PROPOSED RECORD OF DECISION AMENDMENT
BB&S TREATED LUMBER CORPORATION SITE

Town of Southampton / Suffolk County / Registry No. 1-52-123 June 2009

Prepared by the New York State Department of Environmental Conservation
Division of Environmental Remediation

1.0 INTRODUCTION

On February 25, 2000, the New York State Department of Environmental Conservation (Department) signed a Record of Decision (ROD) which selected a remedy to clean up the BB&S Treated Lumber Corporation (BB&S) Site. The remedy originally selected included the installation of extraction wells on-site and off-site to 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 lumberyard 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 has installed a public water line in the area making public water available to home and business owners situated immediately downgradient of the site along Speonk-Riverhead Road, Fifth Avenue, and Old Country Road. Also, remedial design investigations 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 impacted soil located both on-site and off-site.

With the increased soil volume now requiring remediation, the Department is proposing to replace the on-site soil treatment remedy with an excavation and off-site disposal remedy. The proposed remedy would 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 has been set for June 22, 2009 through July 30, 2009 to provide an opportunity for you to comment on these proposed changes. A public meeting is scheduled for Tuesday, July 14, 2009 at the Incorporated Village of Westhampton Beach Village Offices, 165 Mill Road, Westhampton Beach, New York beginning at 7 p.m.

At the meeting, a description of the original ROD and the circumstances that have led to proposed changes in the ROD will be presented. After the presentation, a question and answer period will be held, during which you can submit verbal or written comments on the proposal. We encourage you to review this summary and attend the meeting.

Written comments may also be sent to:

David J. Chiusano, Project Manager
New York State Department of Environmental Conservation
Division of Environmental Remediation (DER)
625 Broadway, 12th Floor
Albany, New York 12233-7017
(518) 402-9814

Comments will be summarized and responses provided in a Responsiveness Summary.

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. 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.

The Department may modify or reject the proposed changes based on new information or public comments. Therefore, the public is encouraged to review and comment on this proposal.

2.0 SITE INFORMATION

2.1 Site Description

As seen in Figure 1 the BB&S Inactive Hazardous Waste Disposal Site No. 1-52-123 is located in the Town of Southampton in eastern Suffolk County, Long Island. The five-acre site, currently in use as a lumberyard for wholesale and retail lumber distribution, 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. 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 at approximately 120-150 feet below ground surface (bgs).

2.2 Site History

From the early 1980s to 1996, the site operated as a lumber treatment and storage facility. Lumber was pressure treated using chromated copper arsenate (CCA). 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 wood.

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.

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 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 Department initiated a pre-design investigation 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 additional PDI field work was completed between September 2005 and February 2006. Additional pre-design investigation 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. Additional private water supply well sampling and off-site sentinel well installation and sampling activities were initiated by the Department in April 2009 as part of 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 of 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). 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 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 site groundwater monitoring well network was expanded in May 2008 with the installation of 14 new groundwater monitoring wells. Specifically, 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 in the former lumber treatment source areas to further characterize source area groundwater quality and to further delineate the vertical extent of soil contamination.

Groundwater in the Upper Glacial Aquifer flows south from the site toward the Atlantic Ocean. The BB&S groundwater plume extends at least 4,000 feet south of the site and the primary contaminant 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, 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 would 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). There is no Part 375 SCO for total chromium for protection of groundwater due to its low solubility.

Of 102 soil samples collected for hexavalent chromium analyses during the RI and PDI, many of which 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), 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 would be maintained, and the second was from the off-site drainage swale and within the current proposed excavation limits). Based on these results, the proposed cleanup to 50 ppm total chromium in the ROD would reach compliance with the 19 ppm hexavalent chromium SCO and, therefore, would 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 proposed on-site 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 in the on-site area both during the PDI and previous investigations. 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 treatment building and concrete drip pad building, and along the northern and eastern perimeter of the site. 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 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 would be excavated from within four feet of the buildings. Soil remaining below this depth exceeding the SCOs is proposed to 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.

During the PDI soil borings were drilled beneath the contaminant source area to a depth of approximately 40 feet bgs at most locations. Borings were drilled through the concrete drip pad, inside the former CCA treatment building, and inside the vehicle maintenance shop (refer to Figure 2 for the concrete drip pad, former CCA treatment building, and vehicle maintenance shop locations). 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 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 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 would 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 would 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). Only approximately 100 CY of off-site soil located just outside of the eastern property boundary will require remediation

Figure 3 depicts the lateral and vertical limits of off-site (drainage swale) soil proposed 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 PDI and previous investigations. 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.

Figure 3 also shows that arsenic and/or 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/or 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 remedial investigation surface and subsurface hexavalent chromium results being non-detect or very low even in areas of high total chromium, suggesting the hexavalent chromium overall 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, whereas during the PDI the maximum concentrations decreased to below 1 ppm. The groundwater sample results from monitoring conducted in 2008 revealed total chromium and/or 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 or hexavalent chromium concentration (677 ppb in June 2008 and 700 ppb in September 2008) was reported in the recently installed downgradient intermediate depth (90 feet bgs) well MW-17I located approximately one-third of a mile south of the site at 1480 Speonk-Riverhead Road (see Figure 4). The highest hexavalent chromium reported in an on-site well was 370 ppb detected in well MW-5 (70 feet bgs). Contaminant concentrations during the June, July and September 2008 sampling round were noticeably lower than during the previous groundwater sampling round (October 2005), and indicate a continued significant decrease since completion of the RI. The decreasing contaminant trends at the site reflect an attenuating plume in the former source area and likely indicate decreasing contaminant loading rates from the former source area soil to groundwater. The elevated chromium concentrations in samples from downgradient wells MW-17I and MW-19D (130 feet bgs) indicate the contaminant plume has expanded deeper into the aquifer downgradient of the Site, to depths of 130 feet or more below grade.

