RECORD OF DECISION

Woodbrook Road Dump
South Plainfield, Middlesex County, New Jersey

United States Environmental Protection Agency
Region II

September 2013

DECLARATION STATEMENT

RECORD OF DECISION

SITE NAME AND LOCATION

Woodbrook Road Dump Site (EPA ID#NJSFN0204260)
South Plainfield, Middlesex County, New Jersey
Operable Unit 1 - Site wide

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedy to address contaminated soil and debris at the Woodbrook Road Dump Superfund Site (Site) located in the Borough of South Plainfield, Middlesex County, New Jersey. The remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record file for the Site.

The State of New Jersey concurs with the selected remedy. A copy of the concurrence letter can be found in Appendix IV.

ASSESSMENT OF THE SITE

The response action selected in this Record of Decision (ROD) is necessary to protect public health or welfare and the environment from actual or threatened releases of hazardous substances from the Site into the environment.

DESCRIPTION OF THE SELECTED REMEDY

The response action described in this document represents the first and only planned remedial phase, or operable unit, described in this document. It addresses soil and debris contaminated with polychlorinated biphenyls (PCBs) at the Site.

The major components of the selected remedy include:

- Excavation and off-site disposal of an estimated 4,000 cubic yards of soil and debris that contains capacitors, capacitor parts and PCB-contaminated soil and debris with PCB concentrations greater than 100 parts per million (ppm) to an approved off-site disposal

facility;

- Excavation and off-site disposal of an estimated 120,000 cubic yards of soil and debris that contains PCBs at concentrations greater than 1.0 ppm to an approved off-site disposal facility; and

- The establishment of institutional controls, such as a deed notice or covenant, to prevent a change in land use to an unrestricted land use such as residential.

This remedy addresses the soil and debris contamination known to be attributable to capacitors that were dumped on Site. Based on data from the remedial investigation/feasibility study (RI/FS), a groundwater remedial action is not required. Principal threat wastes in the form of capacitors, capacitor parts and PCB-contaminated soils will be addressed as part of this remedy to prevent contamination from spreading to the Bound Brook and other surface water bodies at the Site. This is expected to be the final action for this Site; EPA is conducting an RI/FS on the entire Bound Brook as part of the Cornell-Dubilier Electronics site, Operable Unit 4, including the section that passes through this Site. EPA is not assessing Bound Brook sediments and surface water in this decision, and will make a determination on the nature and extent, risks posed, and response actions needed as part of the Bound Brook RI/FS.

DECLARATION OF STATUTORY DETERMINATIONS

Part 1: Statutory Requirements

The Selected Remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial action, is cost-effective, and utilizes permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable.

Part 2: Statutory Preference for Treatment

The selected remedy does not satisfy the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element for reasons explained in the Decision Summary.

Part 3: Five-Year Review Requirements

The selected remedy is protective for plausible future uses, which do not anticipate unlimited use or unrestricted exposure. Because this remedy results in hazardous substances, pollutants, or

contaminants remaining on the Site above levels that will allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years of the initiation of the remedial action to ensure that the remedy is, or will be, protective of human health and the environment, unless determined otherwise at the completion of the remedial action.

ROD DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary section of this ROD. Additional information can be found in the Administrative Record file for the Site.

- Chemicals of concern and their respective concentrations may be found in the "Site Characteristics" section;
- Baseline risk represented by the chemicals of concern may be found in the "Summary of Site Risks" section;
- A discussion of cleanup levels for chemicals of concern may be found in the "Remedial Action Objectives" section;
- A discussion of source materials constituting principal threats may be found in the "Principal Threat Waste" section;
- Current and reasonably anticipated future land use assumptions are discussed in the "Current and Potential Future Site and Resource Uses" section;
- A discussion of potential land uses that will be available at the Site as a result of the Selected Remedy is found in the "Current and Potential Future Site and Resource Uses" section;
- Estimated capital, annual operation and maintenance (O&M), and total present worth costs are discussed in the "Description of Alternatives" section; and
- Key factor(s) that led to selecting the remedy (i.e., how the Selected Remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision) may be found in the "Comparative Analysis of Alternatives" and "Statutory Determinations" sections.

Walter E. Mugdan, Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
Region II

Sept. 30, 2013
Date

RECORD OF DECISION
DECISION SUMMARY

Woodbrook Road Dump Site
South Plainfield, Middlesex County, New Jersey

United States Environmental Protection Agency
Region II

September 2013

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APPENDICES

ATTACHMENTS TO RESPONSIVENESS SUMMARY

SITE NAME, LOCATION AND BRIEF DESCRIPTION

The Woodbrook Road Dump Site is located primarily on two properties in South Plainfield north of Woodbrook Road currently identified as Block 388, Lots 1 and 26 in Middlesex County, New Jersey. See Figure 1 of Appendix I. The two properties cover approximately 70 acres of heavily wooded and undeveloped land within the vicinity of the Dismal Swamp. Dumps were operated on the two properties by previous owners during the 1940s and 1950s, accepting household and industrial wastes until shut down by the State of New Jersey in 1958. Texas Eastern Terminal Company (TETC) acquired the properties in 1972. The surrounding area consists of a mixture of undeveloped/open space, residential and industrial properties. The Site is transected by the northwest-flowing Bound Brook, which forms the boundary between Lot 1 on the east and Lot 26 on the west. Bound Brook flows into central South Plainfield and ultimately discharges to Green Brook and the Raritan River. Three tributaries (referred to as Main Tributary, Secondary Tributary and Railroad Tributary) and a body of standing water (referred to as Western Pond) also bound portions of the Site and discharge to Bound Brook.

The Woodbrook Road Dump Site, Superfund identification number NJSFN0204260, is on the U.S. Environmental Protection Agency's (EPA's) National Priorities List (NPL). Funding from a potentially responsible party (PRP) has been used to pay for response actions at this Site. EPA is the lead agency and the New Jersey Department of Environmental Protection (NJDEP) is the support agency.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

In September 1999, members of a non-profit environmental group, Edison Wetlands Association (EWA), discovered weathered capacitors, some of which contained an oily liquid that had discharged onto the ground, on the western portion of the Site. Some of the capacitors were lying on the ground surface and others were partially buried. The capacitors consisted of rectangular metal boxes (typically 24 inches by 14 inches by 5 inches) with paper/foil rolls inside. NJDEP sampled material inside one capacitor and measured polychlorinated biphenyls (PCBs) exceeding 50 ppm. NJDEP also observed the name "Cornell Dubilier" on small phenolic ballast containers. Cornell-Dubilier Electronics, Inc. (CDE) used PCBs in the process of manufacturing capacitors from 1936 to 1962 at a South Plainfield facility, which is now a Superfund Site located approximately 0.75 miles northwest of the Woodbrook Road Dump Site. NJDEP requested that EPA take the lead for the Woodbrook Road Dump Site in October 1999.

In March 2000, TETC, the land owner, removed and disposed of 26 capacitors from what became Disposal Area 1, under EPA oversight. One of the capacitors had a manufacturing label

indicating “Manufacturer: Cornell Dubilier Electrical Corporation, South Plainfield, NJ.” A fence and warning signs were installed around the capacitors in Disposal Area 1. Additional surficial soil sampling near Disposal Area 1 indicated the presence of PCBs in the soil. A portion of the Site, Lot 1.01 of Block 388, is owned by the Borough of South Plainfield.

In April 2000, a second disposal area, Disposal Area 2, containing capacitor parts (paper/foil rolls) was discovered, also on the western portion of the Site. Surficial soil samples by EPA indicated elevated PCB concentrations. During this time, additional preventative security measures were implemented by TETC, including installation of additional fencing around the known disposal area and warning signs along the paths leading to this area. Individuals trespassing with all-terrain vehicles were a common occurrence, so guard rails were installed at potential access points. See Figure 2 of Appendix I.

In July and August 2000, EPA performed test pit excavations and sampling of surface water, sediment, domestic well water, groundwater and soil throughout both lots and off-site locations. The Site was proposed for listing on the NPL on September 13, 2001, and was subsequently placed on the NPL on April 30, 2003.

In August 2003, TETC entered into an administrative order on consent with EPA to further investigate the Site through a remedial investigation/feasibility study (RI/FS) and implement additional Site security measures such as a perimeter fence and security cameras. A unilateral administrative order was sent to CDE as well. CDE declined to participate.

A contractor for TETC, TRC Environmental Corporation, initiated the RI in 2007, which included sampling of groundwater, potable water, surface water, sediment as well as surface and subsurface soil on and off Site. The Site Characterization Summary Report (SCSR) completed in November 2007 includes all sampling results. Based on EPA comments to the SCSR, TRC collected additional samples in 2009 and reported the data through an Addendum. The Baseline Human Health Risk Assessment (BHHRA) was completed in July 2011 and a Screening Level Ecological Risk Assessment (SLERA) was completed in February 2012. The Draft Final Remedial Investigation Report, which summarizes the data and risk assessments, was approved by EPA in July 2012.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

In 2009, a Community Advisory Group (CAG) was formed to keep the public apprised of activities at the Site. The CAG meets every three to four months or as needed for updates, presentations and discussions about the RI/FS processes at the Woodbrook Road Dump Site. A Technical Assistance Grant (TAG) was awarded to EWA, the coordinator of the CAG, in 2010. The TAG allowed the CAG to hire technical consultants to aid in its understanding of the Site.

On August 16, 2013, EPA released the Proposed Plan and supporting documentation for the OU1 contaminated soil remedy to the public for comment. EPA made these documents available to the public in the administrative record repositories maintained at the EPA Region II office (290 Broadway, New York, New York) and the South Plainfield Public Library (2848 Plainfield Avenue, South Plainfield, New Jersey). EPA published a notice of availability for these documents in the South Plainfield Observer newspaper; posted the Proposed Plan on EPA's Region website; sent copies of the Proposed Plan to CAG members and other important stakeholders; and opened a public comment period on the documents from August 16, 2013 to September 16, 2013. On August 26, 2013, EPA conducted a public meeting at the South Plainfield Municipal Hall to inform local officials and interested citizens about the Superfund process, to review the planned remedial activities at the Site, and to respond to questions from area residents and other attendees. Responses to the comments received at the public meeting and in writing during the public comment period are included in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF OPERABLE UNIT

This action, referred to as operable unit 1 (OU1), will be the only action for the Site, addressing contaminated soil and debris. EPA's findings indicate the presence of "principal threat" wastes at the Site, as discussed below.

EPA is conducting a separate study of the Bound Brook as part of the CDE Site, and included in that study is the section of the Brook that includes the Woodbrook Road Dump Site (the Woodbrook Site is approximately one river mile upstream of the CDE Site). Any remedy for the Bound Brook sediments and surface water will be addressed as part of that study.

This is expected to be the final selected remedy for the Woodbrook Road Dump Site.

SUMMARY OF SITE CHARACTERISTICS

Physical Characteristics of the Site

A conceptual site model (CSM) was developed for the Site in 2005 indicating the Site characteristics and initiating a basis for the Site investigations. The Site is located in a low-lying area to the west and southwest of the terminal moraine created by the southernmost advance of the last Pleistocene continental ice sheet. Ground surface elevations on top of the moraine, 1.5 miles northeast of the Site, are higher than 160 feet above mean sea level (msl); the ground surface on the Site is about 65 to 70 feet msl. Most of the Site, outside the fill areas, is wetlands, as is much of the land along Bound Brook southeast and northwest of the Site. Wetlands and adjacent upland open space in this section of Middlesex County is considered to be a valuable ecosystem in a region that is intensely developed.

EPA collected or oversaw collection of environmental data during the RI and other sampling efforts in order to determine Site characteristics, as well as to gain information to perform risk assessments. RI-related sampling of groundwater, surface and subsurface soil, surface water and sediment on and around the Site was conducted in several phases from 2007 to 2009. The samples were analyzed for one or more of the following: PCBs, dioxins, dioxin-like PCB congeners, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), pesticides, total metals and dissolved metals.

As discussed in more detail below, PCB contamination was discovered in two dumping areas: the Eastern Dump and the Western Dump. The Eastern Dump (on Lot 1) is located on the east side of the Bound Brook and contains primarily municipal waste, i.e., glass, scrap metal and plastic, but no capacitors. The Eastern Dump contains approximately 65,000 cubic yards (yd^3) of debris over an area of 13 acres. The Western Dump (on Lot 26 and a small portion of Lot 1.01, which is owned by South Plainfield) is located on the west side of the Site and includes Disposal Areas 1 and 2. The Western Dump contains approximately 122,000 yd^3 of debris over a footprint of approximately 19 acres. The remaining acreage consists of the perimeter surrounding the two dumps and the Panhandle, located to the north of the Eastern Dump. See Figure 2 of Appendix I.

Site Geology and Hydrogeology

Overburden units consist of artificial fill deposits including debris; swamp and marsh deposits; and glacial deposits. Aerial photographs and visual surveys conducted at the Site suggest that there are at least four areas of artificial fill deposits created from historic dumping, including the Western Dump, Eastern Dump, Panhandle Area and a fourth area located along the south-western border of Lot 26. Based on field observations from test pits and soil borings the artificial

fill debris thickness ranges from less than two feet to approximately seven feet near the center of the dumping areas. The fill encountered in most dumping areas primarily resembles municipal wastes. Though highly variable, glass debris is the most frequently identified constituent, varying from 20 percent to as much as 80 percent of the debris, with lesser percentages of scrap metal, plastics, paper, ash, cinders, brick and gravel, depending on the location. The artificial fill deposits are underlain and surrounded by swamp and marsh deposits that occur over large portions of the Site, especially near Bound Brook and the adjoining tributaries. These deposits generally consist of clay inter-bedded with occasional sand, silt, and organic lenses. The thickness of the swamp and marsh deposits range from less than two feet to more than four feet.

Bedrock underlying the Site consists of the Passaic Formation of the Brunswick Group. A weathered bedrock zone, typically less than two feet thick, occurs above the bedrock interface. The top of competent bedrock was encountered at depths ranging from 40 to 48 feet below ground surface (bgs). In the area of the Site, the Passaic Formation consists of reddish-brown to brownish-purple and grayish-red siltstone, shale, and mudstone of late Triassic/early Jurassic age, which is typically thousands of feet in thickness. The bedding of the Passaic Formation, in the vicinity of the Site, has a northeast to southwest strike with a dip of about eight degrees to the northwest.

The depth to groundwater at the Site is very shallow, occurring at the ground surface to a few feet deep. Shallow groundwater flows toward the local surface water bodies. West of Bound Brook, groundwater in the overburden generally flows to the north-northeast, while east of Bound Brook groundwater generally flows to the south-southeast, with both areas discharging into Bound Brook and its tributaries. A clayey silt semi-confining unit (14 to 36 feet thick) with a hydraulic conductivity in the range of 10^{-7} centimeters per second is located within the overburden deposits and separates the shallow overburden and upper bedrock zone (58 to 68 feet bgs). Groundwater within the underlying bedrock flows to the north-northwest, in the direction of the regional bedding plane dip and toward regional groundwater pumping centers in the area. The calculated hydraulic gradients indicate an upward vertical gradient, where the shallow bedrock water-bearing zone provides recharge to the overburden water-bearing unit. These upward vertical gradients result in strong artesian conditions at some locations.

As part of the RI, monitoring wells were installed in the overburden (screened between one and 11 feet bgs) and the shallow bedrock (screened 58 to 68 feet bgs) in the top of the Passaic Formation. The RI also tested potable wells near the Site. No construction details are available for the tested potable wells, but potable wells installed in this part of the Passaic Formation are typically screened deeper than the Site bedrock wells.

Surface Water and Wetlands

The Site is transected by the northwest-flowing Bound Brook, which forms the boundary between Lot 1 on the east and Lot 26 on the west. The Bound Brook flows into central South Plainfield and turns west, merging with Green Brook and ultimately flowing into the Raritan River. A tributary referred to as "Main Tributary," cuts through Lot 1 from east to west and joins Bound Brook at the western edge of the lot. A small tributary, "Railroad Tributary," emanating from the former Chevron Chemical (Former Ortho Products) facility, flows into Main Tributary in the east northeast portion of Lot 1.

The northwest corner of Lot 26 is occupied by a body of standing water referred to as the "Western Pond" that extends to the northwest approximately 400 feet beyond the property boundary. The average depth of the Western Pond is approximately one foot. The Western Pond is fed and drained by a stream referred to as the "Secondary Tributary" that drains commercial and industrial properties west of the Site, along Helen Street. The northeast flowing channel of the Secondary Tributary exiting Western Pond also accepts drainage from properties along Hollywood Avenue before joining Bound Brook north of Lot 1. Four ephemeral drainage ditches have been identified on the property southwest of Bound Brook on Lot 26. See Figure 2 of Appendix I.

The Dismal Swamp is a conservation area made up of freshwater wetlands, forested uplands, meadows and open space. Though identified as early as the 1980s by various agencies, including the U.S. Fish and Wildlife Service (FWS), EPA, NJDEP and the U.S. Army Corps of Engineers as an important wetland and prized flood storage area in highly urbanized Middlesex County, New Jersey officially established the Dismal Swamp Conservation Area, and the Dismal Swamp Conservation Commission, in October 2009 identifying it as approximately 660 acres within South Plainfield, Edison and Metuchen. The EPA designated the Dismal Swamp as "Priority Wetlands" in a 1994 document entitled "Priority Wetlands for the State of New Jersey". Much of the Site consists of wetlands that are situated within the floodplain of Bound Brook and are subject to periodic inundation.

A 2004 wetlands delineation assessment found several habitat cover types: palustrine forested wetlands; open water/emergent wetlands; and scrub-shrub wetlands. The remaining areas of the Site are covered by a mixture of successional scrub-shrub fields and upland woods located within formerly disturbed areas, such as the abandoned debris piles. Flood Insurance Rate Maps for South Plainfield and Edison indicate that most of the Site lies within the 100- and 500-year floodplain boundaries. NJDEP information indicates that New Jersey Flood Hazard Areas exist at the Site. As a consequence of historic filling (including the dumping in the 1940s and 1950s), certain locations of the Site (e.g., the top of the Eastern Dump, the top of the Western Dump, and

an area south of the Western Dump along the property line) are currently above the flood hazard elevation.

Soil Contamination

Western Dump

Within the Western Dump, PCB concentrations are very high in soil around the capacitors in what is known as the PCB hot spot. The PCB hot spots were investigated via the collection of surface and subsurface soil samples on a 20-foot grid pattern in four areas. From these sample locations, 462 samples were analyzed for PCBs. Based on initial sampling results, a specific subset of samples were further analyzed for dioxin and dioxin-like PCB congener analysis. Total concentrations of dioxins and dioxin-like PCB congeners are proportional to total PCB concentrations, and generally exceed the criteria where total PCB concentrations in soil samples were high.

PCB concentrations in the PCB hot spots range from non-detect to pure product. Analytical results for soil sampling indicate that concentrations of total PCBs exceeding 100 ppm do not exist below four feet bgs and in some areas the extent of contamination does not go below two feet bgs. Results indicate that PCB concentrations in soil decrease significantly horizontally and vertically, moving away from the PCB capacitors and capacitor parts. All capacitors and capacitor parts have been found in Disposal Areas 1 and 2 of the Western Dump, coinciding with hot spots within the Western Dump that have the highest PCBs concentrations at the Site. Many PCB capacitors and capacitor parts have been removed from the Site for off-site disposal, although a small number currently reside on the ground surface within fenced areas of the Site. The dumping pattern suggests that capacitors and capacitor parts were dumped via trucks within the existing piles of debris. See Figure 3 of Appendix II.

The Western Dump, excluding the PCB hot spots, displays PCB concentrations in the soil ranging from non-detect to 67 ppm. Other types of contaminants detected above the screening criteria, NJDEP Residential Direct Contact Soil Cleanup Criteria (RDCSCC) are SVOCs, pesticides and metals. The contaminants of potential concern (COPCs) for the Site include SVOCs, pesticides, PCBs, and metals. Detections of SVOCs and pesticides at concentrations exceeding the RDCSCC are relatively low in magnitude and infrequent.

Eastern Dump

Based on field observations from test pits and monitoring well installations, the Eastern Dump contains approximately 13 acres of general refuse with a thickness ranging from less than one foot to approximately six feet, near the center of the dumping area. The composition of the refuse is primarily glass, with varying percentages of scrap metal, plastics, paper, ash, cinders, and

gravel. No PCB capacitors or capacitor parts were observed in this area of the Site. The highest concentration of PCBs found in the soil is 12.2 ppm. Once again there were low level detections of SVOCs, PCBs and metals above the RDCSCC.

