** See response to Comment 19 above. To date, the Department has not been contacted by the Town of Southampton regarding any proposed rezoning/subdivision project in the site area.

**COMMENT 69:** The community should be updated on project progress on at least an annual basis, particularly with respect to offsite issues that affect the community but for which no controls (groundwater-use restrictions, soil cover, etc.) are presently in place. This will enable to community to identify potential concerns as they arise rather than react to them after the fact.

**RESPONSE 69:** See Responses to Comments 7, 12, 19 and 51 above.

# **APPENDIX B**

## **Administrative Record**

# **ADMINISTRATIVE RECORD**

## **BB&S Treated Lumber Corporation Site**

### **Site No. 1-52-123**

1. Letter from Robert J. Mozer and Suzanne T. Collins, Speonk-Remsenburg Civic Association, Inc., to David Chiusano, New York State Department of Environmental Conservation, August 29, 2009. Comments on the June 2009 BB&S Treated Lumber Corporation Inactive Hazardous Waste Site Proposed Amendment to the Record of Decision.
2. "Supplemental Pre-Design Investigation Report", Volume 1 of 1, July 2009, prepared by AECOM Environment.
3. "Fact Sheet - Proposed Record of Decision Amendment for the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site", dated June 2009, prepared by the New York State Department of Environmental Conservation.
4. Proposed Amendment to the Record of Decision for the BB&S Treated Lumber Corporation site, dated June 2009, prepared by the New York State Department of Environmental Conservation.
5. "Fact Sheet – Design of Cleanup Begins at the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site", dated March 2008, prepared by the New York State Department of Environmental Conservation.
6. "Remedial Design Work Plan, BB&S Treated Lumber Site 1-52-123", Volume 1 of 1, November 2007, prepared by Earth-Tech Northeast, Inc.
7. "Pre-Design Investigation Report", Volume 1 of 1, March 2007, prepared by Earth-Tech Northeast, Inc.
8. "Pre-Design Study Work Plan (Amendment No. 1), BB&S Treated Lumber Corporation Inactive Hazardous Waste Site 1-52-123", Volume 1 of 1, June 2005, prepared by Earth-Tech Northeast, Inc.
9. "Pre-Design Study Work Plan, BB&S Treated Lumber Site 1-52-123", Volume 1 of 1, January 2001, prepared by Earth-Tech Northeast, Inc.
10. Letter from Fred W. Thiele, Jr., Member of NYS Assembly, to Kathleen McCue, New York State Department of Environmental Conservation, October 12, 1999. Comments on the Proposed Remedial Action Plan (PRAP) for the BB&S Treated Lumber Corporation Site.

11. Letter from Frances Genovese, Association of Southampton Neighborhoods, to Kathleen McCue, New York State Department of Environmental Conservation, October 6, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
12. Letter from Mr. and Mrs. Robert Caccavalla to Kathleen McCue, New York State Department of Environmental Conservation, October 6, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
13. Letter from Julie McConnell to Kathleen McCue, New York State Department of Environmental Conservation, October 6, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
14. Letter from Ralph Schiano, South Fork Groundwater Task Force, to Kathleen McCue, New York State Department of Environmental Conservation, October 5, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
15. Letter from Ramon D. Thome to Kathleen McCue, New York State Department of Environmental Conservation, September 27, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
16. Letter from James Pendleton to Kathleen McCue, New York State Department of Environmental Conservation, September 27, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
17. Letter from Peggy Thome to Kathleen McCue, New York State Department of Environmental Conservation, September 27, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
18. Letter from Marybeth Greene to Kathleen McCue, New York State Department of Environmental Conservation, September 22, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
19. Letter from Heide Leofken to Kathleen McCue, New York State Department of Environmental Conservation, September 22, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
20. Letter from Steven Biasetti, Group for the South Fork, to Kathleen McCue, New York State Department of Environmental Conservation, September 21, 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.
21. Letter from Sy Robbins, Suffolk County Department of Health Services (SCDHS) to Kathleen McCue, New York State Department of Environmental Conservation, September 1999. Comments on the BB&S Treated Lumber Corporation Inactive Hazardous Waste Site PRAP.



22. "Fact Sheet - Public Meeting Invitation: Remedial Action Proposed for the BB&S Treated Lumber Corporation Site," dated September 1999, prepared by the New York State Department of Environmental Conservation.
23. Proposed Remedial Action Plan for the BB&S Treated Lumber Corporation Site, dated August 1999, prepared by the New York State Department of Environmental Conservation.
24. New York State Department of Environmental Conservation, August 6, 1999. Mass Loading Removal of Arsenic and Chromium, BB&S Treated Lumber; Site No. 152123 (table and chart), dated August 6, 1999, prepared by the New York State Department of Environmental Conservation.
25. Engineering Feasibility Study, BB&S Treated Lumber Site. Volume includes results of private well sampling by the SCDHS in December 1998-January 1999, dated August 1999, prepared by Malcolm Pirnie, Inc.
26. Remedial Investigation Report, BB&S Treated Lumber Site, dated June 1998, prepared by Malcolm Pirnie, Inc.
27. Remedial Investigation/Feasibility Study Work Plan Amendment, dated November 1997, prepared by Malcolm Pirnie, Inc.
28. BB&S Treated Lumber Corporation Inactive Hazardous Waste Site: Fact Sheet No. 2, dated November 1996, prepared by the New York State Department of Environmental Conservation.
29. Private well sampling results in the vicinity of the BB&S Site, dated May 1996, prepared by the SCDHS.
30. Remedial Investigation/Feasibility Study Work Plan. Volume also includes Citizen Participation Plan and Health and Safety Plan, dated February 1996, prepared by Malcolm Pirnie, Inc.
31. BB&S Treated Lumber Corporation Inactive Hazardous Waste Site: Fact Sheet No. 1, dated January 1996, prepared by the New York State Department of Environmental Conservation.
32. Letter from Robert L. Marino, New York State Department of Environmental Conservation, to BB&S Creosol Lumber: Thomas Samuels; Kenneth Thommen, Town of Southampton clerk and Edward P. Romain, county of Suffolk; March 31, 1993. Designation of BB&S Site as a "Class 2" inactive hazardous waste site.
33. Project Update for the BB&S Treated Lumber Corporation Site, July - September 1988, dated November 4, 1988, prepared by Groundwater Technology, Inc.

34. Groundwater Technology, Inc., Subsurface Investigation Project Update for BB&S Treated Lumber Corporation, dated March 1986, prepared by Groundwater Technology, Inc.
35. Letter from Martin Trent, SCDHS, to BB&S, May 17, 1985. Advisory of chromium and arsenic in a supply well at the BB&S Site.