The volatile organic compound (VOC) results for all groundwater samples collected during the most recent 2008 sampling event were non-detect. This data indicates that groundwater downgradient of the BB&S Site, and within the limits of the BB&S plume, is not 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 June 2008 and again in March 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 either non-detect 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 in the area did not find any private water supply wells contaminated above MCLs, monitoring of plume migration indicates a possible future impact to private 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. 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 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 pathway~~s~~ and ecological risk~~s~~ has 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. This aquifer is utilized by the community as a water supply source.

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 be 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 be 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 treatment installed at the point of use.

- Installation of off-site groundwater wells to monitor plume migration. The new off-site wells would include sentinel groundwater monitoring wells between the contaminant plume or recovery wells and downgradient water supply wells.

- Site fencing would be repaired and maintained to restrict access and protect remedial components.

- Excavation of on-site and off-site soil where chromium concentrations exceed 50 ppm (estimated at 5,300 cy). All excavated soil would be brought into the lumberyard and treated ex-situ in a temporary plant by solidification/stabilization. Treated soil would be placed on-site and covered with clean soil and/or the new building or pavement. All excavated areas would be 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 be necessary to designate a portion of the BB&S property as a CAMU. 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 promote on-site remediation and reduce off-site disposal. The dimensions, location, and maintenance/monitoring program for the CAMU would be 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)**.

- Implementation of the remedy would result in untreated hazardous waste remaining at the site, since a long period of time would be needed to clean up the groundwater plume. A long-term monitoring program would be instituted. This program would consist chiefly of periodic sampling of existing on-site monitoring wells and new off-site wells. This monitoring would begin as soon as possible and continue during and after installation of the selected groundwater collection and treatment system. This program would monitor the effectiveness of the

groundwater remediation and would be a component of future operation and maintenance for the site.

3.0 DESCRIPTION OF PROPOSED CHANGES

3.1 New Information

Early in the PDI process, some areas on-site and off-site were re-sampled to better define the nature and extent of impacted soil and groundwater that would 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 (hexavalent chromium at 660 ppb) are now found in 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 and March 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 has been installed by the Suffolk County Water Authority (SCWA) 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 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.

3.2 Proposed Changes

It is proposed that the groundwater extraction and treatment remedial alternative selected for the site in the ROD be eliminated and replaced with a comprehensive groundwater monitoring program including taking necessary actions to fund and provide an AWS in accordance with Department program policy DER-24 **(Assistance for Contaminated Water Supplies, dated July 2008)** to authorized homes and businesses as determined by the Department and the NYSDOH. The major factors considered in making this recommendation 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 would promote increased attenuation rates of the groundwater plume.

- The ROD groundwater remedial scenario would not 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.

- A public water supply is now available to potentially impacted properties located downgradient of the BB&S Site. Offering to fund and provide AWS to authorized homes and businesses as determined by the Department and the NYSDOH. The offer would include a connection to the existing public water supply, which would continue to provide protection to public health from potential exposure to

contaminated groundwater. The estimated cost to fund and provide an AWS to authorized homes and businesses is approximately $160,000.

It is also proposed that the on-site soil treatment remedy identified within the ROD be replaced with an excavation and off-site disposal remedy. The major factors considered in making this recommendation are 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 proposed for remediation is being increased by 13,100 CY from the ROD. Under this proposal an estimated 12,700 CY of on-site contaminated soil would be excavated and disposed of off-site. In addition, an estimated 5,700 CY of off-site contaminated soil, located primarily within the drainage swale would 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 proposed amended remedy for the off-site disposal of 18,400 CY of soil is $7.6 million. Based on this analysis, the Department recommends amending the soil remedy to the off-site disposal option.

4.0 EVALUATION OF PROPOSED 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.

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 proposed remedy and the ROD remedy would result in an untreated portion of the plume being left to migrate. Under both scenarios, protection of public health would be achieved through monitoring well and private water supply monitoring and the offer to fund and provide an AWS to authorized homes and businesses as determined by the Department and the NYSDOH. The proposed

remedy would be protective of the environment in that the groundwater 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 proposed soil remedy, excavation and off-site disposal would be protective of human health and the environment since contaminated soil would be removed from the site and 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 current 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. The proposed off-site disposal remedy would be more protective of the environment than the ROD on-site treatment remedy because less residual contamination would remain that could potentially provide an ongoing source of contamination to the groundwater. The excavation depths from both alternatives would be sufficient in protecting human health and ecological receptors because potential surface soil exposures would be eliminated. The engineering and institutional controls proposed would reduce the potential for contact with remaining subsurface contaminated soil below the former treatment area.