Perimeter

The Panhandle is located on Lot 1, north of the Eastern Dump and Main Tributary. Small amounts of refuse were observed within the southern portion of the Panhandle, composed of glass bottles with minor amounts of household debris. While some of the refuse is scattered, most of the dumping is concentrated in an approximately one- to two-acre area in which the refuse is estimated to be approximately one foot thick. One pesticide, 4,4'-DDT, was found above the RDCSCC in one location.

Several soil samples were collected from the perimeter around the Western and Eastern Dumps. PCBs, SVOCs and metals were detected at low levels above the RDCSCC in soil samples collected at various locations.

Surface Water and Sediment Contamination

As part of the Woodbrook Road Dump RI, surface water and sediments were collected in the Bound Brook, the primary tributaries, and in the standing water known as the Western Pond. As described earlier, EPA is conducting a separate study of the Bound Brook as part of the CDE site, and included in that study is the section of the Brook that includes the Woodbrook Road Dump Site. Any remedy for the Bound Brook sediments and surface water will be addressed as part of that study. To facilitate a better understanding of the conditions in the Bound Brook upstream of the CDE site, EPA prepared figures showing surface water and sediment of the data collected as part of both CDE and Woodbrook studies. In March 2013, EPA presented this data to the CAG, and included the figures in the administrative record. The discussion below only summarizes the data collected as part of the Woodbrook RI, and the human and ecological risk assessments only considered the Woodbrook-collected data.

Surface Water in the Bound Brook and Tributaries

Arsenic, pesticides, and SVOCs were detected in historical and 2007 RI surface water samples. PCBs were detected only in surface water samples collected during the 2007 RI and not in earlier sampling events. The highest detections were, in some cases, slightly above the New Jersey surface water quality standards (SWQS). The distribution of pesticides was limited to surface water samples collected in the Railroad Tributary and segments of the Main Tributary and Bound Brook downstream of the Railroad Tributary. The Railroad Tributary is downstream of a former Chevron Chemical (Ortho Products) facility located on Metuchen Road in South Plainfield. See Figure 1 of Appendix I. Thus, pesticide concentrations in surface water are not attributable to

historic dumping activities conducted at the Site, but are probably attributable to sources along the Railroad Tributary[1].

PCBs were detected in the Main Tributary in only one of eight RI samples. The detection was in the most upstream sample, collected upstream of the Site. PCBs were also detected in all three Railroad Tributary surface water samples, which is upstream of the Main Tributary. PCBs detected in RI surface water samples collected from Bound Brook upstream of Site were of the same order of magnitude as PCB detections in Bound Brook samples collected within the Site boundary and downstream of the Site; therefore, the Site does not appear to be a current source of PCBs in Bound Brook surface water.

Surface Water in the Western Pond

COPCs detected in the Western Pond surface water are limited to SVOCs and PCBs. The highest detections were slightly above the SWQS. Samples with detectable levels of SVOCs and PCBs also tended to have high turbidity; thus, these detections may be biased high with suspended solids. RI surface water results indicate that SVOCs and PCBs are detected in Western Pond surface water at a higher frequency and at concentrations one or two orders of magnitude higher than they are detected in surface water samples collected from Site streams.

Sediments in the Western Pond

COPCs for the Western Pond sediments are limited to PCBs. In general, PCB concentrations exceed sediment screening criteria in the upper two feet of the Western Pond for sediments located closest to Disposal Area 1. Constituents detected in the Western Pond sediments do not appear to have migrated significantly from the source area. Given the proximity of the Western Dump and Disposal Area 1 to the edge of the Western Pond, it is reasonable to assume that tested "sediments" are in fact fill material that is part of the Western Dump.

Groundwater Contamination

Overburden

During the 2007 RI investigation, groundwater samples were collected from monitoring wells in the overburden unit. VOCs, SVOCs, and PCBs were not detected in these samples at concentrations exceeding the New Jersey groundwater quality standards (NJ GWQS). Four pesticides were detected at concentrations exceeding the NJ GWQS in the sample collected from

1 Chevron /Ortho is a closed former pesticide manufacturing facility that is being addressed under the Resource Conservation and Recovery Act (RCRA).Private parties are working under the direction of NJDEP as the lead agency. Pesticide detections in surface water and sediments of the Railroad Tributary have been attributed to Chevron/Ortho's operations, and cleanup activities are being planned for this area. This cleanup work is not expected to affect EPA's plan for the NPL Site. EPA and NJDEP will continue to coordinate their efforts in addressing these two projects, as necessary.

a monitoring well in the Panhandle. Six metals were detected in various groundwater samples collected from monitoring wells located across the Site. PCE was detected at concentrations exceeding the NJ GWQS in one historical sample.

Analytical results for the 2007 RI groundwater sampling confirmed historical detections of several metals in groundwater at concentrations exceeding the NJ GWQS. A comparison of unfiltered (total) metals data to filtered (dissolved) metals data reveals a significant reduction in concentrations in the filtered samples, with detected concentrations for several analytes being below the NJ GWQS. The reduction in metals concentration between filtered and unfiltered results suggests sample turbidity may have increased concentrations detected in the total metals sample fractions. There are no exceedances for lead or beryllium in filtered samples, further suggesting that exceedances of the NJ GWQS for these two metals is attributed to sample turbidity. Arsenic was detected in 11 of 16 overburden groundwater samples at concentrations ranging from 0.61 to 3.7 micrograms per liter (µg/L) (for filtered fractions), slightly above the NJ GWQS of 3 µg/L, suggesting that arsenic concentrations are reflective of regional, naturally occurring groundwater quality conditions. Based on the high frequency of iron and manganese detections and similarity of concentrations between total and dissolved results, elevated iron and manganese concentrations are likely representative of natural regional groundwater quality conditions.

Analytical results confirm that there are few COPCs present in groundwater beneath the Site. PCE was detected in groundwater samples collected from only one location during historical sampling, was not detected in RI groundwater samples, and appears to be a localized anomaly. Shallow overburden flow is toward the interior of Site (toward Bound Brook) and, therefore, there is no migration pathway to potential off-Site shallow groundwater receptors. Historical and 2007 RI groundwater results confirm the presence of few COPCs in the shallow overburden unit.

Bedrock

During the 2007 RI, groundwater samples were collected from four shallow bedrock monitoring wells via low flow sampling methods. No VOCs, pesticides or PCBs were detected in bedrock groundwater at concentrations exceeding the NJ GWQS. Bis(2-ethylhexyl) phthalate (BEHP) and arsenic were detected in the groundwater at concentrations exceeding the NJ GWQS. Arsenic was detected at concentrations exceeding the NJ GWQS in all four groundwater samples. The detection of arsenic and BEHP at concentrations above the NJ GWQS is not likely related to the Site. Arsenic was detected in the majority of RI surface water and overburden groundwater samples, including background samples. The narrow detection range for arsenic indicates that it is naturally occurring in bedrock groundwater at low concentrations that slightly exceed the NJ GWQS of 3 µg/L.

The 2007 RI groundwater results confirm the absence of Site-related COPCs in the upper bedrock unit. Furthermore, due to the presence of the clayey silt (which may act as a semi-confining unit) between the shallow overburden and bedrock units and the upward vertical hydraulic gradient, there is no potential for dissolved constituents in the overburden groundwater to migrate to the bedrock groundwater.

Potable Water

During historical investigations, water samples were collected from four domestic wells located hydraulically upgradient of the Eastern and Western Dumps. Analytical results for drinking water samples were compared to Federal and New Jersey Primary and Secondary Drinking Water Standards (February 2005) and the New Jersey Maximum Contaminant Levels (MCLs).

Results for the historical sampling indicated only metals (arsenic, barium, calcium, copper, iron, magnesium, potassium, sodium, vanadium and zinc) were detected in domestic well water samples below the MCL. There were no detections of VOCs, SVOCs, PCBs or pesticides in the drinking water samples. It should be noted that the detected arsenic concentration of 4.7 µg/L for the sample collected from location DW-02 (while below the MCL of 5 µg/L) is above the NJ GWQS of 3 µg/L, as are the detected arsenic concentrations in groundwater samples collected from the four bedrock monitoring wells. Analytical results for 2007 RI domestic well sampling did not detect any constituents above the MCL.

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

Land Use: The Site is currently open space as are most of the neighboring properties. The Site properties and much of the surrounding area are zoned commercial/industrial, though none of the lots are currently used for that purpose. The 2005 Conceptual Site Model (CSM) prepared by TRC assumes the area will be utilized for "passive recreation, hiking, and ecological education" and EPA anticipates that the land will remain open space.

Groundwater Use: Groundwater underlying the Site is considered by New Jersey to be Class IIA, a source of potable water. With few exceptions, residential and non-residential users in the area of the Site are currently using publicly supplied potable water which is treated to assure all drinking water standards are met. There are no current uses of groundwater resources at the Site and none are anticipated in the future. If contaminated groundwater from the Site is used as potable water in the future, risks to human health would exceed acceptable levels due to naturally occurring metals in the groundwater.

SUMMARY OF SITE RISKS

TRC completed a BHHRA and a SLERA for the Site. These risk assessments were based on the CSM developed for the Site and environmental sampling data collected during the RI. The risk assessments evaluate and determine the risk posed by Site contaminants to humans and ecological receptors. The risk assessments provide the basis for taking action and identify the contaminants and exposure pathways that need to be addressed by the remedial action.

Human Health Risk Assessment

A four-step process is utilized for assessing Site-related human health risks for a reasonable maximum exposure scenario:

- *Hazard Identification* – uses the analytical data collected to identify the contaminants of potential concern (COPCs) at the Site for each medium, with consideration of a number of factors explained below;
- *Exposure Assessment* - estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways by which humans are potentially exposed;
- *Toxicity Assessment* - determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and
- *Risk Characterization* - summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of Site-related risks. The risk characterization also identifies contamination with concentrations that exceed acceptable levels, defined by the NCP as an excess lifetime cancer risk greater than 1×10^{-6} to 1×10^{-4} or a hazard index greater than 1.0. Contaminants at these concentrations are considered COPCs and are typically those that will require remediation at the Site. Also included in this section is a discussion of the uncertainties associated with these risks.

Hazard Identification

COPCs were selected by comparing the maximum detected concentration of each analyte in soil, sediment, surface water and groundwater with available risk-based screening values for potentially complete pathways. The BHHRA showed that the following Site areas have calculated risk higher than EPA cancer and non-cancer target levels: the Western Dump including hot spots and the Western Dump exclusive of hot spots. The principal COPC driving the calculated risk is PCBs in soils. No threats to human health were found in the Eastern Dump soil, surface water, sediment or groundwater throughout the Site from the COPCs. Other COPCs contributing to risk include dioxins, polycyclic aromatic hydrocarbons (PAHs) and pesticides.

A comprehensive list of all COPCs can be found in the BHHRA, which consists of documents entitled "Final Baseline Human Health Risk Assessment – Woodbrook Road Dump Site," prepared by TRC, which includes the "Draft Baseline Human Health Risk Assessment," "TRC response to USEPA comments," and "Addendum to Draft Baseline Human Health Risk Assessment." These documents are available in the Administrative Record file. Only the COPCs, or those chemicals requiring remediation at the Site, are listed in Table 1 of Appendix II.

Exposure Assessment

Consistent with Superfund policy and guidance, the BHHRA is a baseline assessment and, therefore, assumes no remediation or institutional controls to mitigate or remove hazardous substance releases. Cancer risks and noncancer hazard indices were calculated based on an estimate of the reasonable maximum exposure (RME) expected to occur under current and future conditions at the Site. The RME is defined as the highest exposure that is reasonably expected to occur at the Site. The input values for assessing exposures are consistent with EPA guidance for characterizing RME conditions. Under the NCP, decisions are based on RME exposures. A Central Tendency Exposure evaluation was not conducted for this risk assessment.

The exposure assessment identified potential human receptors based on a review of current and reasonably foreseeable future land use at the Site. The Woodbrook Road Dump property is a private property zoned for commercial/light industrial use. While the potential zoned land uses are plausible in theory, in practice the adjoining properties are not commercial or industrial. They include undeveloped open space and two residences. There are currently no utilities to support redevelopment. In addition, wetland protection laws and regulations will pose impediments to the zoned land use. The BHHRA evaluated the current and plausible future land use of open space/wetlands, which would be more conservative and, therefore, also protective for the zoned land use.

Potential routes of exposure for current receptors include ingestion and dermal contact with soils, sediments, surface water and groundwater and ingestion of fish and wildlife tissue (deer and mallards. Potential routes of exposure for future receptors include ingestion and dermal contact with soils, sediments and surface water. The soils were divided into five different exposure areas based on probable Site use and sampling regimes. A summary of the exposure pathways that were associated with elevated risks or hazards can be found in Table 2 of Appendix II.

The calculation of the exposure point concentrations (EPCs) followed the "Supplemental Guidance to RAGS: Calculating the Concentration Term," using EPA's ProUCL 4.1 software. Specifically, ProUCL 4.1 has the extended version of Shapiro-Wilk test that can perform normal and lognormal goodness-of-fit tests for data sets of sizes up to 2000. ProUCL 4.1 can also

compute upper prediction and upper tolerance limits based upon the gamma distribution. In those cases where the Upper Confidence Limit (UCL) exceeds the maximum value, the maximum concentration shall be used as the EPC. A summary of the EPCs for the COPCs in each medium can be found in Table 1 of Appendix II, while a comprehensive list of the EPCs for all COPCs can be found in the BHHRA.

Toxicity Assessment

Under current EPA guidelines, the likelihood of carcinogenic risks and noncancer hazards due to exposure to Site chemicals are considered separately. Consistent with current EPA policy, it was assumed that the toxic effects of the Site-related chemicals would be additive. Thus, cancer and noncancer risks associated with exposures to individual COPCs were summed to indicate the potential risks and hazards associated with mixtures of potential carcinogens and noncarcinogens, respectively.

The toxicity assessment identified potential effects generally associated with exposure to the COPCs. Two types of toxic effects were evaluated for each receptor in the risk assessment: carcinogenic effects and non-carcinogenic effects. Calculated risk estimates for each receptor were compared to EPA's acceptable range of carcinogenic risk of 1×10^{-6} (one-in-one million) to 1×10^{-4} (one-in-ten thousand), and EPA's acceptable non-cancer hazard quotient less than or equal to a target value of one.

Toxicity data for the human health risk assessment were provided by the Integrated Risk Information System (IRIS) database or the "Provisional Peer-Reviewed Toxicity Database," which is another source that is identified as an appropriate reference for toxicity values consistent with EPA's directive on toxicity values. This information is presented in Appendix II, Table 3 (noncancer toxicity data summary) and Table 4 (cancer toxicity data summary). Additional toxicity information for all COPCs is presented in the BHHRA.

Risk Characterization

Noncarcinogenic risks were assessed using a hazard index (HI) approach, based on a comparison of expected contaminant intakes and benchmark comparison levels of intake (reference doses, reference concentrations). Reference doses (RfDs) and reference concentrations (RfCs) are estimates of daily exposure levels for humans (including sensitive individuals) that are thought to be safe over a lifetime of exposure. The estimated intake of chemicals identified in environmental media (*e.g.*, the amount of a chemical ingested from contaminated drinking water) is compared to the RfD or the RfC to derive the hazard quotient (HQ) for the contaminant in the particular medium. The HI is obtained by adding the hazard quotients for all compounds within a particular medium that impacts a particular receptor population.

The HQ for oral and dermal exposures is calculated as below. The HQ for inhalation exposures is calculated using a similar model that incorporates the RfC, rather than the RfD.

HQ = Intake/RfD

Where: HQ = hazard quotient
Intake = estimated intake for a chemical (mg/kg-day)
RfD = reference dose (mg/kg-day)

The intake and the RfD will represent the same exposure period (i.e., chronic, subchronic, or acute).

As previously stated, the HI is calculated by summing the HQs for all chemicals for likely exposure scenarios for a specific population. An HI greater than 1.0 indicates that the potential exists for noncarcinogenic health effects to occur as a result of Site-related exposures, with the potential for health effects increasing as the HI increases. When the HI calculated for all chemicals for a specific population exceeds 1.0, separate HI values are then calculated for those chemicals which are known to act on the same target organ. These discrete HI values are then compared to the acceptable limit of 1.0 to evaluate the potential for noncancer health effects on a specific target organ. The HI provides a useful reference point for gauging the potential significance of multiple contaminant exposures within a single medium or across media. A summary of the noncarcinogenic risks associated with these chemicals for each exposure pathway is contained in Appendix II, Table 5.

For carcinogens, risks are generally expressed as the incremental probability of an individual developing cancer over a lifetime as a result of exposure to a carcinogen, using the cancer slope factor (SF) for oral and dermal exposures and the inhalation unit risk (IUR) for inhalation exposures. Excess lifetime cancer risk for oral and dermal exposures is calculated from the following equation, while the equation for inhalation exposures uses the IUR, rather than the SF:

Risk = LADD x SF

Where: Risk = a unit-less probability (1×10^{-6}) of an individual developing cancer
LADD = lifetime average daily dose averaged over 70 years (mg/kg-day)
SF = cancer slope factor, expressed as [1/mg/kg-day]

These risks are probabilities that are usually expressed in scientific notation (such as 1×10^{-4}). An excess lifetime cancer risk of 1×10^{-4} indicates that one additional incidence of cancer may occur in a population of 10,000 people who are exposed under the conditions identified in the

assessment. Again, as stated in the NCP, the acceptable risk range for site-related exposure is 1 x 10^{-6} to 1 x 10^{-4}. The risk characterization combined the exposure and toxicity information to determine estimated risks to the selected exposure groups. See Appendix II, Table 6, for a summary of cancer risks.

The results of the BHHRA show that the following Site areas have no calculated risk higher than EPA cancer and non-cancer target levels:

- Eastern Dump;
- Panhandle; and
- Perimeter

The BHHRA shows that the following Site areas have calculated risk higher than EPA cancer and non-cancer target levels:

- Hot spots in Western Dump, and
- Western Dump, exclusive of hot spots.

The principal COPCs that are driving the calculated risk are PCBs. Other COPCs that influence the risk are dioxins and PAHs.

Further, the BHHRA shows that the following Site areas also have calculated risks greater than EPA cancer and non-cancer target levels, but no actual risks to human health, for reasons explained below:

- Western Pond (sediments, surface water and fish), and
- Bound Brook (fish)

The principal COPCs that are driving the calculated risk in these areas are PCBs, PAHs, arsenic and mercury. Site sediment and surface water concentrations of PAHs and PCBs are less than or equal to upstream and downstream areas; thus, the risk associated with PCBs and PAHs are not exclusive to the Site and would be expected to be similar in the upstream and downstream areas. Thus, these areas are not believed to present actual risk above EPA target levels due to (a) background comparisons of Site sediments and surface water with upstream and downstream reference areas, which do not suggest the presence of a current Site-derived source of PCBs to surface water, and (b) conservative assumptions in calculating fish tissue concentrations. Arsenic concentrations in Site sediment and mercury concentrations in Site surface waters are less than or equal to the reference areas; thus, risk associated with arsenic and mercury in fish tissue is also notsite-related, and due to natural conditions or regional anthropogenic sources.

The BHHRA concluded that a few data points originally identified as being within the Western Pond sediments showed calculated risk due to PCBs. As noted earlier, these samples were adjacent to the Western Dump and are likely to be made up of fill material. Because the water level of the Western Pond advances and recedes, depending on weather conditions, these samples are considered as part of the Western Dump soil and will be addressed in remediation of the Western Dump and not as separate "sediments."

Although ingestion of on-site groundwater shows an unacceptable future risk (greater than the acceptable 1×10^{-4} to 1×10^{-6} cancer risk range and the non-cancer threshold of 1) due to naturally occurring metals (chromium as chromium VI, iron and manganese), there is no current or plausible future exposure to Site groundwater. The Site is zoned M-3 Industrial, which does not allow for residential use and, as cited earlier, other plausible future land uses would not include residential.

Uncertainties

The procedures and inputs used to assess risks in this evaluation, as in all such assessments, are subject to a wide variety of uncertainties. In general, the main sources of uncertainty include:

- environmental chemistry sampling and analysis;
- environmental parameter measurement;
- fate and transport modeling;
- exposure parameter estimation; and
- toxicological data.

Uncertainty in environmental sampling arises in part from the potentially uneven distribution of chemicals in the media sampled. Consequently, there is significant uncertainty as to the actual levels present. Environmental chemistry-analysis error can stem from several sources including the errors inherent in the analytical methods and characteristics of the matrix being sampled.

Uncertainties in the exposure assessment are related to estimates of how often an individual would actually come in contact with the chemicals of concern, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure. Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the risk assessment provides upper-bound estimates of the risks to populations near the Site, and is highly unlikely to underestimate actual risks related to the Site.

Ecological Risk Assessment

A four-step process is utilized for assessing Site-related ecological risks for a reasonable maximum exposure scenario:

- *Problem Formulation* - a qualitative evaluation of contaminant release, migration, and fate; identification of contaminants of concern, receptors, exposure pathways, and known ecological effects of the contaminants; and selection of endpoints for further study.
- *Exposure Assessment* - a quantitative evaluation of contaminant release, migration, and fate; characterization of exposure pathways and receptors; and measurement or estimation of exposure point concentrations.
- *Ecological Effects Assessment* - literature reviews, field studies, and toxicity tests, linking contaminant concentrations to effects on ecological receptors.
- *Risk Characterization* - measurement or estimation of both current and future adverse effects.

A SLERA was conducted for the Woodbrook Road Dump Site to determine which contaminants and exposure pathways presented ecological risks based on conservative assumptions. The SLERA evaluated ecological receptors and important exposure pathways for both aquatic and terrestrial habitats present within the Site and assessed how contaminants detected within the surface water, sediments and surface soils of the Site may potentially affect the identified ecological receptors (e.g., via direct contact or ingestion of contaminated media and food items). Exposure to bioaccumulative preliminary contaminants of potential ecological concern (PCOPECs) via aquatic and terrestrial food chains was evaluated by modeling exposure to indicator species associated with Site habitat. Both maximum and mean concentrations within each medium for each area of concern were used to evaluate exposure. Literature based biosediment accumulation factors or bioaccumulation factors (for soil) were used to calculate a body burden for aquatic invertebrates, terrestrial invertebrates, and small mammals. Quantitative risk was evaluated by using the HQ approach (exposure estimates are compared to the ecotoxicity benchmark values). HQs greater than one indicate potential risk.

The selected assessment endpoints represent both community level endpoints (e.g., macroinvertebrate diversity and productivity) and population level endpoints (e.g., survival, growth and reproduction of particular guilds such as piscivorous birds). Community-based measurement endpoints (e.g. sediment quality criteria, ecological soil screening values) were selected for community level assessment endpoints. For population level endpoints food chain models evaluated the risk to representative trophic level species.

The selected receptors represented various trophic level and feeding guilds for both the aquatic (Bound Brook and the Western Pond) and terrestrial habitats (Eastern Dump, Western Dump,

Panhandle). Species evaluated included aquatic herbivores and insectivores (muskrat, mallard, little brown bat), piscivores (belted kingfisher, mink), terrestrial herbivores (mourning dove, white-footed mouse), terrestrial insectivores (American robin, short-tailed shrew), as well as carnivores (redtailed hawk and red fox).

Estimated contaminant exposure doses were compared to chronic No Observable Adverse Effect Level (NOAEL) survival, reproductive, or growth effect levels reported in the literature. An exposure dose that exceeds the chronic NOAEL indicates effects are possible. Adverse effects on populations can be inferred from measures associated with impaired survival, growth or reproduction.

Preliminary remediation goals (PRGs) were developed for the following four areas where ecological risk was identified (see Table 7 of Appendix II)

- Sediments associated with Bound Brook/Tributaries: PRGs were developed for alpha & gamma chlordane as sediment concentrations exceeded values protective of the benthic community. PRGs selected were upstream concentrations which represent non-site influenced background conditions with the Bound Brook. Any remediation efforts directed at Bound Brook sediments within the Site would not result in long-term risk reduction as upstream sources of chlordane present in Bound Brook sediment would likely be transported to portions of Bound Brook within the Site during large storm events. Because the mean UCL sediment concentrations of chlordane at Bound Brook/Tributaries are below the PRGs selected for these PCOPECs, remediation in this aquatic habitat was not recommended by the SLERA.
- Sediments associated with the Western Pond: Total PCBs present a risk to benthic macroinvertebrates; avian/mammalian insectivores and piscivores. For the wildlife indicator species, PRGs for total PCBs in sediment were calculated based on the use of an HQ of 1 for the selected Maximum Acceptable Toxicant Concentration (MATC) avian/mammalian Toxicity Reference Value (TRVs). The evaluation of total PCBs (Aroclors) indicated that the most sensitive receptor would be the benthic community as a PRG of 0.68 mg/kg was calculated. The evaluation of PCB/dioxin/furan congeners indicates that the most sensitive receptor is the mink with sediment PRG of 0.31 mg/kg calculated. Only certain Western Pond sediment samples exceeded this PRG. These sample locations are near the interface of the Western Pond and the Western Dump. This interface is sometimes saturated and sometimes not, depending on recent climatological conditions. The SLERA recommended that a response action was warranted at these specific PRG exceedances. As previously noted, due to the proximity of the samples to the Western Dump, the samples are better categorized as fill/debris/soil and not sediments and will be included in the remediation of the Western Dump.

- Surface soils in the Western Dump: PCBs (Aroclors and PCB/dioxin/furan congeners), five pesticides (total DDT, aldrin, dieldrin, endrin, heptachlor epoxide) and several inorganics (cadmium, copper, lead and mercury) present potential risk to avian/mammalian herbivores and insectivores and mammalian carnivores. Five representative receptors were evaluated and the lowest PRG calculated (based on the sensitivity of the receptor) was selected. The insectivores (shrew and American Robin) were the most sensitive receptors and PRGs were based on their exposure doses.
- Surface soils in the Eastern Dump: High molecular weight PAHs, PCBs (Aroclors and PCB/ dioxin/furan congeners) and several inorganics (cadmium, copper, lead and mercury) present potential risk to avian/mammalian herbivores and insectivores and mammalian carnivores. Five representative receptors were evaluated and the lowest PRG calculated (based on the sensitivity of the receptor) was selected. The insectivores (shrew and American Robin) were the most sensitive receptors and PRGs were based on their exposure doses.

The SLERA recommended that adverse ecological exposures were likely, and that risk was appropriately defined. Only one risk driver was identified (total PCBs), and the exposure endpoints were well understood in terms of PCB exposures. Therefore, TRC recommended, and EPA agreed, that sufficiently conservative ecological risks could be estimated from the SLERA.

In summary, the SLERA made the following recommendations:

- Bound Brook/Tributaries — no areas of sediment are above the PRGs.
- Western Pond – Remove specific sediments that contain concentrations of total PCBs that are greater than the PRG associated with the Western Pond. As stated earlier, due to their proximity, this area will be included in remediation of the Western Dump.
- Western Dump -Remediate surface soils associated with the Western Dump in locations where concentrations exceed the PRGs. The removal or capping of surface soils above the PRGs would eliminate the exposure pathway to various receptors and sufficiently reduce ecological risk.
- Eastern Dump - Although mean UCL exposure concentrations of several COPECs exceed MATC TRVs only mean UCL exposure doses of PCBs, cadmium and lead are equal to or exceed their respective LOAEL TRVs. PCB Aroclors 1248, 1254 and 1260 each exceed the PCB Aroclor PRG at one sampling location each. Cadmium concentrations in approximately 35 percent of Eastern Dump surface soils result in exposure doses that exceed MATC and LOAEL TRVs for avian/mammalian insectivores. Lead concentrations in approximately 70 percent of the Eastern Dump surface soils exceed the MATC TRV for avian insectivores. The potential removal of surface soils

associated with elevated concentrations of COPECs in portions of the Eastern Dump may reduce the risk to various receptors that presently use this habitat.

More specific information concerning public health risks and environmental risks, including a quantitative evaluation of the degree of risk associated with various exposure pathways, is presented in the risk assessment reports. The response action selected in the Record of Decision is necessary to protect the public health and the environment from actual or threatened release of hazardous substances in the environment.

REMEDIAL ACTION OBJECTIVES

Remedial action objectives (RAOs) are specific goals to protect human health and the environment. These objectives are based on available information and standards such as applicable or relevant and appropriate requirements (ARARs) and risk based levels established in the risk assessment.

Based on the site-specific human health and ecological risk assessment results, PCBs in soil and debris pose an unacceptable risk. Therefore, the following RAOs address the human health and ecological risks posed by PCB-contaminated soil and debris at the Site:

- Reduce or eliminate the direct-contact threat associated with contaminated soil and debris to levels protective of current and potential future land uses. The most conservative land use anticipated for the Site would be a future recreational user/trespasser.
- Reduce or eliminate exposures through biological uptake of contaminated soil and debris, and contaminated food items to environmental receptors.
- Prevent or minimize contact by humans and environmental receptors to PCB-contaminated capacitors and capacitor parts as well as PCB-contaminated soil and debris identified as principal threats at the Site.
- Prevent contaminant migration to currently unaffected areas or to sediments and surface water.

The RI collected sediment and surface water data from the Bound Brook; however, EPA is conducting an RI/FS on the entire Bound Brook (CDE Site OU4), including the section that passes through this Site. EPA is not assessing Bound Brook sediments and surface water in this decision, and will make a determination on the nature and extent, risks posed, and response actions needed as part of the Bound Brook CDE study. For the selected remedy the issue is only whether the Site constituents have the potential to be a former or potential long-term source of contaminants to the Brook.

The RI report also identified several samples as "sediments" in the Western Pond. This is a low-lying area adjacent to the Western Dump with standing water most of the year. The elevated PCB levels are in areas better characterized as part of the Western Dump, rather than as sediments to be addressed separately. These detections in the sediment are being included as part of the response actions for the dump, and are considered soil.

The RI found exceedances of MCLs in groundwater monitoring wells, though not in any nearby potable wells. There is not a pattern to the exceedances suggesting a groundwater plume, and the detected constituents are not otherwise identified as Site contaminants in the soil or debris. In addition, the wells with detections were installed in shallow water-bearing sections of the aquifer that, while technically part of the drinking water aquifer, would not be a viable source of potable water. The Agency has concluded that no further actions are required for the groundwater, though post-remedial action groundwater monitoring is warranted as a precaution.

REMEDIATION GOALS

The Remediation Goals discussed below address PCBs. The conclusions of the risk assessment identified PCBs as driving the human and ecological risk in the Western Dump and the ecological risk in the Eastern Dump. When a Remediation Goal for PCBs is satisfied, other contaminants of concern (COCs) would not pose an unacceptable risk.

In developing remediation goals for the Western and Eastern Dumps, the EPA found that the high levels of PCBs were only found near capacitors and, therefore, identified the capacitors and neighboring soils/debris as "principal threat wastes". EPA "Guidance on Remedial Actions for Superfund Sites with PCB Contamination, 1990" (EPA PCB Guidance) identifies two different thresholds for PCBs as principal threat waste, 500 ppm for industrial land and 100 ppm for residential land uses. EPA has elected to use 100 ppm, concluding that the land is not expected to be developed as industrial land. The Site will likely be open space/wetlands, infrequently visited and not subject to routine monitoring.

The human health risk assessment identified an unacceptable risk to exposure to illegal Site trespassers, utility workers, current and future off-site residents and future recreational hikers at the Western dump, and a back-calculation of the 1 $x10^{-6}$ exposure reveals a PRG of 1.1 ppm total PCBs. There was no unacceptable human health risk at the Eastern Dump; however, an ecological risk value of 1.43 ppm total PCBs was calculated for the eastern dump. These values are sufficiently similar and sufficiently close to EPA's 1.0 ppm remedial goal for PCBs on residential properties (from the EPA PCB guidance) that the Region plans to use 1.0 ppm as its remediation goal.

NJDEP has promulgated residential and commercial direct-contact remediation standards for a list of chemicals, including PCBs (0.2 ppm for residential and 1.0 ppm for non-residential). There are a number of detections throughout the dumps that exceed these standards, for PCBs, and a number of other constituents, exceed the NJDEP residential direct-contact soil cleanup criteria (RDCSCC) that are otherwise not meaningful contributors to the risk posed by the Site. The selected remedy will implement institutional controls to prevent development of these properties for unrestricted (residential) use. The human health risk assessment concluded that, but for the PCBs, the types of passive exposures that would occur on these properties in future would not pose an unacceptable risk. Given the expected future use for this Site, unrestricted use would not be anticipated. New Jersey's promulgated standard will require that, at a minimum, land use would need to be controlled to prevent unrestricted use. The expected future land use is neither an unrestricted (residential) or commercial/industrial exposure scenarios. EPA has concluded that a 1.0 ppm level would be adequately protective for the expected future land uses for ecological receptors and for human exposures.

DESCRIPTION OF ALTERNATIVES

CERCLA requires that each remedial alternative be protective of human health and the environment, be cost effective, comply with other statutory laws, and utilize permanent solutions and alternative treatment technologies and resource recovery technologies to the maximum extent practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility or volume of hazardous substances.

This section provides descriptions and analysis of the remedial alternatives for PCBs in surface soil and debris. The FS broke the Site down into three subareas requiring remedial action: the Western Dump hot spots, the remainder of the Western Dump, and the Eastern Dump. The report then discussed five alternatives for each of the subareas. As discussed in the Proposed Plan, the site-wide remedial alternatives discussed below are compiled from the 15 subarea remedial alternatives developed in the FS. See Table 9 of Appendix II for a cross reference between the FS and the Proposed Plan alternatives.

The FS considered the Western Dump hot spots separate from the rest of the Western Dump because EPA considers the hot spots to be principal threat wastes. Principal threat wastes: have greater than 100 ppm PCBs; contain or are close to capacitors and/or parts; and are located in the Western Dump. It is EPA's preference to select permanent remedies that treat principal threat wastes, wherever practicable. Therefore, for hot spots, the "monitoring only" as well as "capping/consolidation" alternatives are eliminated, leaving only "no action," "on-site treatment" and "excavation/off-site disposal" for the principal threat wastes.

Low-level threat wastes contain PCB concentrations greater than 1 ppm but less than 100 ppm and are located in the Western Dump and, to a lesser extent, in the Eastern Dump. Whereas capping alone was not considered appropriate for the principal threat wastes, it was retained for the low-level threat wastes. Preventing direct contact is the primary capping goal, with preventing migration a secondary goal. Capping in a wetland environment raises several considerations as to long-term maintenance of the capped area, particularly if the cap materials are impervious to water movement. Leaching to groundwater is not occurring on the Site to any significant degree, so an impervious cap material is not required. As per the EPA PCB Guidance, the FS considered different types of cap materials, including a hazardous waste landfill cap as defined by the Resource Conservation and Recovery Act (RCRA) Subtitle C cap (multi- layer, impervious materials), a clay cap, or a vegetative soil cap. Because impervious materials would fundamentally change the hydrodynamics of the marsh and would be difficult to implement, and capping is only being considered for low-level wastes, a vegetative soil cover is an appropriate cap material for capping alternatives.

There were two capping methods under consideration: consolidation and capping in one area of the Site; and capping in place. As discussed below, consolidation and capping was the preferred approach.

Also present on the Site are large areas of debris that are not contaminated by PCBs in excess of the 1 ppm remediation goal. The Site was once an unregulated dump, filled with varying types of municipal debris, particularly glass. Clearing and grubbing activities, performed for excavation or consolidation and capping, will also disturb some of this debris. These wastes are not regulated under CERCLA and will, therefore, remain on Site after the selected remedy is implemented. The selected remedial action will attempt to minimize the collateral damage caused during excavations, and wetlands and floodplains will be restored after completion of the action. Whereas “restoration” would typically entail returning the Site to close to its original condition, in this case the post-remedy topographic profile of the Site is expected to change. For example, for alternatives that either excavate soil and debris for off-site disposal or that consolidate soil and debris into a smaller surficial area on the Site, EPA expects that the remediated areas would not be backfilled to the current grades but would be restored to a topography closer to the natural wetland contours of the area that existed prior the dumping. The construction time for each alternative reflects only the time required to construct or implement the remedy and does not include the time required to design the remedy, negotiate the performance of the remedy with any potentially responsible parties, or procure contracts for design and construction.

Common Elements

All of the remedial alternatives except Alternative 1 include long-term monitoring of the Site and institutional controls to limit future land uses. Limited post-remediation monitoring of groundwater would be required for all the remedial alternatives (again, except Alternative 1), to demonstrate that groundwater conditions have not been adversely changed by the implementation of the remedy. Long-term monitoring of groundwater would not be required. The degree of operation and maintenance (O&M) will vary from alternative to alternative. Institutional controls are administrative and legal controls that help to minimize the potential for human exposure to contaminants. Institutional controls consisting of deed restrictions will be implemented along with some of the alternatives. Given the expected future use for this Site, unrestricted use would not be anticipated. New Jersey‘s promulgated standard for unrestricted use will require that, at a minimum, land use would need to be controlled to prevent unrestricted (e.g., residential) use. These institutional controls limit future use of the Site soil and are common components of each of the alternatives. If CERCLA wastes are left on the Site, five-year reviews would be conducted to monitor the contaminants and evaluate the need for future actions.

Alternative 1: No Action

Estimated Capital Cost:	$0
Estimated Annual O&M Cost:	$0
Estimated Present Worth:	$0
Estimated Construction Time:	None

The no action alternative is required by the NCP to be carried through the screening process. The no action alternative would include no action being taken and serves as a baseline for comparison of Site remedial alternatives. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five-year review would be required. Under this alternative, EPA would take no action at the Site to prevent potential exposure to soil contamination.

Alternative 2 – On-site Treatment of Principal Threat Waste with Consolidation and Capping of Residual Soil

Estimated Capital Cost:	$8,555,000
Estimated Annual O&M Cost:	$6,400
Estimated Present Worth:	$8,695,000

Estimated Construction Time: 1 yr + O&M

Under this alternative, principal threat wastes with PCB concentrations greater than 100 ppm would be treated by an on-site treatment process, low temperature thermal desorption (LTTD). Contaminated soil and debris would be excavated for treatment at an on-site LTTD treatment facility temporarily constructed at the Site. LTTD is a physical separation process by which wastes are heated in thermal desorption units to volatilize water and organic contaminants. A carrier gas or vacuum system transports volatilized water and organics to the gas treatment system. Contaminants are removed through condensation followed by carbon adsorption or they are destroyed in a secondary oxidation unit. The post-treatment target would be less than 1 ppm total PCBs and treated material would then be returned to the Site. Debris that cannot be successfully treated would be disposed off-site.

For Alternative 2, soil and debris from the Eastern and Western Dump with PCB concentrations exceeding 1 ppm would be consolidated into a single location in the Western Dump and capped. For capped material, a maximum allowable concentration for total PCBs is 100 ppm, though based on the RI data, the average concentration remaining under the cap is expected to be less than 10 ppm. The capping would consist of a permeable and vegetated soil cap. This alternative would include wetland restoration for remediated areas where soil and debris have been excavated. Long-term O&M of the cap include periodic inspections, mowing to maintain the integrity of the vegetative cover and maintain proper drainage, and repair of damaged sections as needed. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five-year review would be required. Institutional controls would be implemented as described in Common Elements.

Alternative 3 – On-site Treatment

Estimated Capital Cost:	$41,516,000
Estimated Annual O&M Cost:	$0
Estimated Present Worth:	$41,516,000
Estimated Construction Time:	2 years

Under this alternative, principal threat wastes and residual wastes with PCB concentrations greater than 1 ppm would be treated by the on-site treatment process, LTTD. This alternative would address all waste on Site (principal threats and low-level threats) to be treated with thermal desorption process described in Alternative 2. As with Alternative 2, debris that cannot be successfully treated would be disposed off-site.

This alternative would include post-remedial wetland restoration. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five year review would be required. The purpose of the five-year review would be to assure that the land use remains unchanged. Institutional controls would be implemented as described in Common Elements.

Alternative 4 – Excavation/Off-site Disposal of Principal Threat Waste with Consolidation and Capping of Residual Soil

Estimated Capital Cost:	$4,476,000
Estimated Annual O&M Cost:	$6,400
Estimated Present Worth:	$4,738,750
Estimated Construction Time:	0.5 yr + O&M

In this alternative, soil and debris with PCB concentrations greater than 100 ppm would be excavated and disposed of off-site. The disposal facility would be chosen based upon waste classification and waste facility permits/approvals. Treatment may be required prior to land disposal of some portion of the wastes. Post-excavation sampling would be performed to document compliance with the remedial goal of 100 ppm. Residual soil in the Western and Eastern Dumps will be consolidated and capped in the same method described in Alternative 2.