2. **Compliance with New York State Standards, Criteria, and Guidance (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. On-site soil compliance with groundwater protection SCOs for arsenic (16 ppm) and hexavalent chromium (19 ppm) would be achieved. There is no Part 375 SCO for total chromium for protection of groundwater due to its low solubility. For off-site soil compliance with unrestricted use SCOs for arsenic (13 ppm), trivalent chromium (30 ppm), and hexavalent chromium (1ppm) would be achieved.

   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 would be met over time.

   The proposed remedy would not be effective for remediation of contaminated groundwater, as groundwater treatment is not part of the proposal. However, given the recent reductions in groundwater contaminant concentrations the proposed remedy would 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 ROD remedy would be 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 would not meet SCGs as they would not be captured for remediation but would 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 proposed and ROD soil remedies, both remedies would have short-term impacts. The impacts associated with remedial construction would be more significant with the on-site treatment and placement alternative, which would 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 would have posed various degrees of short-term impacts to BB&S workers, visitors, the public, and the environment from disturbance and/or transport. The proposed remedy eliminates this impact.

For groundwater, the proposed remedy would not be expected to generate contaminant releases. However, the ROD remedy involves intrusive construction work which could cause releases of contamination during excavation activities. The proposed groundwater remedy would 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 current 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 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 be captured and treated. Portions of the downgradient contaminant plume that would not be captured for treatment would continue to attenuate. For both alternatives, institutional controls would be imposed upon groundwater use at the site which would comply with NYSDOH and SCDHS use and development restrictions.

   For remediation of impacted soil, the proposed soil remedy is considered to be a reliable remedy for site contaminated soil as a significant portion of the metals contaminated soil would be removed. On-site contaminated soil located in inaccessible areas would remain on-site indefinitely and potentially impact the groundwater. Therefore, both the proposed remedy and the 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 would be implemented for the proposed 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 proposed remedy, to address future construction or excavation, a soil management plan would be developed.

   For groundwater, the proposed remedy would not be considered a permanent long-term site remedy for contaminated groundwater because the groundwater would not be actively remediated. Despite this, the proposed remedy would provide controls that would monitor the presence of metals in the groundwater in the vicinity of the site. In addition, the proposed remedy would 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 proposed soil remedy would provide for the greatest reduction of toxicity, mobility and volume of contaminants in soil, as a significant portion of the contamination would 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 proposed remedy would not reduce the toxicity, mobility and volume of groundwater contaminants, as treatment of the contaminants is not part of this proposal. The ROD remedy provides for the greatest reduction of toxicity, mobility and volume of contaminants in groundwater, as a significant portion of the contamination would be captured and treated. Additionally, any residual waste generated on-site as part of the groundwater treatment process would be 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.

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 proposed and ROD soil remedies could be implemented on a technical basis, although they are complicated by the active on-site lumber business operations. Both remedies would 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 be 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 on-site business operations. Although the planned excavation limits have been expanded the proposed soil remedy would result in a short term impact to the on-site lumber business during remedial construction. Long term impacts of the proposed remedy primarily involving the monitoring of groundwater contaminant levels and annual certification that institutional and engineering controls are in place would be minimal.

   In terms of administrative concerns, these alternatives could be implemented and would 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 would be imposed to preclude contact with remaining contaminated media on-site under both remedies. There are no anticipated, specific problems associated with obtaining permits or approvals from the various agencies and other concerns.

   For groundwater, both the proposed remedy and ROD remedy could be implemented on a technical basis. Implementation of the ROD remedy would be more complicated than the proposed remedy due to on-site lumber business operations. The materials and services necessary for these remedial alternatives are readily available. In terms of administrative concerns, these alternatives could 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 ROD provided an estimated Present Worth Cost to construct and operate the On-Site Groundwater 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 for groundwater is estimated to be at least $5.7 million. The On-Site Remedial Scenario also would not

remove contaminants that are migrating 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 proposed groundwater remedy associated with long term on and off-site monitoring of the attenuation of the contaminant plume is $1.4 million. The public water line recently installed by the SCWA provides additional benefits and remedial options at no additional cost to the Department.

- The cost estimate for the proposed soil remedy associated with off-site disposal of hazardous soil to a Subtitle C facility and non-hazardous soil to a Part 360 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.

2. **Community Acceptance.** Concerns of the community regarding the proposed changes are evaluated. A responsiveness summary will be prepared that describes public comments received and the manner in which the Department will address the concerns raised. If the final remedy differs significantly from the proposed remedy, notices to the public will be issued describing the differences and reasons for the changes.

5.0 SUMMARY OF PROPOSED CHANGES

The Department is proposing to amend the Record of Decision (ROD) for the BB&S Site. The proposed changes include:

- The elimination of the extraction and treatment component. An existing public water supply would be offered to authorized homes and businesses as determined by the Department and the NYSDOH. The cost estimate for the proposed 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 $4.3 million over a 30 year period from the ROD remedy.

- 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 would result in a volume increase of on-site soil requiring remediation from 4,000 CY to 12,700 CY. In addition, the revision would result in a volume increase of off-site soil requiring remediation from 1,300 CY to an estimated 5,700 CY.

- The revision of the remedial technology for impacted soil is based upon PDI data, revised soil SCOs, and cost savings. The proposed 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 $3 million from the ROD remedy.