This alternative would include post-remedial wetland restoration. Long-term O&M would be conducted as described in Alternative 2. Institutional controls would be implemented as described in Common Elements. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five-year review would be required.

Alternative 5 – Excavation/Off-site Disposal of Principal Threat Waste, Consolidation/Capping of Western Dump, Spot Excavation/Monitoring of Eastern Dump

Estimated Capital Cost:	$4,332, 000
Estimated Annual O&M Cost:	$8,133
Estimated Present Worth:	$4,484,200
Estimated Construction Time:	0.5 yr + O&M

This alternative would include the same requirement of principal threat wastes as described in Alternative 4, excavation and off-site disposal. The alternative would also consolidate and cap soil and debris in the Western Dump with PCB concentrations less than 100 ppm as described in Alternatives 2 and 4. The average concentration remaining under the cap in the Western Dump

would be 10 ppm. However, due to limited PCB contamination found in the Eastern Dump, this alternative would allow for removal of soil greater than 10 ppm. This would leave an average concentration of less than 2 ppm uncapped in the Eastern Dump. This area would be subject to institutional controls to achieve protectiveness and monitoring. For the Eastern Dump, fencing would be maintained to limit access to the surface soils.

This alternative would include post-remedial wetland restoration. Long-term O&M would be conducted as described in Alternative 2. Institutional controls would be implemented as described in Common Elements. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five-year review would be required.

Alternative 6 – Excavation and Off-site Disposal

Estimated Capital Cost:	$24,354,000
Estimated Annual O&M Cost:	$0
Estimated Present Worth:	$24,354,000
Estimated Construction Time:	1 year

Under this alternative, principal threat wastes and residual wastes with PCB concentrations greater than 1.0 ppm would be excavated and disposed of off-site at an appropriate disposal facility. Treatment may be required prior to land disposal of some portion of the wastes. Excavation and off-site disposal would be accomplished under the same description as Alternative 4; however, it would apply to all PCB-contaminated material, principal threats as well as low level.

This alternative would include post-remedial wetland restoration. Institutional controls would be implemented as described in Common Elements. Because this alternative would result in hazardous substances, pollutants, or contaminants remaining at the Site above levels that allow for unlimited use and unrestricted exposure, a five year review would be required. The purpose of the five-year review would be to assure that the land use remains unchanged.

COMPARATIVE ANALYSIS OF ALTERNATIVES

In selecting a remedy, EPA considered the factors set out in CERCLA §121, 42 U.S.C. §9621, by conducting a detailed analysis of the viable remedial response measures pursuant to the NCP, 40 CFR §300.430(e)(9) and OSWER Directive 9355.3-01. The detailed analysis consisted of an assessment of the individual response measure against each of the nine evaluation criteria

is in the FS report. This section profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other alternatives under consideration.

Threshold Criteria *- The first two criteria are known as "threshold criteria" because they are the minimum requirements that each response measure must meet to be eligible for selection as a remedy.*

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1. **Overall Protection of Human Health and the Environment**

Overall protection of human health and the environment addresses whether each alternative provides adequate protection of human health and the environment and describes how risks posed through each exposure pathway are eliminated, reduced, or controlled, through treatment, engineering controls, and/or institutional controls.

Since Alternative 1 (no further action) would not address the risks posed by soil contaminants, it would not be protective of human health and the environment.

All of the alternatives except the “no action” alternative would provide adequate protection of human health and the environment by eliminating, reducing, or controlling risk through treatment, removal or containment. Contaminants would be treated to risk-based levels or contained through Alternatives 2 (On-site Treatment of Principal Threat Waste with Consolidation and Capping of Residual Soil) and 3 (On-site Treatment). Alternatives 4 (Excavation/Off-site Disposal of Principal Threats, Consolidation and Capping of Residuals), 5 (Excavation/Off-site Disposal, Consolidation/Capping of Western Dump, Spot Excavation/Monitoring of Eastern Dump) and Alternative 6 (Excavation and Off-site Disposal) would provide protection by removing or containing the contaminants, thereby preventing migration off-site or to on-site water bodies.

As required for principal threats, all principal threat wastes would be either treated or, where treatment is not practicable, addressed permanently by excavation and off-site disposal. Engineering controls (capping and fencing) and institutional controls associated with on-site management of low-level wastes in Alternatives 2, 4 and 5 are protective for human receptors.

Because the “no action” alternative, Alternative 1, is not protective of human health and the environment, it was eliminated from further consideration under the remaining eight criteria.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Section 121 (d) of CERCLA and NCP §300.430(f)(1)(ii)(B) require that remedial actions at CERCLA sites at least attain legally applicable or relevant and appropriate Federal and State requirements, standards, criteria, and limitations which are collectively referred to as "ARARs," unless such ARARs are waived under CERCLA section 121(d)(4). Applicable requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site. Only those State standards identified by a state in a timely manner and that are more stringent than Federal requirements may be applicable.

Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well-suited to the particular site. Only those State standards that are identified in a timely manner and are more stringent than Federal requirements may be relevant and appropriate.

Compliance with ARARs addresses whether a remedy will meet all of the applicable or relevant and appropriate requirements of other Federal and State environmental statutes or provides a basis for an invoking waiver.

All active alternatives would meet their chemical-specific ARARs. The NJDEP Non-Residential Direct Contact Soil Remediation Standard for PCBs is 1.0 ppm, and Site-specific risk assessments also concluded that a remediation goal 1.0 ppm would be protective.

All the active alternatives trigger location-specific ARARs that apply to wetlands protection by causing the disruption of existing wetlands. When work is required within a wetland, regulations generally favor actions that minimize ecosystem disturbance, and then expect restoration efforts to attain similar or, where possible, improved ecosystem conditions, post-action. Minimization of disturbance is generally preferred, because post-action wetlands restoration can have limited effectiveness, and it can take many years for the pre-action ecosystem conditions to reestablish themselves naturally. Capping (as in Alternatives 2, 4 and 5) technically results in filling in and fundamentally altering the wetland; however, consolidation followed by capping offers the potential for a net improvement in overall wetland quality by reducing the footprint of the wastes

and opening up areas free of waste. The cap itself would constitute a new habitat, a regularly maintained vegetated mound that would be mowed to keep it free of trees that could penetrate the cap. This would require a variance from typical wetland regulatory requirements, probably requiring some kind of offset/improvement elsewhere on the Site.

Temporary wetland disturbances would also result from construction of an on-site treatment facility (Alternatives 2 and 3), that would require substantial infrastructure improvements (e.g., temporary roads, a raised bed of compacted and impervious material for placement of the treatment system, electric, water and fuel utilities) that currently are not available. These activities would cause substantial collateral, if temporary, wetland disturbances and would require compliance with wetlands protection ARARs, and would likely require removal of improvements after completion of the work, and wetlands restoration.

Federal Floodplain Protection and New Jersey's Floodplain/Flood Hazard Area Protection would also require no net loss of flood water storage capacity, an essential wetland function. Improving overall flood storage capacity within the wetland, while not an RAO, is an added potential value for the remedy. Alternative 3 leaves treated material on-site and offers the least potential for overall flood storage capacity, and Alternative 6, which removes the most waste material from the wetland, offers the most. Consolidation and capping in Alternatives 2, 4 and 5 can be performed in such a way that net flood storage is improved within the wetland. Therefore, assuming that there is enough room on the Site, the capping alternatives can be implemented so that they comply with wetland ARARs with regard to flood storage.

For handling, storage and disposal of PCB soil and waste, the Toxic Substances Control Act (TSCA) and RCRA would be ARARs. A complete list of ARARs can be found in Table 8 of Appendix II.

Primary Balancing Criteria *- The next five criteria, criteria 3 through 7, are known as "primary balancing criteria." These criteria are factors with which tradeoffs between response measures are assessed so that the best option will be chosen, given site-specific data and conditions.*

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3. Long-Term Effectiveness and Permanence

Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once clean-up levels have been met. This criterion includes the consideration of residual risk that will remain on site following remediation and the adequacy and reliability of controls.

Long-term effectiveness and permanence for the principal threat wastes is similar for all the active alternatives. For the residual soils with PCB concentrations less than 100 ppm, excavation and off-site disposal (Alternative 6) and on-site treatment (Alternative 3) reduce the risk posed by PCBs by permanently removing them from the Site. Consolidation and capping in Alternatives 2, 4 and 5 would be effective in preventing direct contact exposure; however, monitoring of the cap would be necessary in the long-term for it to remain effective, and these alternatives also require long-term monitoring because of the residual soils left in place. In a wetland environment, where the water table is at or near the ground surface, the long-term effectiveness and permanence of a cap may be uncertain. These alternatives offer greater uncertainties with regard to long-term protectiveness for environmental receptors (e.g., maintaining cap integrity over the long term, the potential for cap damage and receptor contact caused by flood events, burrowing animals).

4. Reduction of Toxicity, Mobility, or Volume of Contaminants Through Treatment

Reduction of toxicity, mobility, or volume through treatment refers to the anticipated performance of the treatment technologies that may be included as part of a remedy.

Site treatment in Alternatives 2 and 3 would remove or destroy PCB contaminants from on-site soil and debris, thereby reducing the toxicity, mobility or volume of PCBs. Excavation and off-site disposal, in Alternatives 4, 5 and 6, while reducing their impact to the Site, would not change the mass, volume or toxicity of the contaminants, and while treatment of some wastes sent off-site may be required prior to land disposal, the requirement for treatment would be governed by the requirements of the receiving facility and would not be a principal element of the selected remedy; therefore, these alternatives would not satisfy this criterion. Given the nature of the wastes, which contain large quantities of debris and, in the principal threat areas, capacitors and capacitor parts[2], few off-site thermal treatment facilities would be equipped to receive the Site wastes for treatment. EPA has concluded that further efforts at off-site treatment independent of those required prior to land disposal, would not be practicable. Thus, only Alternatives 2 and 3 would satisfy this criterion.

5. Short-Term Effectiveness

Short-term effectiveness addresses the period of time needed to implement the remedy and any adverse impacts that may be posed to workers, the community and the environment during construction and operation of the remedy until cleanup levels are achieved.

[2] On-site LTTD was used effectively at the nearby CDE NPL Site to treat PCBs; however, LTTD had limited effectiveness in treating still-intact capacitors and, for the most part, capacitors were removed from the soil before treatment and sent off Site for land disposal.

All of the active alternatives involve at least some excavation and, as discussed under compliance with ARARs, cause adverse, if temporary, affects on existing wetlands. More consequential (to the wetlands) would be Alternatives 2 and 3: constructing an on-site treatment plant in a floodplain would be disruptive and difficult, and cause substantial short-term adverse affects. Due to the sensitive nature of wetlands, restoration can be difficult and requires significant time for revitalization. Consolidation and capping (Alternatives 4 or 5) also introduces a new vegetated upland habitat that would presumably be mowed so it would not be allowed to revert to the native scrub/shrub or forested ecosystem. The introduction of a new habitat type may cause unintended stresses on the ecosystem that may require some compensation.

All the alternatives will encounter fill (soil, refuse and debris) that does not contain elevated PCB levels. While not covered by the CERCLA response action, active remedies would need to account for removal of contaminated surface soils that may support vegetation, the creation of physical hazards where holes are created, and other consequences of not-currently-exposed refuse. Grading fill and adding local borrow material that would support vegetation could be used to restore such areas, minimizing adverse affects caused by exposing this material while also potentially improving flood storage capacity in the floodplain and minimizing the addition of material into a wetland.

For all alternatives, increased truck traffic would be disruptive to the community. Alternative 6 would involve the most added trucks and traffic, while Alternatives 4 and 5 would have the least. Use of a nearby rail system may minimize the increased truck traffic, if it can be accessed for long-haul transportation to an off-site disposal facility. Even Alternatives 4 and 5 that rely on capping will require trucks and heavy equipment to bring cap material onto the Site and to re-grade areas where excavation has taken place, which would result in short-term impacts to the community.

Although on-site treatment (Alternatives 2 and 3) would require longer time frames to meet remediation goals, the difference in time frames is not a significant consideration when comparing alternatives.

6. Implementability

Implementability addresses the technical and administrative feasibility of a remedy from design through construction and operation. Factors such as availability of services and materials, administrative feasibility, and coordination with other governmental entities are also considered.

The technologies in each of the alternatives are readily available and generally proven; however, as stated earlier, on-site treatment has much more serious implementability limitations when compared to the other alternatives. The area where the on-site LTTD system would be constructed is likely to flood during the cleanup, and flooding cannot be effectively managed except by raising the entire treatment facility footprint above the flood zone or constructing a flood wall structure around it. Neither of these flood prevention methods is without risk of failure, given the uncertainties of building in a floodplain. Flooding can be expected to irreparably damage the treatment equipment. In addition, the waste to be treated contains debris that may not pass through the treatment unit, including capacitors that, as mentioned previously, resist treatment by LTTD. The debris not amenable to treatment would still not meet the RAOs and would be transported off-site under Alternatives 2 and 3.

Alternatives 2, 4 and 5 would install a cap to prevent direct contact to the residual contaminated soil and debris. In a wetland environment, where the water table is at or near the ground surface, the installation of a cap may be difficult. As discussed in the FS, a clay or RCRA cap may cause problems with drainage in the wetlands. A vegetated soil cap would be preferred, but even this type of cap would typically be installed by first contouring and compacting wastes and then compacting layers of the cover material, to assure adequate containment unit stability and coverage. In this type of wetland/floodplain environment, consolidation, compaction and cap construction may be challenging, given a variety of factors not encountered in an unsaturated disposal cell, including a fluctuating water table, soft subsurface layers that resist compaction, flooding/inundation for extended periods, and side slope stability. The FS anticipates taking fill material currently spread over about 15 acres (between the Eastern and Western Dumps) and placing it in an area covering approximately six acres. The new mound would be placed on top of a portion of the Western Dump that is already contaminated and where the wastes are already the thickest, by so doing minimizing the amount of material that needs to be moved. The FS contemplates the use of borrow material, both non-CERCLA soil and debris fill and organic substrates (sometimes called “muck”) as top soil. A local borrow source approach has the advantage of minimizing the need to bring in more fill (needed for contouring, compaction and top soil) into the Site. It is unclear how much of the non-CERCLA fill would actually be suitable backfill, or whether muck would be acceptable top soil. While less desirable,

Alternatives 4 and 5 may require off-site fill to be implemented. These compressed layers of fill and cover may also cause adverse hydrodynamic affects within the wetland.

7. Cost

Includes estimated capital and O&M costs, and net present worth value of capital and O&M costs.

Alternative 3 - On-site Treatment – is the highest cost alternative ($41,516,000), followed by Alternative 6 - Excavation and Off-site Disposal ($24,354,000). Alternative 4 - Excavation/Off-site Disposal of Principal Threats, Consolidation and Capping of Residuals ($4,738,750) and Alternative 5 - Excavation/Off-site Disposal, Consolidation/Capping of Western Dump, Spot Excavation/Monitoring of Eastern Dump ($4,484,200) are the lowest cost alternatives, because consolidating and capping of the large volume of residual soil and debris (with PCB concentrations between 1 ppm and 100 ppm) is less costly than addressing these soils through treatment or off-site disposal. Alternative 2 - On-site Treatment of Principal Threat Waste with Consolidation and Capping of Residual Soil ($8,555,000) also consolidates and caps the residual soils, requiring treatment only for the principal threats.

Modifying Criteria - The final two evaluation criteria, criteria 8 and 9, are called "modifying criteria" because new information or comments from the state or the community on the Proposed Plan may modify the preferred response measure or cause another response measure to be considered.

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8. State Acceptance

Indicates whether based on its review of the RI/FS reports and the Proposed Plan, the state supports, opposes, and/or has identified any reservations with the selected response measure.

NJDEP concurs with the selected remedy.

9. Community Acceptance

Summarizes the public's general response to the response measures described in the Proposed Plan and the RI/FS reports. This assessment includes determining which of the response measures the community supports, opposes, and/or has reservations about.

EPA solicited input from the community on the remedial alternatives proposed for the Site. Representatives of a PRP provided extensive comments in support of one of the lower cost alternatives (Alternative 4 or 5) as equally protective, less disruptive to the community, and less costly. Site neighbors and other community members were generally supportive of EPA’s

Proposed Plan. Appendix III, The Responsiveness Summary, addresses the comments received at the public meeting and written comments received during the public comment period.

PRINCIPAL THREAT WASTE

Principal threat wastes are considered source materials, i.e., materials that include or contain hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to groundwater, surface water, or as a source for direct exposure. As previously mentioned principal threat wastes at this Site are capacitors, capacitor parts and concentrations of PCBs greater than 100 ppm.

SELECTED REMEDY

Based upon consideration of the results of the Site investigation, the requirements of CERCLA, the detailed analysis of the response measures, and public comments, EPA has determined that Alternative 6, excavation and off-site disposal of soil and debris contaminated with PCBs at concentrations greater than 1.0 ppm, is the appropriate remedy for addressing the Site. Alternative 6 satisfies the requirements of CERCLA §121 and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR §300.430(e)(9). The Selected Remedy includes the following major components:

- Excavation and off-site disposal of an estimated 4,000 cubic yards of soil and debris that contains capacitors, capacitor parts and PCB-contaminated soil and debris with PCB concentrations greater than 100 ppm to an approved off-site disposal facility;

- Excavation and off-site disposal of an estimated 120,000 cubic yards of soil and debris that contains PCBs at concentrations greater than 1.0 ppm to an approved off-site disposal facility; and

- The establishment of institutional controls, such as a deed notice or covenant, to prevent a change in land use to an unrestricted land use such as residential.

This is expected to be the final action for this Site: EPA is conducting an RI/FS on the entire Bound Brook (CDE Site OU4), including the section that passes through this Site. EPA is not assessing Bound Brook sediments and surface water in this decision, and will make a determination on the nature and extent, risks posed, and response actions needed as part of the Bound Brook CDE study.

During the development of the RI/FS and as a result of public comments received on the Proposed Plan, there are two very different end uses that EPA assessed in selecting this remedy. In one approach, the land is zoned M3, commercial/light industrial, and EPA received a comment from the municipality endorsing the existing zoning, and supporting its future (commercial/industrial) development as an appropriate end use. In the other approach, the land would continue to be open space, and may provide opportunities for ecosystem enhancements, and ultimately it could be subjected to conservation easements to protect it in perpetuity, as a part of the larger Dismal Swamp Conservation Area. EPA will work with the land owner and other stakeholders toward an appropriate end use for the Site, though as discussed in the Summary of Site Risks section of this Decision Summary, commercial/industrial redevelopment faces substantial impediments, and EPA expects the Site to remain as open space. The selected remedy will support either end use.

The Western and Eastern Dumps artificially elevate the topography and disturb Bound Brook floodplains and neighboring wetlands as they existed prior to the 1940s; however, today, aquatic and terrestrial habitats have reestablished themselves atop or adjacent to the Dumps. During the implementation of this remedy, EPA will minimize damage to existing wetlands and preserve existing habitat where practicable. EPA considers the final depth for excavation is the extent of PCB contamination, not relying on the uncertain nature of "cover" currently present at the Site as an acceptable barrier to exposure to deeper contamination. Based on the RI findings, the Region anticipates the depth of excavation to be approximately 3 feet; however, we will conduct additional sampling as part of the remedial design.

The 4,000 cubic yard-volume estimate of the soil and debris that contains capacitors, capacitor parts and PCB-contaminated soil and debris with PCB concentrations greater than 100 ppm is based upon a large number of sample locations and these areas are well characterized. For PCB-contaminated soil and debris at concentrations between 1.0 ppm and 100 ppm, the volume estimates in the FS are based upon a much smaller number of sample locations, and may be overly conservative, particularly in the Eastern Dump. Further sampling may reduce the volume of material that needs to be removed for the remedy to be protective. During remedial design, sampling of the Eastern and Western Dumps will be performed to further delineate the contaminated soil and debris that exceeds the remediation goal. This may reduce the amount of material requiring excavation, which would result in a smaller disturbance of the wetlands and reduce the final cost of the remediation.

In addition to PCB-contaminated soil and debris, an estimated 50,000 cubic yards of refuse (household wastes, soil and debris) is found in the Western and Eastern Dumps that will not be addressed under the selected remedy, because it does not pose an unacceptable risk to human health or the environment. Although the general refuse in the area is not subject to Superfund

action, the removal of surface soils that may support vegetation and the creation of physical hazards where holes are created, and refuse exposed, by the Superfund action needs to be addressed. At minimum, as part of the remedy, grading and adequate surface soil cover that would support vegetation will be used to restore disturbed refuse areas, while, also minimizing the addition of new material into a floodplain/wetland. If an open space/conservation end use is contemplated, EPA may partner with other stakeholders (e.g., the municipality, property owner, natural resource trustees, private conservation organizations) to identify further ecosystem enhancements that would not be implemented under CERCLA, including the removal of additional refuse and recovery of a more natural topography to the area, allowing for restoration of original wetlands, and increasing flood storage by removing refuse and regrading the land.

Several comments received about EPA's preferred remedy, as presented in the Proposed Plan, were concerned about increased truck traffic with Alternative 6, and asked whether other transportation options could be identified. During remedial design, use of rail transportation will be further evaluated to transport the large volumes of soil and debris, minimizing truck traffic through the local municipalities. While developing the FS, it was concluded that the rail line that runs by the Site was not suitable to serve this purpose, but there may an appropriate facility nearby.

STATUTORY DETERMINATIONS

CERCLA §121(b)(1) mandates that a remedial action must be protective of human health and the environment, cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ treatment to permanently and significantly reduce the volume, toxicity or mobility of the hazardous substances, pollutants, or contaminants at a site. CERCLA §121(d) further specifies that a remedial action must attain a degree of cleanup that satisfies ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA §121(d)(4). For the reasons discussed below, EPA has determined that the Selected Remedy meets the requirements of CERCLA Section 121.

Protection of Human Health and the Environment

The Selected Remedy, Alternative 6, will adequately protect human health and the environment by eliminating the direct contact exposure pathway risk to human and environmental receptors. In addition, the alternative will eliminate the possibility of the PCBs spreading to the groundwater, surface water bodies or soil in the future. This action will result in the reduction of exposure levels to acceptable risk levels within EPA's generally acceptable risk range of 10^{-4} to

10^{-6} for carcinogens and at or below a HI of 1 for noncarcinogens. Implementation of the Selected Remedy will not pose unacceptable short-term risks or adverse cross-media impacts.

Compliance with Applicable or Relevant and Appropriate Requirements

The excavation remedial action (Alternative 6) will comply with all federal and state requirements that are ARARs. A comprehensive ARAR discussion is included in the FS and a listing of ARARs is included in Table 7 of this ROD. Alternative 6 would meet the chemical-specific ARARs. The NJDEP Non-Residential Direct Contact Soil Remediation Standard for PCBs is 1 ppm, and Site-specific risk assessments also concluded that a cleanup level of 1 ppm would be protective.

Location-specific ARARs would apply to wetlands protection due to excavation activities causing the disruption of an existing wetland. When work is required within a wetland, regulations generally favor actions that minimize ecosystem disturbance, and then expect restoration efforts to attain similar, or where possible improved ecosystem conditions, post-action. Minimization of disturbance is generally preferred, because post-action wetlands restoration can have limited effectiveness, and it can take many years for the pre-action ecosystem conditions to reestablish themselves naturally.

Federal Floodplain Protection and New Jersey's Floodplain/Flood Hazard Area Protection would also require no net loss of flood water storage capacity, an essential wetland function. Improving overall flood storage capacity within the wetland, while not an RAO, is an added potential value for the remedy. Alternative 6, which will remove the most waste material from the wetland, would offer significant flood storage capacity.

Cost Effectiveness

EPA has determined that the Selected Remedy is cost-effective and represents reasonable value for the money to be spent. In making this determination, the following definition was used: "A remedy shall be cost-effective if its costs are proportional to its overall effectiveness."(NCP §300.430(f)(1)(ii)(D)).

Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in toxicity, mobility and volume through treatment; and short-term effectiveness). Overall effectiveness was then compared to costs to determine cost-effectiveness. The overall effectiveness of the Selected Remedy has been determined to be proportional to the costs, and the Selected Remedy; therefore, represents reasonable value for the money to be spent. The estimated present net worth cost of

the Selected Remedy is $24.4 million.[3]

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable

EPA has determined that the Selected Remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner at the Site. EPA has determined that the Selected Remedy provides the better balance of trade-offs with respect to the five balancing criteria. The Selected Remedy satisfies the criteria for long-term effectiveness and permanence by removing the primary COCs.

Preference for Treatment as a Principal Element

On-site treatment has implementability limitations when compared to the other alternatives. The area where the on-site LTTD system would be constructed is expected to flood during the cleanup, and flooding cannot be effectively managed. In addition, the waste to be treated contains debris that will not pass through the treatment unit, including capacitors that, as mentioned previously, are difficult to treat. The debris not amenable to treatment would still not meet the RAOs and would be transported off-site. While treatment of some wastes sent off-site may be required prior to land disposal, the requirement for treatment would be governed by the requirements of the receiving facility and would not be a "principal element" of the selected remedy; therefore, it would not satisfy this criterion. Given the nature of the wastes, which contain large quantities of debris and, in the principal threat areas, capacitors and capacitor parts, few if any off-site thermal treatment facilities would be equipped to receive the Site wastes for treatment. EPA has concluded that further efforts at off-site treatment independent of those required prior to land disposal, would not be practicable.

Five-Year Review Requirements

The current land use is commercial/light industrial (as defined by local zoning ordinance), or open space/recreational (as defined by actual practice and land use on adjoining properties). Neither of these land uses are considered "unrestricted," and the selected remediation goal, 1.0 ppm total PCBs, is protective for either of these plausible future uses, and satisfies the New Jersey ARAR. Thus, the remedy is protective as long as the land use is not changed to one that would allow for unlimited use and unrestricted exposure. Because this remedy results in

3 Table 10 summarizes the cost of the selected remedy. Table 10 uses cost assumptions from Appendix B of the FS. Several mathematical errors in the FS were discovered, and the actual cost for Alternative 6 should be $23.8 million not $24.4 million. EPA is using the figure $24.4 million, because that amount was used in the Proposed Plan, and nothing else has changed in the scope of the remedy.

hazardous substances, pollutants, or contaminants remaining on the Site above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years of the initiation of the remedial action for this operable unit, to ensure that the remedy is, or will be, protective of human health and environment, unless determined otherwise at the completion of the remedial action. The five-year review will assess the current land use, and monitoring that is typically called for in five-year reviews is not required.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for this ROD for the Woodbrook Road Dump Site was released for public comment on August 16, 2013. The comment period closed on September 16, 2013. All verbal and written comments submitted during the public comment period were reviewed by EPA. Upon review of the comments, it was determined that no significant changes to the remedy, as was originally identified in the Proposed Plan, were necessary.

Appendix I

Figures

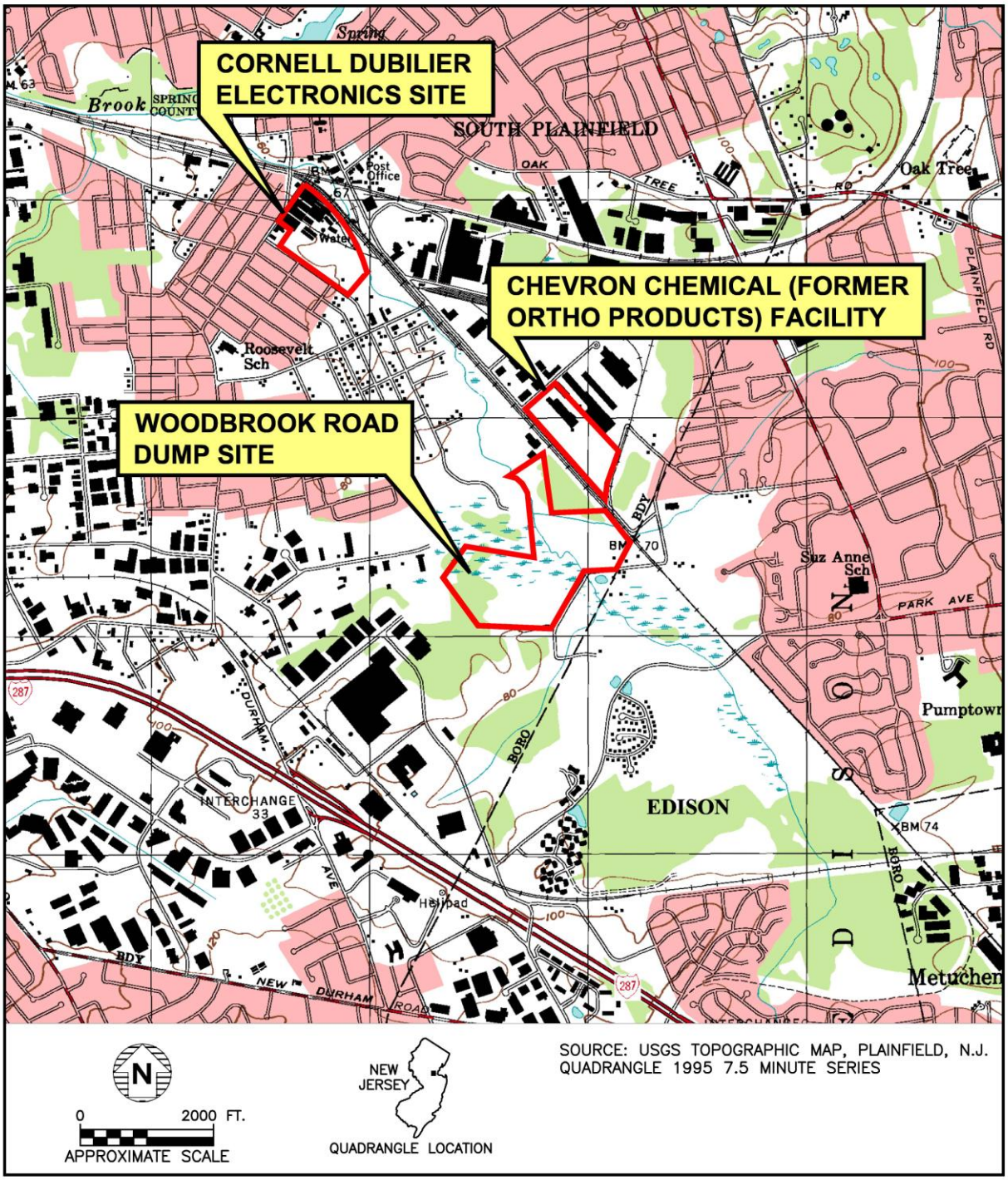

Figure 1

Provided by TRC Environmental Corporation, June 08, 2012

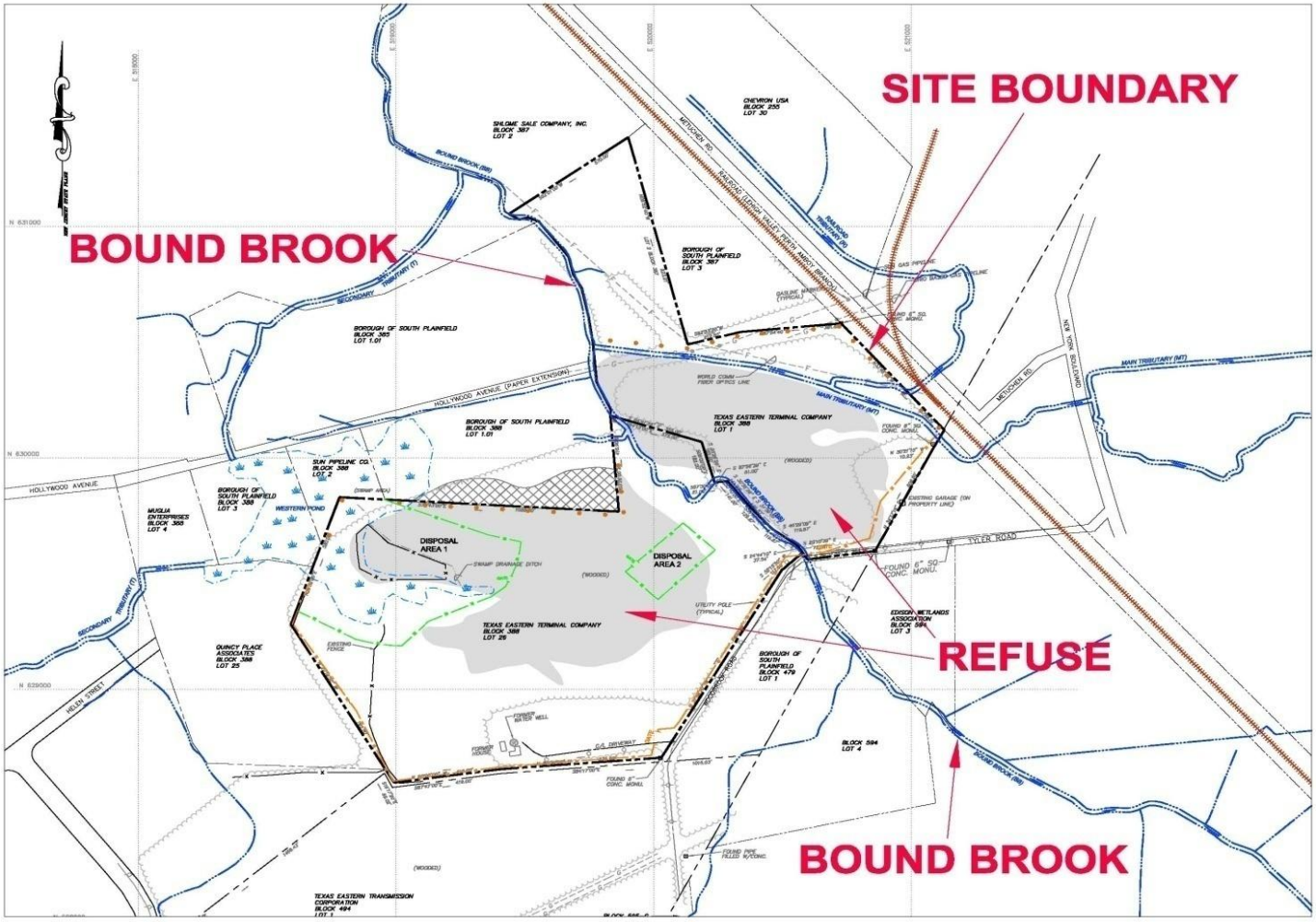

Figure 2

Provided by TRC Environmental Corporation, June 08, 2012

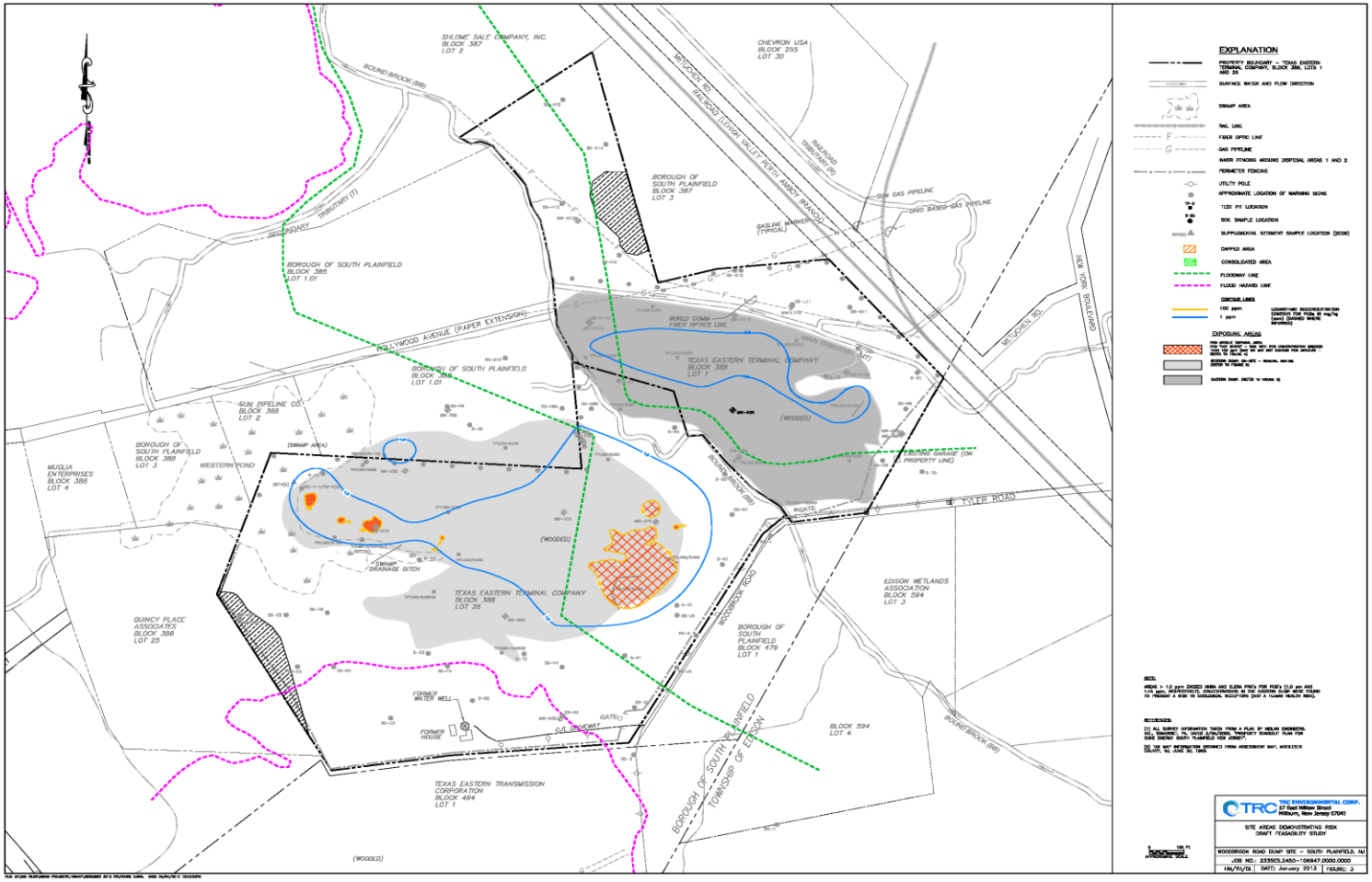

Figure 3

Taken from TRC Environmental Corporation, Draft Final Feasibility Study, Woodbrook Road Dump Superfund Site, July 26, 2013

Appendix II

Tables

Table 1
Summary of Chemicals of Concern and Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Medium: Surface Soils
Exposure Medium: Surface Soil - Exposure Area 1

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Surface Soils	Dioxin TEQ	0.0032299	0.0147486	mg/kg	2/2	0.0147	mg/kg	Maximum
	77-TeCB	21.2	42.8	mg/kg	2/2	42.8	mg/kg	Maximum
	81-TeCB	2.34	5.02	mg/kg	2/2	5	mg/kg	Maximum
	126-PeCB	0.295	4.88	mg/kg	2/2	4.9	mg/kg	Maximum
	105-PeCB	28.6	833	mg/kg	2/2	833	mg/kg	Maximum
	114-PeCB	2.18	63.2	mg/kg	2/2	63	mg/kg	Maximum
	118-PeCB	46.7	1360	mg/kg	2/2	1360	mg/kg	Maximum
	123-PeCB	1.49	18.9	mg/kg	2/2	19	mg/kg	Maximum
	156,157-HxCB	2.11	399	mg/kg	2/2	399	mg/kg	Maximum
	167-HxCB	0.619	106	mg/kg	2/2	106	mg/kg	Maximum
	189-HpCB	0.163	10.8	mg/kg	2/2	11	mg/kg	Maximum
	Total PCBs >1000 ppm	1050.4	1200000	mg/kg	34/34	1000	mg/kg	Hotspot Cutoff Value
	Aldrin	400	400	mg/kg	1/1	400	mg/kg	Maximum
	4,4'-DDE	110	110	mg/kg	1/1	110	mg/kg	Maximum
	Antimony	16.9	16.9	mg/kg	1/1	16.9	mg/kg	Maximum
	Arsenic	23.4	23.4	mg/kg	1/1	23.4	mg/kg	Maximum
	Barium	2320	2320	mg/kg	1/1	2320	mg/kg	Maximum
	Chromium	91.7	91.7	mg/kg	1/1	91.7	mg/kg	Maximum
	Cobalt	12.5	12.5	mg/kg	1/1	12.5	mg/kg	Maximum
	Iron	115000	115000	mg/kg	1/1	115000	mg/kg	Maximum
	Lead	3030	3030	mg/kg	1/1	3030	mg/kg	Maximum
	Manganese	561	561	mg/kg	1/1	561	mg/kg	Maximum
	Mercury	10.2	10.2	mg/kg	1/1	10.2	mg/kg	Maximum
	Thallium	12.9	12.9	mg/kg	1/1	12.9	mg/kg	Maximum