- Development of a site management plan.

- 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 was $12,900,000. 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.

The elements of the proposed 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 determined by the Department and the NYSDOH. The offer would include a connection to the existing public water supply.

3. Excavation of on-site soil exceeding Part 375 groundwater protection SCOs for arsenic and chromium. Off-site transportation, pre-treatment (as necessary) and disposal of soil determined to be a hazardous waste into a Subtitle C landfill permitted to accept hazardous waste. Contaminated soil characterized to be non-hazardous would be transported off-site for disposal at a Part 360 permitted landfill. Clean fill meeting the requirements of Part 375 would be used as backfill to replace the excavated soil and establish the designed grades at the site.

4. Excavation of off-site soil exceeding Part 375 unrestricted use SCOs for arsenic and chromium. All of the off-site soil excavated would be considered a F035 listed hazardous waste which would require off-site transportation, pre-treatment (as necessary) and disposal into a Subtitle C landfill permitted to accept hazardous waste. Clean fill meeting the requirements of Part 375 would be used as backfill to replace the excavated soil and establish the designed grades at the site.

5. Installation of additional off-site groundwater wells to monitor plume attenuation. The new off-site wells would 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 proposed remedy results in contamination above unrestricted levels remaining on-site. The SMP would 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 would 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 would (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 would 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 would 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 would 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) would be repaired and maintained to restrict access and protect remedial components.

6.0 NEXT STEPS

As described above, there will be a public meeting and comment period on the proposed changes to the selected remedy. At the close of the comment period, the Department will evaluate the comments received and prepare a responsiveness summary which will be made available to the public. A notice describing the Department's final decision will be sent to all persons on the site mailing list.

If you have questions or need additional information, you may contact any of the following:

David Chiusano, Project Manager
NYS Department of Environmental Conservation
Central Office
625 Broadway, 12th Floor
Albany, New York 12233-7017
(518) 402-9814
djchiusa@gw.dec.state.ny.us

Walter Parish, Regional Remediation Engineer
NYS Department of Environmental Conservation
Region 1 Office
50 Circle Road
Stony Brook, New York 11790
(631) 444-0240
wjparish@gw.dec.state.ny.us

Bill Fonda, Citizen Participation Specialist
NYS Department of Environmental Conservation
Region 1 Office
50 Circle Road
Stony Brook, New York 11790
(613) 444-0350
bmfonda@gw.dec.state.ny.us

For Site-Related Health Questions Contact:
Mr. Steven Karpinski
NYSDOH
Flanigan Square
547 River Street
Troy, New York 12180-2216
(518) 402-7880 or 1(800) 458-1158 ext. 27880

TABLE 1
Nature and Extent of Contamination
1996-2008

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

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

ON-SITE SUBSURFACE SOIL	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppm)[a]	Frequency of Exceeding SCG
Volatile Organic	Acetone	ND - 93	50	2/9
Compounds (VOCs)	Tetrachloroethene	ND - 19	1300	0/9
Inorganic	Arsenic	ND - 1410	13	57/231
Compounds	Total Chromium	0.52 - 1300	30	37/231
	Hexavalent Chromium	ND - 35	1	4/54
	Copper	95.5 - 463	50	4/4

OFF-SITE SUBSURFACE SOIL (DRAINAGE SWALE)	Contaminants of Concern	Concentration Range Detected (ppm)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic	Arsenic	ND - 439	13	55/140
Compounds	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

ON-SITE SHALLOW GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	Arsenic	ND to 478	25	6 of 11
	Total Chromium	ND to 771	50	7 of 11
	Hexavalent Chromium	ND to 760	50	6 of 11
	Copper	ND to 386	200	1 of 11
	Iron	ND to 35,200	300	4 of 11

OFF-SITE SHALLOW GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	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

ON-SITE INTERMEDIATE GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	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

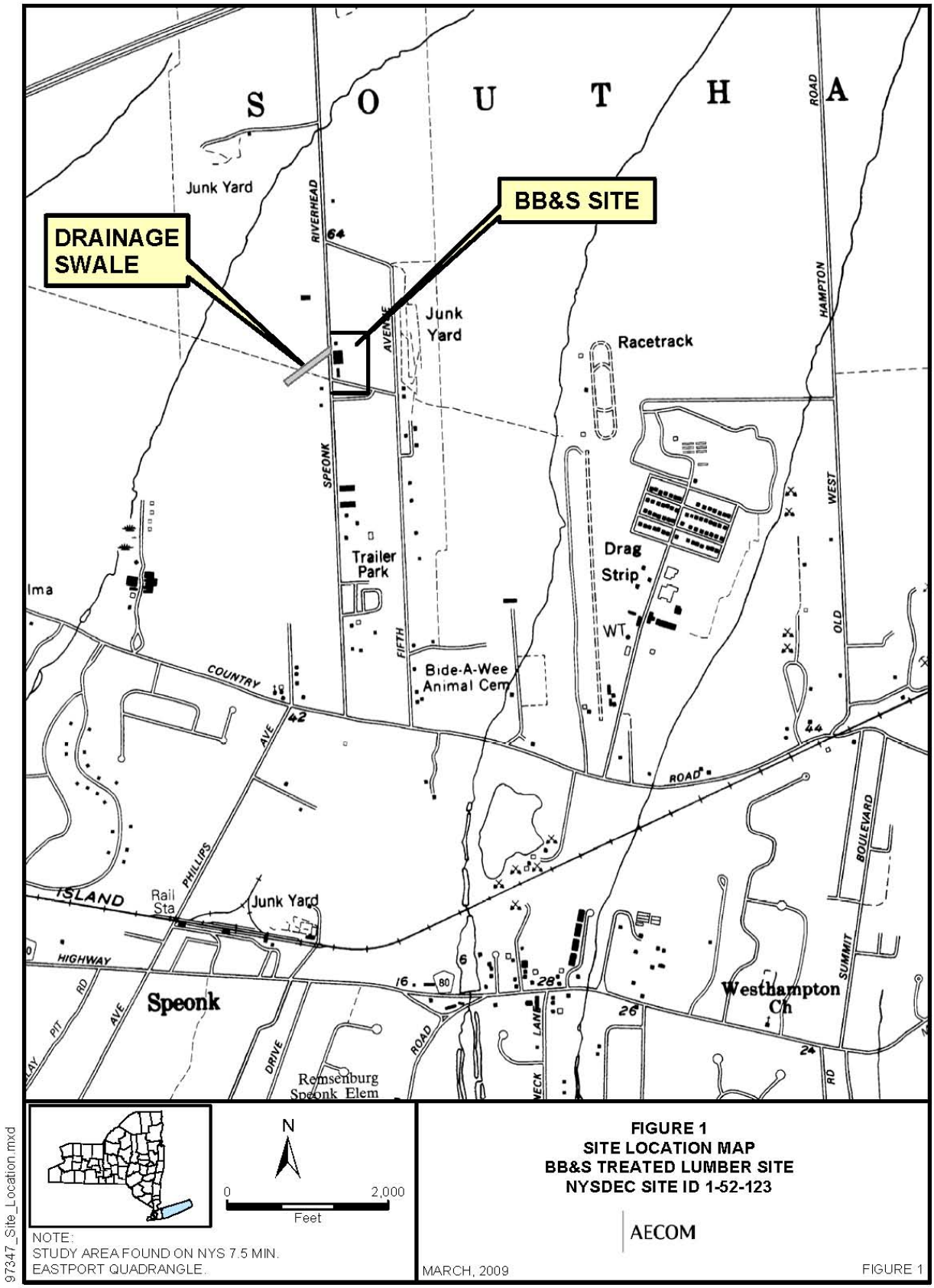
TABLE 1
Nature and Extent of Contamination
1996-2008

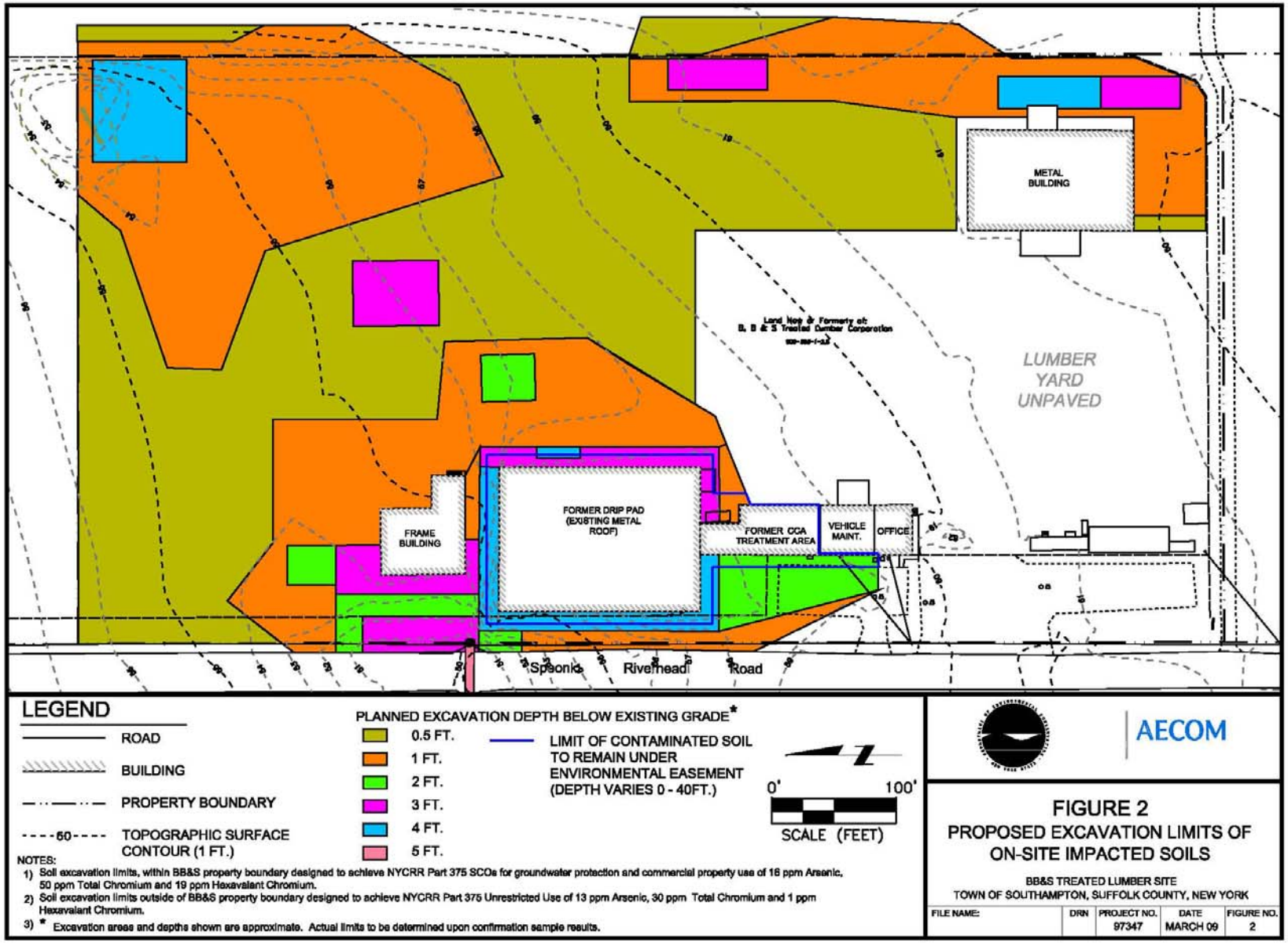
OFF-SITE INTERMEDIATE GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	Arsenic	ND to 11.1	25	0 of 6
	Total Chromium	ND to 677	50	3 of 6
	Hexavalent Chromium	ND to 700	50	2of 6
	Copper	ND to 73.1	200	0 of 6
	Iron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