Table 1 - Continued
Summary of Chemicals of Concern and Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Medium: Surface Soils
Exposure Medium: Exposure Area 2 - Waste Area 1 - Regimes I and II

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Surface Soils	Benzo(a)anthracene	0.13	3.71	mg/kg	6/20	1.161	mg/kg	95% KM (% Bootstrap) UCL
	Benzo(a)pyrene	0.049	3.66	mg/kg	10/21	0.892	mg/kg	95% KM (t) UCL
	Benzo(b)fluoranthene	0.038	3.71	mg/kg	11/21	0.892	mg/kg	95% KM (BCA) UCL
	Benzo(k)fluoranthene	0.049	2.87	mg/kg	8/21	0.773	mg/kg	95% KM (t) UCL
	Dibenzo(a,h)anthracene	0.27	0.779	mg/kg	3/21	0.466	mg/kg	95% KM (t) UCL
	Di-n-octylphthalate	360	360	mg/kg	1/21	360	mg/kg	Maximum
	Bis(2-Ethylhexyl)phthalate	0.0629	1300	mg/kg	21/21	451.9	mg/kg	97.5% Chebyshev (Mean, Sd) UCL
	Indeno(1,2,3-cd)pyrene	0.075	2.55	mg/kg	9/21	0.76	mg/kg	95% KM (t) UCL
	Dioxin TEQ	5.72E-05	1.97E-04	mg/kg	7/7	0.00017	mg/kg	95% Student's-t UCL
	77-TeCB	1.21E-02	1.14E+00	mg/kg	7/7	0.843	mg/kg	95% Approximate Gamma UCL
	81-TeCB	9.69E-03	5.36E-02	mg/kg	2/7	0.054	mg/kg	95% KM (BCA) UCL
	126-PeCB	1.68E-02	1.68E-02	mg/kg	1/7	0.017	mg/kg	Maximum
	105-PeCB	2.37E-01	5.33E+00	mg/kg	7/7	3.61	mg/kg	95% Approximate Gamma UCL
	114-PeCB	1.06E-02	2.90E-01	mg/kg	7/7	0.19	mg/kg	95% Approximate Gamma UCL
	118-PeCB	6.71E-01	1.43E+01	mg/kg	7/7	9.1	mg/kg	95% Approximate Gamma UCL
	123-PeCB	1.02E-02	1.31E-01	mg/kg	7/7	0.09	mg/kg	95% Approximate Gamma UCL
	156,157-HxCB	8.21E-02	2.23E+00	mg/kg	7/7	1.49	mg/kg	95% Approximate Gamma UCL
	167-HxCB	2.24E-02	5.86E-01	mg/kg	7/7	0.39	mg/kg	95% Approximate Gamma UCL
	189-HpCB	7.77E-03	5.83E-02	mg/kg	5/7	0.049	mg/kg	95% KM (Chebyshev) UCL
	Aroclor 1242	0.12	0.12	mg/kg	1/233	0.12	mg/kg	Maximum
	Aroclor 1248	0.053	883	mg/kg	95/233	118.4	mg/kg	95% KM (t) UCL
	Aroclor 1254	0.004	704	mg/kg	113/234	71.23	mg/kg	95% KM (Chebyshev) UCL
	Aroclor 1260	0.12	81.8	mg/kg	15/233	3.417	mg/kg	95% KM (t) UCL

Table 1 - Continued
Summary of Chemicals of Concern and Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Medium: Surface Soils
Exposure Medium: Exposure Area 2 - Waste Area 1 - Regimes I and II

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
	4,4'-DDE	0.0066	4.7	mg/kg	15/21	1.889	mg/kg	95% KM (Chebyshev) UCL
	4,4'-DDT	0.0048	2.7	mg/kg	12/20	0.504	mg/kg	95% KM (BCA) UCL
	Heptachlor	0.0026	2	mg/kg	2/19	1.548	mg/kg	99% KM (Chebyshev) UCL
	Heptachlor Epoxide	0.0061	1.7	mg/kg	2/20	1.252	mg/kg	99% KM (Chebyshev) UCL
	Aluminum	893	25900	mg/kg	23/23	10351	mg/kg	95% Approximate Gamma UCL
	Antimony	1.5	40.1	mg/kg	15/23	11.94	mg/kg	95% KM (% Bootstrap) UCL
	Arsenic	1.3	73.6	mg/kg	23/23	20.09	mg/kg	95% Approximate Gamma UCL
	Cadmium	1.3	150	mg/kg	16/23	69.99	mg/kg	97.5% KM (Chebyshev) UCL
	Chromium	5	553	mg/kg	23/23	156.4	mg/kg	95% Approximate Gamma UCL
	Cobalt	0.62	32.2	mg/kg	21/23	17.14	mg/kg	95% KM (t) UCL
	Copper	8.4	3910	mg/kg	23/23	785.4	mg/kg	95% Approximate Gamma UCL
	Iron	4110	214000	mg/kg	23/23	169795	mg/kg	95% Chebyshev (Mean, Sd) UCL
	Lead	9.5	4450	mg/kg	23/23	1347	mg/kg	Arithmetic Mean
	Manganese	6.9	1450	mg/kg	23/23	851.9	mg/kg	95% Student's-t UCL
	Mercury	0.07	12.9	mg/kg	19/23	5.843	mg/kg	95% KM (Chebyshev) UCL
	Silver	1.8	67.1	mg/kg	13/23	27.81	mg/kg	97.5% KM (Chebyshev) UCL
	Thallium	0.59	19.4	mg/kg	15/23	9.189	mg/kg	95% KM (% Bootstrap) UCL
	Vanadium	8.9	58.3	mg/kg	23/23	30.73	mg/kg	95% Student's-t UCL
	Zinc	15.5	3510	mg/kg	22/22	1444	mg/kg	95% Student's-t UCL

Table 1 - Continued
Summary of Chemicals of Concern and
Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Future
Medium: Surface and Subsurface Soils
Exposure Medium: Surface and Subsurface Soils

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Surface and Subsurface Soils	Benzo(a)anthracene	2.21E-02	9.4	mg/kg	48/128	0.772	mg/kg	95% KM (Chebyshev) UCL
	Benzo(a)pyrene	1.98E-02	7.3	mg/kg	53/129	0.718	mg/kg	95% KM (Chebyshev) UCL
	Benzo(b)fluoranthene	2.60E-02	6.2	mg/kg	57/129	0.509	mg/kg	95% KM (BCA) UCL
	Dibenzo(a,h)anthracene	3.26E-02	1.6	mg/kg	13/129	0.145	mg/kg	95% KM (t) UCL
	Di-n-octylphthalate	8.00E-02	360	mg/kg	5/129	8.099	mg/kg	95% KM (t) UCL
	Bis(2-Ethylhexyl)phthalate	4.10E-02	1300	mg/kg	82/129	76.48	mg/kg	97.5% KM (Chebyshev) UCL
	Indeno(1,2,3-cd)pyrene	3.26E-02	4.3	mg/kg	44/129	0.333	mg/kg	95% KM (BCA) UCL
	Aroclor 1242	5.2E-02	140	mg/kg	8/341	3.212	mg/kg	97.5% KM (Chebyshev) UCL
	Aroclor 1248	3.3E-02	883	mg/kg	111/341	83.79	mg/kg	95% KM (t) UCL
	Aroclor 1254	4.00E-03	704	mg/kg	159/344	50.15	mg/kg	97.5% KM (Chebyshev) UCL
	Aroclor 1260	7.33E-02	81.8	mg/kg	26/340	1.858	mg/kg	95% KM (t) UCL
	Aldrin	2.70E-03	5.2	mg/kg	6/125	0.175	mg/kg	95% KM (t) UCL
	Dieldrin	4.20E-03	7.7	mg/kg	15/124	0.562	mg/kg	97.5% KM (Chebyshev) UCL
	Heptachlor	2.60E-03	11	mg/kg	16/111	0.269	mg/kg	95% KM (t) UCL
	Heptachlor Epoxide	1.80E-03	3	mg/kg	16/111	0.227	mg/kg	97.5% KM (Chebyshev) UCL
	Dioxin - TEQ	5.72E-05	0.0002587	mg/kg	8/8	0.0001798	mg/kg	95% Student's-t UCL
	77-TeCB	1.21E-02	1.14	mg/kg	8/8	0.656	mg/kg	95% Approximate Gamma UCL
	81-TeCB	9.69E-03	0.0536	mg/kg	2/8	0.0536	mg/kg	95% KM (BCA) UCL
	126-PeCB	1.21E-03	0.0277	mg/kg	3/8	0.0162	mg/kg	95% KM (t) UCL
	169-HxCB	1.90E-03	0.00369	mg/kg	2/8	0.00369	mg/kg	Maximum
	105-PeCB	2.37E-01	9.12	mg/kg	8/8	4.817	mg/kg	95% Approximate Gamma UCL
	114-PeCB	1.06E-02	0.512	mg/kg	8/8	0.36	mg/kg	95% Chebyshev (Mean, Sd) UCL
	118-PeCB	6.71E-01	24.3	mg/kg	8/8	12.55	mg/kg	95% Approximate Gamma UCL
	126-PeCB	1.21E-03	0.0277	mg/kg	3/8	0.0162	mg/kg	95% KM (t) UCL

Table 1 - Continued
Summary of Chemicals of Concern and
Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Future
Medium: Surface and Subsurface Soils
Exposure Medium: Surface and Subsurface Soils

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
	169-HxCB	1.90E-03	0.00369	mg/kg	2/8	0.00369	mg/kg	Maximum
	105-PeCB	2.37E-01	9.12	mg/kg	8/8	4.817	mg/kg	95% Approximate Gamma UCL
	114-PeCB	1.06E-02	0.512	mg/kg	8/8	0.36	mg/kg	95% Chebyshev (Mean, Sd) UCL
	118-PeCB	6.71E-01	24.3	mg/kg	8/8	12.55	mg/kg	95% Approximate Gamma UCL
	123-PeCB	1.02E-02	0.229	mg/kg	8/8	0.119	mg/kg	95% Approximate Gamma UCL
	156,157-HxCB	8.21E-02	3.82	mg/kg	8/8	2.035	mg/kg	95% Approximate Gamma UCL
	167-HxCB	2.24E-02	1.01	mg/kg	8/8	0.534	mg/kg	95% Approximate Gamma UCL
	189-HpCB	3.79E-03	0.0966	mg/kg	7/8	0.0694	mg/kg	95% KM (Chebyshev) UCL
	Antimony	877.00	225	mg/kg	44/132	11.29	mg/kg	95% KM (BCA) UCL
	Arsenic	1.30	112	mg/kg	116/132	14.1	mg/kg	95% KM (BCA) UCL
	Cadmium	0.68	226	mg/kg	57/131	15.13	mg/kg	95% KM (BCA) UCL
	Chromium	5	553	mg/kg	131/131	88.86	mg/kg	95% Chebyshev (Mean, Sd) UCL
	Cobalt	0.62	46.6	mg/kg	86/131	11.01	mg/kg	95% KM (% Bootstrap) UCL
	Copper	2.20	6360	mg/kg	130/132	707.5	mg/kg	97.5% KM (Chebyshev) UCL
	Iron	2510	349000	mg/kg	130/131	78386	mg/kg	95% KM (Chebyshev) UCL
	Lead	3.1	30400	mg/kg	132/132	921.10	mg/kg	Average
	Mercury	0.04	14.2	mg/kg	106/131	2.569	mg/kg	97.5% KM (Chebyshev) UCL
	Thallium	0.5	36	mg/kg	40/132	4.761	mg/kg	95% KM (BCA) UCL

Table 1 - Continued
Summary of Chemicals of Concern and
Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Medium: Western Pond Sediment
Exposure Medium: Western Pond Sediment

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Western Pond Sediment	Benzo(a)anthracene	0.0385	1.69	mg/kg	15/17	0.964	mg/kg	97.5% KM (Chebyshev) UCL
	Benzo(a)pyrene	0.0489	2.16	mg/kg	13/17	1.239	mg/kg	97.5% KM (Chebyshev) UCL
	Benzo(b)fluoranthene	0.0565	2.58	mg/kg	13/17	1.42	mg/kg	97.5% KM (Chebyshev) UCL
	Benzo(k)fluoranthene	0.0732	1.9	mg/kg	11/17	1.234	mg/kg	97.5% KM (Chebyshev) UCL
	Carbazole	0.0722	0.093	mg/kg	2/17	0.093	mg/kg	Maximum
	Dibenzo(a,h)anthracene	0.0381	0.567	mg/kg	6/17	0.244	mg/kg	95% KM (% Bootstrap) UCL
	Di-n-octylphthalate	1.23	1.23	mg/kg	1/17	1.23	mg/kg	Maximum
	Indeno(1,2,3-cd)pyrene	0.0464	1.66	mg/kg	13/17	1.006	mg/kg	95% KM (% Bootstrap) UCL
	Aroclor 1248	1.7	1.7	mg/kg	1/21	1.7	mg/kg	Maximum
	Aroclor 1254	0.12	20.9	mg/kg	7/21	3.17	mg/kg	95% KM (t) UCL
	Aroclor 1260	0.089	6.2	mg/kg	2/21	4.376	mg/kg	99% KM (Chebyshev) UCL
	77-TeCB	1.05E-03	0.0279	mg/kg	4/4	0.0279	mg/kg	Maximum
	81-TeCB	5.51E-05	0.000849	mg/kg	2/4	0.000849	mg/kg	Maximum
	126-PeCB	2.43E-04	0.00923	mg/kg	3/4	0.00923	mg/kg	Maximum
	105-PeCB	7.87E-03	0.321	mg/kg	4/4	0.321	mg/kg	Maximum
	114-PeCB	3.10E-04	0.0134	mg/kg	3/4	0.0134	mg/kg	Maximum
	118-PeCB	2.45E-02	0.848	mg/kg	4/4	0.848	mg/kg	Maximum
	123-PeCB	3.00E-04	0.0115	mg/kg	4/4	0.0115	mg/kg	Maximum
	156-HxCB, 157-HxCB	3.18E-03	0.173	mg/kg	4/4	0.173	mg/kg	Maximum
	167-HxCB	1.14E-03	0.0535	mg/kg	4/4	0.0535	mg/kg	Maximum
	189-HpCB	1.19E-04	0.0066	mg/kg	4/4	0.0066	mg/kg	Maximum
	TCDD - TEQ	1.71E-05	0.0001068	mg/kg	4/4	0.00010683	mg/kg	Maximum
	Aluminum	5155	35300	mg/kg	17/17	21722	mg/kg	95% Student's-t UCL

Table 1 - Continued
Summary of Chemicals of Concern and
Medium-Specific Exposure Point Concentrations

Scenario Timeframe: Current
Medium: Western Pond Sediment
Exposure Medium: Western Pond Sediment

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Western Pond Sediment	Antimony	1.4	8.3	mg/kg	3/17	3.069	mg/kg	95% KM (t) UCL
	Arsenic	0.22	21	mg/kg	17/17	11.1	mg/kg	95% Student's-t UCL
	Chromium	6.8	70	mg/kg	17/17	35.79	mg/kg	95% Approximate Gamma
	Cobalt	4.8	12.9	mg/kg	4/17	12.05	mg/kg	95% KM (% Bootstrap) UCL
	Iron	3430	43000	mg/kg	17/17	20868	mg/kg	95% Approximate Gamma
	Lead	3.05	573	mg/kg	17/17	133.5	mg/kg	Arithmetic Mean
	Manganese	38.6	601	mg/kg	17/17	243.1	mg/kg	95% Approximate Gamma
	Mercury	0.096	2	mg/kg	16/17	0.85	mg/kg	95% KM (Chebyshev) UCL
	Thallium	0.032	6.3	mg/kg	100.0%	2.438	mg/kg	95% Chebyshev (Mean, Sd) UCL
	Vanadium	8.85	100	mg/kg	17/17	53.5	mg/kg	95% Approximate Gamma

Table 2
Selected Exposure Pathways Resulting in Elevated Risk

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Soil	Surface Soil	Surface Soil	Trespasser (hiker)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (hiker)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (hiker)	Youth	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (hiker)	Youth	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (hiker)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (hiker)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (hiker)	Youth	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (hiker)	Youth	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (hiker)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (hiker)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (hiker)	Youth	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (hiker)	Youth	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (ATV rider)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (ATV rider)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Fugitive Dusts	Trespasser (ATV rider)	Adult	Inhalation	Quant.	Selected, although site is primarily wetlands and/or heavily vegetated, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (ATV rider)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (ATV rider)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Fugitive Dusts	Trespasser (ATV rider)	Juvenile	Inhalation	Quant.	Selected, although site is primarily wetlands and/or heavily vegetated, unlikely scenario

Table 2 - Continued
Selected Exposure Pathways Resulting in Elevated Risk

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Sediment	Sediment	Sediment	Trespasser (ATV rider)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (ATV rider)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (ATV rider)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (ATV rider)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (ATV rider)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (ATV rider)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (ATV rider)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (ATV rider)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (Angler)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (Angler)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (Angler)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (Angler)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (Angler)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (Angler)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (Angler)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (Angler)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario

Table 2 - Continued
Selected Exposure Pathways Resulting in Elevated Risk

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Surface Water	Surface Water	Surface Water	Trespasser (Angler)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (Angler)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Fish	Trespasser (Angler)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (Angler)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (Angler)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Fish	Trespasser (Angler)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Fish	Trespasser (Angler)	Child	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (Hunter)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (Hunter)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Wild Game	Trespasser (Hunter)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Surface Soil	Trespasser (Hunter)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Soil	Trespasser (Hunter)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Wild Game	Trespasser (Hunter)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Soil	Surface Soil	Wild Game	Trespasser (Hunter)	Child	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (Hunter)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (Hunter)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Sediment	Sediment	Sediment	Trespasser (Hunter)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Sediment	Trespasser (Hunter)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario

Table 2 - Continued
Selected Exposure Pathways Resulting in Elevated Risk

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor Age	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current	Surface Water	Surface Water	Surface Water	Trespasser (Hunter)	Adult	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (Hunter)	Adult	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Current	Surface Water	Surface Water	Surface Water	Trespasser (Hunter)	Juvenile	Ingestion	Quant.	Selected, although due to perimeter fencing, unlikely scenario
			Surface Water	Trespasser (Hunter)	Juvenile	Dermal	Quant.	Selected, although due to perimeter fencing, unlikely scenario
Future	Soil	Surface Soil	Surface Soil	Recreational (Hiker)	Adult	Ingestion	Quant.	Selected
			Surface Soil	Recreational (Hiker)	Adult	Dermal	Quant.	Selected
Future	Soil	Surface Soil	Surface Soil	Recreational (Hiker)	Youth	Ingestion	Quant.	Selected
			Surface Soil	Recreational (Hiker)	Youth	Dermal	Quant.	Selected
Future	Sediment	Sediment	Sediment	Recreational (Hiker)	Adult	Ingestion	Quant.	Selected
			Sediment	Recreational (Hiker)	Adult	Dermal	Quant.	Selected
Future	Sediment	Sediment	Sediment	Recreational (Hiker)	Youth	Ingestion	Quant.	Selected
			Sediment	Recreational (Hiker)	Youth	Dermal	Quant.	Selected
Future	Surface Water	Surface Water	Surface Water	Recreational (Hiker)	Adult	Ingestion	Quant.	Selected
			Surface Water	Recreational (Hiker)	Adult	Dermal	Quant.	Selected
Future	Surface Water	Surface Water	Surface Water	Recreational (Hiker)	Youth	Ingestion	Quant.	Selected
			Surface Water	Recreational (Hiker)	Youth	Dermal	Quant.	Selected

Table 3
Non-Cancer Toxicity Data Summary

Pathway: Ingestion/Dermal

Chemicals of Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Absorp. Efficiency (Dermal)	Adjusted RfD (Dermal)	Adj. Dermal RfD Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfD
Dioxin TEQ (a)	Chronic	1.0E-09	mg/kg-d	100%	1.0E-09	mg/kg-d	Developmental	90	ATSDR	05/11
77-TeCB	Chronic	1.0E-05	mg/kg-d	100%	1.0E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
81-TeCB	Chronic	3.3E-06	mg/kg-d	100%	3.3E-06	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
126-PeCB	Chronic	1.0E-08	mg/kg-d	100%	1.0E-08	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
169-HxCB	Chronic	3.3E-08	mg/kg-d	100%	3.3E-08	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
105-PeCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
114-PeCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
118-PeCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
123-PeCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
156,157-HxCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
167-HxCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
189-HpCB	Chronic	3.3E-05	mg/kg-d	100%	3.3E-05	mg/kg-d	Developmental (k)		USEPA RSLs, 2011 (l)	05/11
Aroclor 1242	Chronic	NA			NA				USEPA RSLs, 2011	05/11
Aroclor 1248	Chronic	NA			NA				USEPA RSLs, 2011	05/11
Aroclor 1254	Chronic	2.0E-05	mg/kg-d	100%	2.0E-05	mg/kg-d	Autoimmune System, eyes	300	IRIS	05/11
Aroclor 1260	Chronic	NA			NA				USEPA RSLs, 2011	05/11
Aldrin	Chronic	3.0E-05	mg/kg-d	100%	3.0E-05	mg/kg-d	Liver	1000	IRIS	05/11
Mercury (g)	Chronic	1.0E-04	mg/kg-d	7%	7.0E-06	mg/kg-d	Nervous System	10	IRIS	05/11

(a) as 2,3,7,8-TCDD

(g) as methylmercury

(k) Assumes same Target Organ Toxicity as Dioxin

(l) Value from Environmental Criteria and Assessment Office.

Table 3 - Continued
Non-Cancer Toxicity Data Summary

Pathway: Inhalation

Chemicals of Concern	Chronic/ Subchronic	Inhalation RfC	Inhalation RfC Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfC
Dioxin TEQ (a)	Chronic	4.0E-08	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental		CalEPA	05/10
77-TeCB	Chronic	4.0E-04	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
81-TeCB	Chronic	1.3E-04	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
126-PeCB	Chronic	4.0E-07	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
169-HxCB	Chronic	1.3E-06	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
105-PeCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
114-PeCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
118-PeCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
123-PeCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
156,157-HxCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
167-HxCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11
189-HpCB	Chronic	1.3E-03	mg/m^3	Liver, reproductive, endocrine, respiratory, hematopoietic systems, developmental (e)		USEPA RSLs, 2011 (f)	05/11

(a) as 2,3,7,8-TCDD

(f) Value from Environmental Criteria and Assessment Office.

Table 4
Cancer Toxicity Data Summary

Pathway: Ingestion/ Dermal

Chemical of Concern	Oral Cancer Slope Factor	Units	Adjusted Cancer Slope Factor (for Dermal)	Slope Factor Units	Weight of Evidence/ Cancer Guideline	Source	Date
Dioxin TEQ	1.30E+05	$(mg/kg\text{-}d)^{-1}$	1.30E+05	$(mg/kg\text{-}d)^{-1}$	B2	CalEPA	05/11
77-TeCB	1.30E+01	$(mg/kg\text{-}d)^{-1}$	1.30E+01	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
81-TeCB	3.90E+01	$(mg/kg\text{-}d)^{-1}$	3.90E+01	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
126-PeCB	1.30E+04	$(mg/kg\text{-}d)^{-1}$	1.30E+04	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
105-PeCB	3.90E+00	$(mg/kg\text{-}d)^{-1}$	3.90E+00	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
114-PeCB	3.90E+00	$(mg/kg\text{-}d)^{-1}$	3.90E+00	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
118-PeCB	3.90E+00	$(mg/kg\text{-}d)^{-1}$	3.90E+00	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
156,157-HxCB	3.90E+00	$(mg/kg\text{-}d)^{-1}$	3.90E+00	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
167-HxCB	3.90E+00	$(mg/kg\text{-}d)^{-1}$	3.90E+00	$(mg/kg\text{-}d)^{-1}$	B2	USEPA RSLs, 2011 (i)	05/11
Aroclor 1248	2.00E+00	$(mg/kg\text{-}d)^{-1}$	2.00E+00	$(mg/kg\text{-}d)^{-1}$	B2	IRIS	05/11
Aroclor 1254	2.00E+00	$(mg/kg\text{-}d)^{-1}$	2.00E+00	$(mg/kg\text{-}d)^{-1}$	B2	IRIS	05/11
Aroclor 1260	2.00E+00	$(mg/kg\text{-}d)^{-1}$	2.00E+00	$(mg/kg\text{-}d)^{-1}$	B2	IRIS	05/11

Table 4 - Continued Cancer Toxicity Data Summary							
Pathway: Inhalation							
Chemical of Concern	**Unit Risk**	**Units**	**Inhalation Cancer Slope Factor**	**Slope Factor Units**	**Weight of Evidence/ Cancer Guideline**	**Source**	**Date**
Dioxin TEQ	3.80E+01	$(ug/m^3)^{-1}$	-	-	B2	CalEPA	05/11
77-TeCB	3.80E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
81-TeCB	1.10E-02	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
126-PeCB	3.80E+00	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
105-PeCB	1.10E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
114-PeCB	1.10E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
118-PeCB	1.10E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
156,157-HxCB	1.10E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
167-HxCB	1.10E-03	$(ug/m^3)^{-1}$	-	-	B2	USEPA RSLs, 2011 (i)	05/11
Aroclor 1248	5.70E-04	$(ug/m^3)^{-1}$	-	-	B2	IRIS	05/11
Aroclor 1254	5.70E-04	$(ug/m^3)^{-1}$	-	-	B2	IRIS	05/11

(i) Value from Environmental Criteria and Assessment Office.

Table 5
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.1.1a) **Receptor Population:** Trespasser Hiker - EPC 1 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**5.3E+00**		7.6E-01	**6.0E+00**
			77-TeCB	Developmental	**1.5E+00**		1.4E-02	**1.5E+00**
			126-PeCB	Developmental	**1.7E+02**		**1.2E+02**	**2.9E+02**
			105-PeCB	Developmental	**9.0E+00**		**6.1E+00**	**1.5E+01**
			114-PeCB	Developmental	6.8E-01		4.6E-01	**1.1E+00**
			118-PeCB	Developmental	**1.5E+01**		**1.0E+01**	**2.5E+01**
			156,157-HxCB	Developmental	**4.3E+00**		**2.9E+00**	**7.2E+00**
			167-HxCB	Developmental	**1.1E+00**		7.8E-01	**1.9E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**1.8E+01**		**1.2E+01**	**3.0E+01**
			Aldrin	Liver	**4.7E+00**		**2.3E+00**	**7.1E+00**
Soil Total								**3.9E+02**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.1E-03		**2.7E+00**	**2.7E+00**
Surface Water Total								**2.7E+00**
Receptor Total							Receptor HI Total	**3.9E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.1.2a) **Receptor Population:** Trespasser Hiker - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	6.0E-01		4.1E-01	1.0E+00
			Aroclor 1254	Autoimmune System, eyes	**1.3E+00**		8.6E-01	**2.1E+00**
Soil Total								**3.1E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.1E-03		**2.7E+00**	**2.7E+00**
Surface Water Total								**2.7E+00**
Receptor Total							Receptor HI Total	**5.8E+00**

Scenario Timeframe: Current (10.1.1b) **Receptor Population:** Trespasser Hiker - EPC 1 and Western Pond **Receptor Age:** Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**8.2E+00**		**1.7E+00**	**9.9E+00**
			77-TeCB	Developmental	**2.4E+00**		3.2E-02	**2.4E+00**
			81-TeCB	Developmental	8.4E-01		8.3E-01	**1.7E+00**
			126-PeCB	Developmental	**2.7E+02**		**2.7E+02**	**5.4E+02**
			105-PeCB	Developmental	**1.4E+01**		**1.4E+01**	**2.8E+01**
			114-PeCB	Developmental	**1.1E+00**		1.0E+00	**2.1E+00**
			118-PeCB	Developmental	**2.3E+01**		**2.3E+01**	**4.5E+01**
			156,157-HxCB	Developmental	**6.7E+00**		**6.6E+00**	**1.3E+01**
			167-HxCB	Developmental	**1.8E+00**		**1.8E+00**	**3.5E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**2.8E+01**		**2.7E+01**	**5.5E+01**
			Aldrin	Liver	**7.4E+00**		**5.2E+00**	**1.3E+01**
Soil Total								**7.1E+02**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.3E-03		**3.1E+00**	**3.1E+00**
Surface Water Total								**3.1E+00**
Receptor Total							Receptor HI Total	**7.2E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.1.2b) **Receptor Population:** Trespasser Hiker - EPC 2 and Western Pond **Receptor Age:** Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	9.3E-01		4.1E-01	**1.8E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.0E+00**		8.6E-01	**3.9E+00**
Soil Total								**5.8E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.3E-03		**3.1E+00**	**3.1E+00**
Surface Water Total								**3.1E+00**
Receptor Total							Receptor HI Total	**8.9E+00**

Scenario Timeframe: Current (10.2.1a) **Receptor Population:** Trespasser ATV Rider - EPC 1 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**3.0E+00**	2.0E-06	**1.3E+00**	**4.3E+00**
			126-PeCB	Developmental	**9.9E+01**	6.5E-05	**6.7E+01**	**1.7E+02**
			105-PeCB	Developmental	**5.1E+00**	3.4E-06	**3.5E+00**	**8.6E+00**
			118-PeCB	Developmental	**8.4E+00**	5.6E-06	**5.7E+00**	**1.4E+01**
			156,157-HxCB	Developmental	**2.5E+00**	1.6E-06	**1.7E+00**	**4.1E+00**
			167-HxCB	Developmental	6.5E-01	4.4E-07	4.4E-01	**1.1E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**1.0E+01**	NA	**6.9E+00**	**1.7E+01**
			Aldrin	Liver	**2.7E+00**	NA	**1.3E+00**	**4.0E+00**
Soil Total								**2.2E+02**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	1.2E-03		**1.5E+00**	**1.6E+00**
Surface Water Total								**1.6E+00**
Receptor Total							Receptor HI Total	**2.2E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.2.1b) **Receptor Population:** Trespasser ATV Rider - EPC 1 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**3.5E+00**	2.0E-06	1.6E-01	**3.7E+00**
			126-PeCB	Developmental	**1.2E+02**	6.5E-05	**2.5E+01**	**1.4E+02**
			105-PeCB	Developmental	**6.0E+00**	3.4E-06	**1.3E+00**	**7.3E+00**
			118-PeCB	Developmental	**9.8E+00**	5.6E-06	**2.1E+00**	**1.2E+01**
			156,157-HxCB	Developmental	**2.9E+00**	1.6E-06	6.3E-01	**3.5E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**1.2E+01**	NA	**2.6E+00**	**1.4E+01**
			Aldrin	Liver	**3.2E+00**	NA	**5.0E-01**	**3.7E+00**
Soil Total								**1.9E+02**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	1.4E-03		**1.5E+00**	**1.5E+00**
Surface Water Total								**1.5E+00**
Receptor Total							Receptor HI Total	**1.9E+02**

Scenario Timeframe: Current (10.2.2a) **Receptor Population:** Trespasser ATV Rider - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	Aroclor 1254	Autoimmune System, eyes	7.2E-01	NA	**1.5E+00**	**2.2E+00**
Soil Total								**2.2E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	1.2E-03		**1.5E+00**	**1.6E+00**
Surface Water Total								**1.6E+00**
Receptor Total							Receptor HI Total	**3.8E+00**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.2.2b) **Receptor Population:** Trespasser ATV Rider - EPC 2 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	1.4E-03		**1.5E+00**	**1.5E+00**
Surface Water Total								**1.5E+00**
Receptor Total							Receptor HI Total	**1.5E+00**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.3.1a) **Receptor Population:** Trespasser Angler - EPC 1 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**5.2E+00**		9.5E-01	**6.1E+00**
			77-TeCB	Developmental	**1.5E+00**		1.7E-02	**1.5E+00**
			126-PeCB	Developmental	**1.7E+02**		**1.5E+02**	**3.2E+02**
			105-PeCB	Developmental	**8.9E+00**		**7.6E+00**	**1.6E+01**
			114-PeCB	Developmental	**6.7E-01**		5.7E-01	**1.2E+00**
			118-PeCB	Developmental	**1.5E+01**		**1.2E+01**	**2.7E+01**
			156,157-HxCB	Developmental	**4.3E+00**		**3.6E+00**	**7.9E+00**
			167-HxCB	Developmental	**1.1E+00**		9.6E-01	**2.1E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**1.8E+01**		**1.5E+01**	**3.3E+01**
			Aldrin	Liver	**4.7E+00**		**2.9E+00**	**7.5E+00**
Soil Total								**4.2E+02**
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	Dioxin TEQ	Developmental	**1.2E+00**			**1.2E+00**
			126-PeCB	Developmental	**3.2E+01**			**3.2E+01**
			105-PeCB	Developmental	**6.7E+00**			**6.7E+00**
			118-PeCB	Developmental	**8.7E+00**			**8.7E+00**
			156-HxCB, 157-HxCB	Developmental	**1.8E+00**			**1.8E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.8E+00**			**5.8E+00**
			Mercury	Nervous System	**3.3E+03**			**3.3E+03**
Western Pond Sediment Total								**3.3E+03**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.1E-03		**3.4E+00**	**3.4E+00**
Surface Water Total								**3.4E+00**
Receptor Total							Receptor HI Total	**3.7E+03**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.3.1b) **Receptor Population:** Trespasser Angler - EPC 1 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**6.1E+00**		**3.9E-01**	**6.5E+00**
			77-TeCB	Developmental	**1.8E+00**		7.2E-03	**1.8E+00**
			126-PeCB	Developmental	**2.0E+02**		**6.1E+01**	**2.6E+02**
			105-PeCB	Developmental	**1.0E+01**		**3.1E+00**	**1.4E+01**
			118-PeCB	Developmental	**1.7E+01**		**5.1E+00**	**2.2E+01**
			156,157-HxCB	Developmental	**5.0E+00**		**1.5E+00**	**6.5E+00**
			167-HxCB	Developmental	**1.3E+00**		4.0E-01	**1.7E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**2.1E+01**		**6.2E+00**	**2.7E+01**
			Aldrin	Liver	**5.5E+00**		**1.2E+00**	**6.7E+00**
Soil Total								**3.5E+02**
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	126-PeCB	Developmental	**6.7E+00**			**2.4E+01**
			105-PeCB	Developmental	**5.0E+00**			**5.0E+00**
			118-PeCB	Developmental	**8.6E+00**			**6.5E+00**
			156-HxCB, 157-HxCB	Developmental	**1.8E+00**			**1.4E+00**
			Aroclor 1254	Autoimmune System, eyes	**3.2E+01**			**4.3E+00**
			Mercury	Nervous System	**3.2E+03**			**2.4E+03**
Western Pond Sediment Total								**2.5E+03**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.5E-03		**3.5E+00**	**3.5E+00**
Surface Water Total								**3.5E+00**
Receptor Total							Receptor HI Total	**2.8E+03**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.3.2a) **Receptor Population:** Trespasser Angler - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	5.9E-01		5.0E-01	**1.1E+00**
			Aroclor 1254	Autoimmune System, eyes	**1.3E+00**		1.1E+00	**2.3E+00**
Soil Total								**3.4E+00**
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	Dioxin TEQ	Developmental	**1.2E+00**			**1.2E+00**
			126-PeCB	Developmental	**3.2E+01**			**3.2E+01**
			105-PeCB	Developmental	**6.7E+00**			**6.7E+00**
			118-PeCB	Developmental	**8.7E+00**			**8.7E+00**
			156-HxCB, 157-HxCB	Developmental	**1.8E+00**			**1.8E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.8E+00**			**5.8E+00**
			Mercury	Nervous System	**3.3E+03**			**3.3E+03**
Western Pond Sediment Total								**3.3E+03**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.1E-03		**3.4E+00**	**3.4E+00**
Surface Water Total								**3.4E+00**
Receptor Total							Receptor HI Total	**3.3E+03**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.3.2b) **Receptor Population:** Trespasser Angler - EPC 2 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	Aroclor 1254	Autoimmune System, eyes	**1.5E+00**		4.4E-01	**1.9E+00**
Soil Total								**1.9E+00**
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	126-PeCB	Developmental	**6.7E+00**			**2.4E+01**
			105-PeCB	Developmental	**5.0E+00**			**5.0E+00**
			118-PeCB	Developmental	**8.6E+00**			**6.5E+00**
			156-HxCB, 157-HxCB	Developmental	**1.8E+00**			**1.4E+00**
			Aroclor 1254	Autoimmune System, eyes	**3.2E+01**			**4.3E+00**
			Mercury	Nervous System	**3.2E+03**			**2.4E+03**
Western Pond Sediment Total								**2.5E+03**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	2.5E-03		**3.5E+00**	**3.5E+00**
Surface Water Total								**3.5E+00**
Receptor Total							Receptor HI Total	**2.5E+03**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.1a) **Receptor Population:** Trespasser Hunter - EPC 1 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**8.8E+00**		3.7E-01	**9.1E+00**
			77-TeCB	Developmental	**2.5E+00**		6.8E-03	**2.6E+00**
			81-TeCB	Developmental	9.0E-01		1.8E-01	**1.1E+00**
			126-PeCB	Developmental	**2.9E+02**		**5.8E+01**	**3.5E+02**
			105-PeCB	Developmental	**1.5E+01**		**3.0E+00**	**1.8E+01**
			114-PeCB	Developmental	**1.1E+00**		2.3E-01	**1.4E+00**
			118-PeCB	Developmental	**2.5E+01**		**4.9E+00**	**2.9E+01**
			156,157-HxCB	Developmental	**7.2E+00**		**1.4E+00**	**8.6E+00**
			167-HxCB	Developmental	**1.9E+00**		3.8E-01	**2.3E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**3.0E+01**		**5.9E+00**	**3.6E+01**
			Aldrin	Liver	**7.9E+00**		**1.1E+00**	**9.1E+00**
Soil Total								**4.7E+02**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**2.0E+00**			**2.0E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.5E+01**			**5.5E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.6E-03		1.3E+00	**1.3E+00**
Surface Water Total								**1.3E+00**
Receptor Total							Receptor HI Total	**5.5E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.1b) **Receptor Population:** Trespasser Hunter - EPC 1 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**1.0E+01**		**1.6E-01**	**1.0E+01**
			77-TeCB	Developmental	**3.0E+00**		3.0E-03	**3.0E+00**
			81-TeCB	Developmental	**1.1E+00**		7.8E-02	**1.1E+00**
			126-PeCB	Developmental	**3.4E+02**		**2.5E+01**	**3.6E+02**
			105-PeCB	Developmental	**1.8E+01**		**1.3E+00**	**1.9E+01**
			114-PeCB	Developmental	**1.3E+00**		9.8E-02	**1.4E+00**
			118-PeCB	Developmental	**2.9E+01**		**2.1E+00**	**3.1E+01**
			156,157-HxCB	Developmental	**8.4E+00**		6.2E-01	**9.0E+00**
			167-HxCB	Developmental	**2.2E+00**		1.6E-01	**2.4E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**3.5E+01**		**2.6E+00**	**3.7E+01**
			Aldrin	Liver	**9.3E+00**		4.9E-01	**9.7E+00**
Soil Total								**4.9E+02**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**1.9E+00**			**1.9E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.4E+01**			**5.4E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	4.2E-03		**1.4E+00**	**1.4E+00**
Surface Water Total								**1.4E+00**
Receptor Total							Receptor HI Total	**5.7E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.2a) **Receptor Population:** Trespasser Hunter - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	1.0E+00		2.0E-01	**1.2E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.1E+00**		4.2E-01	**2.5E+00**
Soil Total								**3.7E+00**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**2.0E+00**			**2.0E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.5E+01**			**5.5E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.6E-03		1.3E+00	**1.3E+00**
Surface Water Total								**1.3E+00**
Receptor Total							Receptor HI Total	**8.6E+01**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.2b) **Receptor Population:** Trespasser Hunter - EPC 2 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	**1.2E+00**		8.6E-02	**1.3E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.5E+00**		1.8E-01	**2.7E+00**
Soil Total								**3.9E+00**
All Surface Soil	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
All Surface Water			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**1.9E+00**			**1.9E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.4E+01**			**5.4E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	4.2E-03		**1.4E+00**	**1.4E+00**
Surface Water Total								**1.4E+00**
Receptor Total							Receptor HI Total	**8.6E+01**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.2a) **Receptor Population:** Trespasser Hunter - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	1.0E+00		2.0E-01	**1.2E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.1E+00**		4.2E-01	**2.5E+00**
Soil Total								**3.7E+00**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**2.0E+00**			**2.0E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.5E+01**			**5.5E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.6E-03		1.3E+00	**1.3E+00**
Surface Water Total								**1.3E+00**
Receptor Total							Receptor HI Total	**8.6E+01**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current (10.4.2b) **Receptor Population:** Trespasser Hunter - EPC 2 and Western Pond **Receptor Age:** Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	**1.2E+00**		8.6E-02	**1.3E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.5E+00**		1.8E-01	**2.7E+00**
Soil Total								**3.9E+00**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	Developmental	**2.3E+01**			**2.3E+01**
			105-PeCB	Developmental	**1.2E+00**			**1.2E+00**
			118-PeCB	Developmental	**1.9E+00**			**1.9E+00**
			Aroclor 1254	Autoimmune System, eyes	**5.4E+01**			**5.4E+01**
Soil/Surface Water Total								**8.1E+01**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	4.2E-03		**1.4E+00**	**1.4E+00**
Surface Water Total								**1.4E+00**
Receptor Total							Receptor HI Total	**8.6E+01**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Future (10.8.1a) **Receptor Population:** Recreational Hiker - EPC 1 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**8.7E+00**		**1.3E+00**	**9.9E+00**
			77-TeCB	Developmental	**2.5E+00**		2.3E-02	**2.5E+00**
			81-TeCB	Developmental	8.9E-01		6.1E-01	**1.5E+00**
			126-PeCB	Developmental	**2.9E+02**		**1.9E+02**	**4.8E+02**
			105-PeCB	Developmental	**1.5E+01**		**1.0E+01**	**2.5E+01**
			114-PeCB	Developmental	**1.1E+00**		7.6E-01	**1.9E+00**
			118-PeCB	Developmental	**2.4E+01**		**1.6E+01**	**4.1E+01**
			156,157-HxCB	Developmental	**7.1E+00**		**4.8E+00**	**1.2E+01**
			167-HxCB	Developmental	**1.9E+00**		**1.3E+00**	**3.2E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**2.9E+01**		**2.0E+01**	**4.9E+01**
			Aldrin	Liver	**7.8E+00**		**3.8E+00**	**1.2E+01**
Soil Total								**6.4E+02**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.5E-03		4.5E+00	**4.5E+00**
Surface Water Total								**4.5E+00**
Receptor Total							Receptor HI Total	**6.4E+02**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Future (10.8.1b) **Receptor Population:** Recreational Hiker - EPC 1 and Western Pond **Receptor Age:** Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	Developmental	**1.3E+01**		**2.8E+00**	**1.6E+01**
			77-TeCB	Developmental	**3.9E+00**		5.2E-02	**4.0E+00**
			81-TeCB	Developmental	**1.4E+00**		1.4E+00	**2.8E+00**
			126-PeCB	Developmental	**4.5E+02**		**4.4E+02**	**8.9E+02**
			105-PeCB	Developmental	**2.3E+01**		**2.3E+01**	**4.6E+01**
			114-PeCB	Developmental	**1.7E+00**		**1.7E+00**	**3.5E+00**
			118-PeCB	Developmental	**3.8E+01**		**3.7E+01**	**7.5E+01**
			156,157-HxCB	Developmental	**1.1E+01**		**1.1E+01**	**2.2E+01**
			167-HxCB	Developmental	**2.9E+00**		**2.9E+00**	**5.8E+00**
			Total PCBs >1000 ppm	Autoimmune System, eyes	**4.6E+01**		**4.5E+01**	**9.1E+01**
			Aldrin	Liver	**1.2E+01**		**8.6E+00**	**2.1E+01**
Soil Total								**1.2E+03**
Sediment	Sediment	Western Pond	126-PeCB	Developmental	8.4E-01		8.3E-01	**1.7E+00**
Sediment Total								**1.7E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	5.5E-03		**5.0E+00**	**5.1E+00**
Surface Water Total								**5.1E+00**
Receptor Total							Receptor HI Total	**1.2E+03**