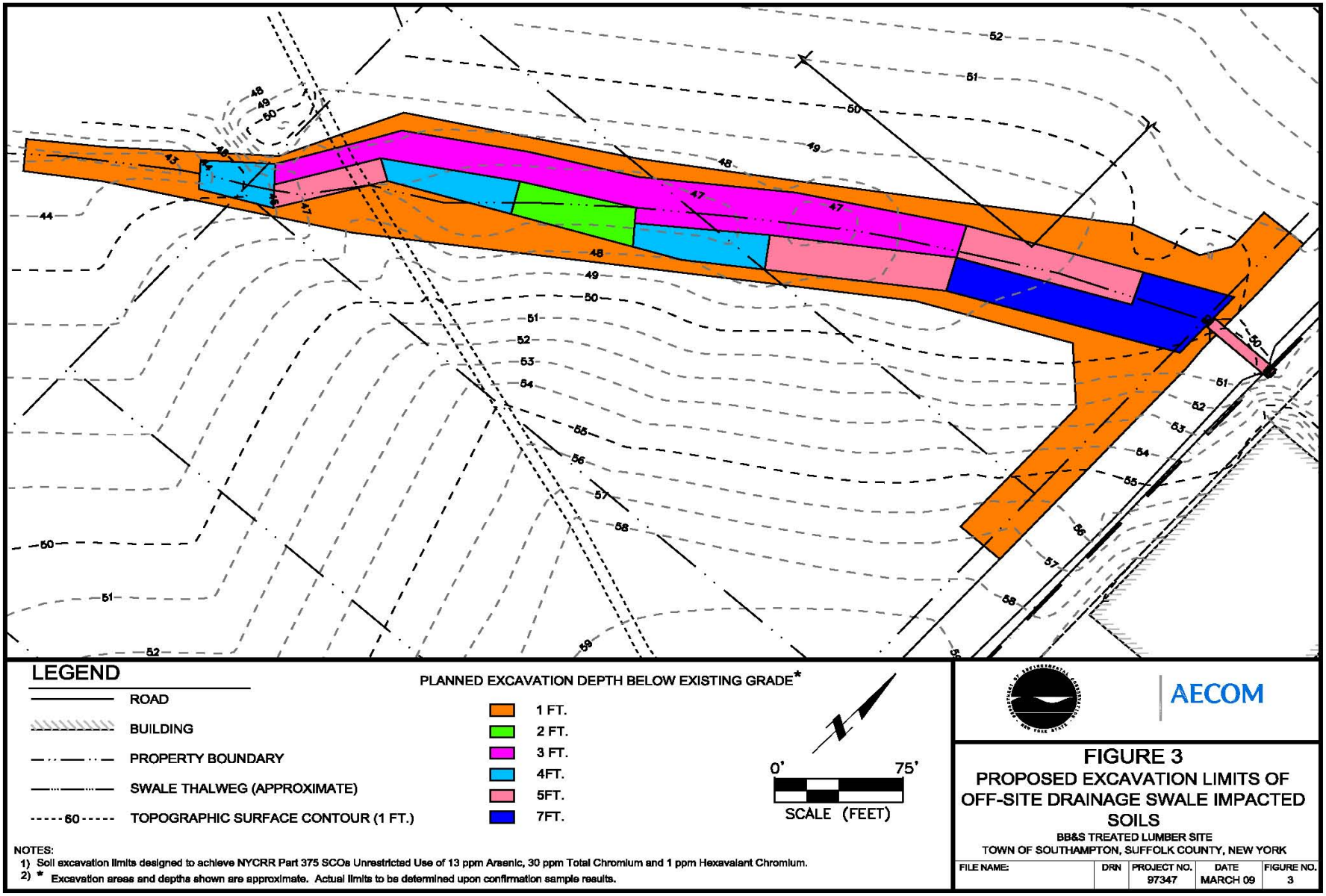
ON-SITE DEEP GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	Arsenic	ND to 3.6	25	0 of 1
	Total Chromium	ND to 23.2	50	0 of 1
	Hexavalent Chromium	ND to 90	50	1 of 1
	Copper	ND to 6.1	200	0 of 1
	Iron	ND to 5,300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

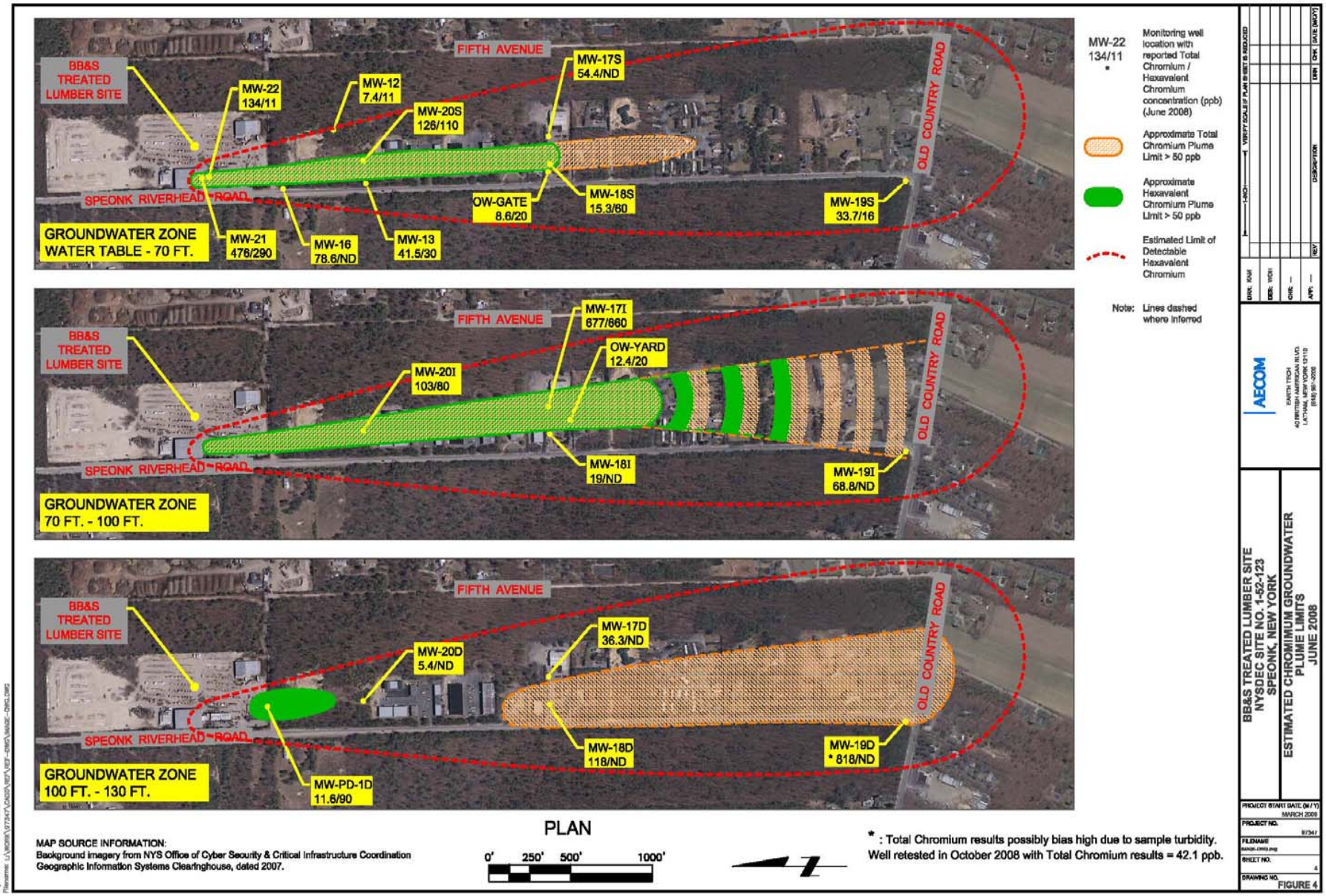
OFF-SITE DEEP GROUNDWATER[c]	Contaminants of Concern	Concentration Range Detected (ppb)[a]	SCG[b] (ppb)[a]	Frequency of Exceeding SCG
Inorganic Compounds	Arsenic	ND to 126	25	1 of 4
	Total Chromium	ND to 818	50	2 of 4
	Hexavalent Chromium	ND to 10	50	0 of 4
	Copper	ND to 923	200	1 of 4
	Iron	138 to 436,000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

[a] 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;
[b] SCG = standards, criteria, and guidance values
[c] 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


S O U T H A
DRAINAGE SWALE
BB&S SITE
Junk Yard
Junk Yard
Racetrack
Trailer Park
Drag Strip
Bide-A-Wee Animal Cem
Ima
COUNTRY
ROAD
ISLAND
Rail Sta
Junk Yard
HIGHWAY
Speonk
Remsenburg Speonk Elem
Westhampton Ch
RIVERHEAD
SPEONK
FIFTH
AVENUE
HAMPTON
WEST
OLD
PHILLIPS
BOULEVARD
SUMMIT
DRIVE
N
0
2,000
Feet
NOTE:
STUDY AREA FOUND ON NYS 7.5 MIN.
EASTPORT QUADRANGLE.
FIGURE 1
SITE LOCATION MAP
BB&S TREATED LUMBER SITE
NYSDEC SITE ID 1-52-123
AECOM
MARCH, 2009
FIGURE 1
97347_Site_Location.mxd


METAL BUILDING
LUMBER YARD UNPAVED
FORMER DRIP PAD (EXISTING METAL ROOF)
FRAME BUILDING
FORMER CCA TREATMENT AREA
VEHICLE MAINT.
OFFICE
Spsonks
Rivehead
Road
LEGEND
ROAD
BUILDING
PROPERTY BOUNDARY
50 TOPOGRAPHIC SURFACE CONTOUR (1 FT.)
PLANNED EXCAVATION DEPTH BELOW EXISTING GRADE*
0.5 FT.
1 FT.
2 FT.
3 FT.
4 FT.
5 FT.
LIMIT OF CONTAMINATED SOIL TO REMAIN UNDER ENVIRONMENTAL EASEMENT (DEPTH VARIES 0 - 40FT.)
0'
100'
SCALE (FEET)
NOTES:
1) Soil excavation limits, within BB&S property boundary designed to achieve NYCRR Part 375 SCOs for groundwater protection and commercial property use of 16 ppm Arsenic, 50 ppm Total Chromium and 19 ppm Hexavalant Chromium.
2) Soil excavation limits outside of BB&S property boundary designed to achieve NYCRR Part 375 Unrestricted Use of 13 ppm Arsenic, 30 ppm Total Chromium and 1 ppm Hexavalant Chromium.
3) * Excavation areas and depths shown are approximate. Actual limits to be determined upon confirmation sample results.
AECOM
FIGURE 2
PROPOSED EXCAVATION LIMITS OF ON-SITE IMPACTED SOILS
BB&S TREATED LUMBER SITE
TOWN OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK
FILE NAME:
DRN
PROJECT NO. 97347
DATE MARCH 09
FIGURE NO. 2


LEGEND
ROAD
BUILDING
PROPERTY BOUNDARY
SWALE THALWEG (APPROXIMATE)
60
TOPOGRAPHIC SURFACE CONTOUR (1 FT.)
PLANNED EXCAVATION DEPTH BELOW EXISTING GRADE*
1 FT.
2 FT.
3 FT.
4FT.
5FT.
7FT.
0'
75'
SCALE (FEET)
NOTES:
1) Soil excavation limits designed to achieve NYCRR Part 375 SCOs Unrestricted Use of 13 ppm Arsenic, 30 ppm Total Chromium and 1 ppm Hexavalent Chromium.
2) * Excavation areas and depths shown are approximate. Actual limits to be determined upon confirmation sample results.
AECOM
FIGURE 3
PROPOSED EXCAVATION LIMITS OF OFF-SITE DRAINAGE SWALE IMPACTED SOILS
BB&S TREATED LUMBER SITE
TOWN OF SOUTHAMPTON, SUFFOLK COUNTY, NEW YORK
FILE NAME:
DRN
PROJECT NO. 97347
DATE MARCH 09
FIGURE NO. 3


BB&S TREATED LUMBER SITE
FIFTH AVENUE
OLD COUNTRY ROAD
SPEONK RIVERHEAD ROAD
MW-22 134/11
MW-12 7.4/11
MW-20S 126/110
MW-17S 54.4/ND
OW-GATE 8.6/20
MW-18S 15.3/60
MW-19S 33.7/16
MW-21 476/290
MW-16 78.6/ND
MW-13 41.5/30
GROUNDWATER ZONE WATER TABLE - 70 FT.
MW-17I 677/660
OW-YARD 12.4/20
MW-20I 103/80
MW-18I 19/ND
MW-19I 68.8/ND
GROUNDWATER ZONE 70 FT. - 100 FT.
MW-17D 36.3/ND
MW-20D 5.4/ND
MW-18D 118/ND
MW-19D * 818/ND
MW-PD-1D 11.6/90
GROUNDWATER ZONE 100 FT. - 130 FT.
MW-22 134/11 * Monitoring well location with reported Total Chromium / Hexavalent Chromium concentration (ppb) (June 2008)
Approximate Total Chromium Plume Limit > 50 ppb
Approximate Hexavalent Chromium Plume Limit > 50 ppb
Estimated Limit of Detectable Hexavalent Chromium
Note: Lines dashed where inferred
MAP SOURCE INFORMATION:
Background imagery from NYS Office of Cyber Security & Critical Infrastructure Coordination Geographic Information Systems Clearinghouse, dated 2007.
PLAN
0' 250' 500' 1000'
* : Total Chromium results possibly bias high due to sample turbidity. Well retested in October 2008 with Total Chromium results = 42.1 ppb.
AECOM
BB&S TREATED LUMBER SITE
NYSDEC SITE NO. 1-52-123
SPEONK, NEW YORK
ESTIMATED CHROMIUM GROUNDWATER PLUME LIMITS
JUNE 2008
FIGURE 4