Table 5 - Continued
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Future (10.8.2a) **Receptor Population:** Recreational Hiker - EPC 2 and Western Pond **Receptor Age:** Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	9.8E-01		6.7E-01	**1.7E+00**
			Aroclor 1254	Autoimmune System, eyes	**2.1E+00**		**1.4E+00**	**3.5E+00**
Soil Total								**5.2E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	3.5E-03		**4.5E+00**	**4.5E+00**
Surface Water Total								**4.5E+00**
Receptor Total							Receptor HI Total	**9.6E+00**

Scenario Timeframe: Future (10.8.2b) **Receptor Population:** Recreational Hiker - EPC 2 and Western Pond **Receptor Age:** Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Non-Carcinogenic Hazard Quotient			
					Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	Developmental	**1.5E+00**		**1.5E+00**	**3.0E+00**
			Aroclor 1254	Autoimmune System, eyes	**3.3E+00**		**3.2E+00**	**6.5E+00**
Soil Total								**9.5E+00**
Sediment	Sediment	Western Pond	126-PeCB	Developmental	8.4E-01		8.3E-01	**1.7E+00**
Sediment Total								**1.7E+00**
Surface Water	Surface Water	Western Pond	Aroclor 1254	Autoimmune System, eyes	5.5E-03		**5.0E+00**	**5.1E+00**
Surface Water Total								**5.1E+00**
Receptor Total							Receptor HI Total	**1.6E+01**

Table 6
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.1.1a)
Receptor Population: Trespasser Hiker - EPC 1 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**2E-04**		**3E-05**	**3E-04**
			77-TeCB	**7E-05**		**6E-07**	**7E-05**
			81-TeCB	**2E-05**		**2E-05**	**4E-05**
			126-PeCB	**8E-03**		**5E-03**	**1E-02**
			105-PeCB	**4E-04**		**3E-04**	**7E-04**
			114-PeCB	**3E-05**		**2E-05**	**5E-05**
			118-PeCB	**6E-04**		**4E-04**	**1E-03**
			156,157-HxCB	**2E-04**		**1E-04**	**3E-04**
			167-HxCB	**5E-05**		**3E-05**	**8E-05**
			Total PCBs >1000 ppm	**2E-04**		**2E-04**	**4E-04**
			Aldrin	**8E-04**		**4E-04**	**1E-03**
Soil Total							**2E-02**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	1E-07		**3E-04**	**3E-04**
			Dibenzo(a,h)anthracene	1E-08		**5E-05**	**5E-05**
			Aroclor 1254	3E-08		**4E-05**	**4E-05**
Surface Water Total							**4E-04**
Receptor Total						Receptor Risk Total	**2E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.1.2a)
Receptor Population: Trespasser Hiker - EPC 2 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**3E-05**		**2E-05**	**5E-05**
			Aroclor 1248	**3E-05**		**2E-05**	**5E-05**
			Aroclor 1254	**2E-05**		**1E-05**	**3E-05**
Soil Total							**1E-04**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	1E-07		**3E-04**	**3E-04**
			Dibenzo(a,h)anthracene	1E-08		**5E-05**	**5E-05**
			Aroclor 1254	3E-08		**4E-05**	**4E-05**
Surface Water Total							**4E-04**
Receptor Total						Receptor Risk Total	**5E-04**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.1.1b)
Receptor Population: Trespasser Hiker - EPC 1 and Western Pond
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**2E-04**		**3E-05**	**2E-04**
			77-TeCB	**4E-05**		**6E-07**	**4E-05**
			81-TeCB	**2E-05**		**2E-05**	**3E-05**
			126-PeCB	**5E-03**		**5E-03**	**1E-02**
			105-PeCB	**3E-04**		**3E-04**	**5E-04**
			114-PeCB	**2E-05**		**2E-05**	**4E-05**
			118-PeCB	**4E-04**		**4E-04**	**8E-04**
			156,157-HxCB	**1E-04**		**1E-04**	**2E-04**
			167-HxCB	**3E-05**		**3E-05**	**6E-05**
			Total PCBs >1000 ppm	**2E-04**		**2E-04**	**3E-04**
			Aldrin	**5E-04**		**4E-04**	**9E-04**
Soil Total							**1E-02**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	3E-08		**6E-05**	**6E-05**
			Benzo(a)pyrene	2E-07		**4E-04**	**4E-04**
			Indeno(1,2,3-cd)pyrene	2E-08		**4E-05**	**4E-05**
			Dibenzo(a,h)anthracene	3E-08		**8E-05**	**8E-05**
			Aroclor 1254	2E-08		**2E-05**	**2E-05**
Surface Water Total							**6E-04**
Receptor Total						Receptor Risk Total	**1E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.1.2b)
Receptor Population: Trespasser Hiker - EPC 2 and Western Pond
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**2E-05**		**2E-05**	**3E-05**
			Aroclor 1254	1E-05		1E-05	**2E-05**
Soil Total							**6E-05**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	3E-08		**6E-05**	**6E-05**
			Benzo(a)pyrene	2E-07		**4E-04**	**4E-04**
			Indeno(1,2,3-cd)pyrene	2E-08		**4E-05**	**4E-05**
			Dibenzo(a,h)anthracene	3E-08		**8E-05**	**8E-05**
			Aroclor 1254	2E-08		**2E-05**	**2E-05**
Surface Water Total							**6E-04**
Receptor Total						Receptor Risk Total	**7E-04**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.2.1a)
Receptor Population: Trespasser ATV Rider - EPC 1 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**1E-04**	1E-09	**6E-05**	**2E-04**
			77-TeCB	**4E-05**	4E-12	**1E-06**	**4E-05**
			81-TeCB	**1E-05**	1E-10	**3E-05**	**4E-05**
			126-PeCB	**4E-03**	3E-08	**3E-03**	**7E-03**
			105-PeCB	**2E-04**	2E-09	**2E-04**	**4E-04**
			114-PeCB	**2E-05**	1E-10	**1E-05**	**3E-05**
			118-PeCB	**4E-04**	3E-09	**3E-04**	**6E-04**
			156,157-HxCB	**1E-04**	8E-10	**7E-05**	**2E-04**
			167-HxCB	**3E-05**	2E-10	**2E-05**	**5E-05**
			Total PCBs >1000 ppm	**1E-04**	1E-09	**9E-05**	**2E-04**
			Aldrin	**5E-04**	4E-09	**2E-04**	**7E-04**
Soil Total							**1E-02**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	7E-08		**2E-04**	**2E-04**
			Aroclor 1254	2E-08		**2E-05**	**2E-05**
Surface Water Total							**2E-04**
Receptor Total						Receptor Risk Total	**1E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.2.1b)
Receptor Population: Trespasser ATV Rider - EPC 1 and Western Pond
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**3E-05**	2E-10	**1E-06**	**3E-05**
			126-PeCB	**9E-04**	6E-09	**2E-04**	**1E-03**
			105-PeCB	**4E-05**	3E-10	**1E-05**	**5E-05**
			118-PeCB	**7E-05**	5E-10	**2E-05**	**9E-05**
			156,157-HxCB	**2E-05**	1E-10	**5E-06**	**3E-05**
			Total PCBs >1000 ppm	**3E-05**	2E-10	**6E-06**	**3E-05**
			Aldrin	**9E-05**	6E-10	**1E-05**	**1E-04**
Soil Total							**1E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	4E-08		**8E-05**	**8E-05**
			Aroclor 1254	3E-09		**3E-06**	**3E-06**
Surface Water Total							**8E-05**
Receptor Total						Receptor Risk Total	**1E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.2.2a)
Receptor Population: Trespasser ATV Rider - EPC 2 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	Aroclor 1248	**2E-05**	2E-10	**3E-05**	**5E-05**
			Aroclor 1254	**1E-05**	1E-10	**2E-05**	**3E-05**
Soil Total							**8E-05**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	7E-08		**2E-04**	**2E-04**
			Aroclor 1254	2E-08		**2E-05**	**2E-05**
Surface Water Total							**3E-04**
Receptor Total						Receptor Risk Total	**4E-04**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.1a)
Receptor Population: Trespasser Angler - EPC 1 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**2E-04**		**4E-05**	**3E-04**
			77-TeCB	**7E-05**		8E-07	**7E-05**
			81-TeCB	**2E-05**		**2E-05**	**4E-05**
			126-PeCB	**8E-03**		**7E-03**	**1E-02**
			105-PeCB	**4E-04**		**3E-04**	**7E-04**
			114-PeCB	**3E-05**		**3E-05**	**6E-05**
			118-PeCB	**6E-04**		**5E-04**	**1E-03**
			156,157-HxCB	**2E-04**		**2E-04**	**3E-04**
			167-HxCB	**5E-05**		**4E-05**	**9E-05**
			Total PCBs >1000 ppm	**2E-04**		**2E-04**	**4E-04**
			Aldrin	**8E-04**		**5E-04**	**1E-03**
Soil Total							**2E-02**
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	Benzo(a)anthracene	**4E-04**			**4E-04**
			Benzo(a)pyrene	**1E-02**			**1E-02**
			Benzo(b)fluoranthene	**1E-03**			**1E-03**
			Benzo(k)fluoranthene	**9E-05**			**9E-05**
			Dibenzo(a,h)anthracene	**2E-03**			**2E-03**
			Indeno(1,2,3-cd)pyrene	**1E-03**			**1E-03**
			Aroclor 1248	**4E-05**			**4E-05**
			Aroclor 1254	**8E-05**			**8E-05**
			Aroclor 1260	**1E-04**			**1E-04**
			126-PeCB	**1E-03**			**1E-03**
			105-PeCB	**3E-04**			**3E-04**
			118-PeCB	**4E-04**			**4E-04**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.1a)
Receptor Population: Trespasser Angler - EPC 1 and Western Pond - Continued
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment/ Surface Water Western Pond	Fish	Fish Tissue	156,157-HxCB	**8E-05**			**8E-05**
			Dioxin - TEQ	**5E-05**			**5E-05**
			Arsenic	**6E-05**			**6E-05**
			Mercury	NA			NA
Western Pond Sediment Total							**2E-02**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	1E-08		**5E-05**	**5E-05**
			Benzo(a)pyrene	1E-07		**4E-04**	**4E-04**
			Dibenzo(a,h)anthracene	1E-08		**7E-05**	**7E-05**
			Aroclor 1254	3E-08		**5E-05**	**5E-05**
Surface Water Total							**5E-04**
Receptor Total						Receptor Risk Total	**4E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.1b)
Receptor Population: Trespasser Angler - EPC 1 and Western Pond
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**5E-05**		**3E-06**	**5E-05**
			77-TeCB	**1E-05**		**5E-08**	**1E-05**
			81-TeCB	**5E-06**		1E-06	**6E-06**
			126-PeCB	**1E-03**		**5E-04**	**2E-03**
			105-PeCB	**8E-05**		**2E-05**	**1E-04**
			118-PeCB	**1E-04**		**4E-05**	**2E-04**
			156,157-HxCB	**4E-05**		**1E-05**	**5E-05**
			167-HxCB	**1E-05**		**3E-06**	**1E-05**
			Total PCBs >1000 ppm	**5E-05**		**1E-05**	**6E-05**
			Aldrin	**2E-04**		**3E-05**	**2E-04**
Soil Total							**3E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.1b)
Receptor Population: Trespasser Angler - EPC 1 and Western Pond - Continued
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Sediment/ Surface Water Westerm Pond	Fish	Fish Tissue	Benzo(a)anthracene	**2E-04**			**2E-04**
			Benzo(a)pyrene	**5E-03**			**5E-03**
			Benzo(b)fluoranthene	**7E-04**			**7E-04**
			Benzo(k)fluoranthene	**5E-05**			**5E-05**
			Dibenzo(a,h)anthracene	**8E-04**			**8E-04**
			Indeno(1,2,3-cd)pyrene	**7E-04**			**7E-04**
			Aroclor 1254	**1E-05**			**1E-05**
			126-PeCB	**2E-04**			**2E-04**
			105-PeCB	**5E-05**			**5E-05**
			118-PeCB	**6E-05**			**6E-05**
			156,157-HxCB	**1E-05**			**1E-05**
			Mercury	NA			NA
Western Pond Sediment Total							**8E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	7E-08		**2E-04**	**2E-04**
			Aroclor 1254	6E-09		**8E-06**	**8E-06**
Medium Total							**2E-04**
Receptor Total						Receptor Risk Total	**1E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.2a)
Receptor Population: Trespasser Angler - EPC 2 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**3E-05**		**2E-05**	**5E-05**
			Aroclor 1248	**3E-05**		**2E-05**	**5E-05**
			Aroclor 1254	**2E-05**		**1E-05**	**3E-05**
Soil Total							**1E-04**
Sediment/ Surface Water Westerm Pond	Fish	Fish Tissue	Benzo(a)anthracene	**4E-04**			**4E-04**
			Benzo(a)pyrene	**1E-02**			**1E-02**
			Benzo(b)fluoranthene	**1E-03**			**1E-03**
			Benzo(k)fluoranthene	**9E-05**			**9E-05**
			Dibenzo(a,h)anthracene	**2E-03**			**2E-03**
			Indeno(1,2,3-cd)pyrene	**1E-03**			**1E-03**
			Aroclor 1248	**4E-05**			**4E-05**
			Aroclor 1254	**8E-05**			**8E-05**
			Aroclor 1260	**1E-04**			**1E-04**
			126-PeCB	**1E-03**			**1E-03**
			105-PeCB	**3E-04**			**3E-04**
			118-PeCB	**4E-04**			**4E-04**
			156,157-HxCB	**8E-05**			**8E-05**
			Dioxin - TEQ	**5E-05**			**5E-05**
			Arsenic	**6E-05**			**6E-05**
			Mercury	NA			NA
Western Pond Sediment Total							**2E-02**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	1E-08		**5E-05**	**5E-05**
			Benzo(a)pyrene	1E-07		**4E-04**	**4E-04**
			Dibenzo(a,h)anthracene	1E-08		**7E-05**	**7E-05**
			Aroclor 1254	3E-08		**5E-05**	**5E-05**
Surface Water Total							**5E-04**
Receptor Total						Receptor Risk Total	**2E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.3.2b)
Receptor Population: Trespasser Angler - EPC 2 and Western Pond
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**5E-06**		**2E-06**	**7E-06**
			Aroclor 1254	**3E-06**		1E-06	**4E-06**
Soil Total							**1E-05**
Sediment/ Surface Water Westerm Pond	Fish	Fish Tissue	Benzo(a)anthracene	**2E-04**			**2E-04**
			Benzo(a)pyrene	**5E-03**			**5E-03**
			Benzo(b)fluoranthene	**7E-04**			**7E-04**
			Benzo(k)fluoranthene	**5E-05**			**5E-05**
			Dibenzo(a,h)anthracene	**8E-04**			**8E-04**
			Indeno(1,2,3-cd)pyrene	**7E-04**			**7E-04**
			Aroclor 1254	**1E-05**			**1E-05**
			126-PeCB	**2E-04**			**2E-04**
			105-PeCB	**5E-05**			**5E-05**
			118-PeCB	**6E-05**			**6E-05**
			156,157-HxCB	**1E-05**			**1E-05**
			Mercury	NA			NA
Bound Brook and Main Tributary Sediment Total							**8E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	7E-08		**2E-04**	**2E-04**
			Aroclor 1254	6E-09		**8E-06**	**8E-06**
Medium Total							**2E-04**
Receptor Total						Receptor Risk Total	**9E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.4.1a)
Receptor Population: Trespasser Hunter - EPC 1 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**4E-04**		**2E-05**	**4E-04**
			77-TeCB	**1E-04**		3E-07	**1E-04**
			81-TeCB	**4E-05**		**8E-06**	**5E-05**
			126-PeCB	**1E-02**		**3E-03**	**2E-02**
			105-PeCB	**7E-04**		**1E-04**	**8E-04**
			114-PeCB	**5E-05**		**1E-05**	**6E-05**
			118-PeCB	**1E-03**		**2E-04**	**1E-03**
			156,157-HxCB	**3E-04**		**6E-05**	**4E-04**
			167-HxCB	**8E-05**		**2E-05**	**1E-04**
			Total PCBs >1000 ppm	**4E-04**		**8E-05**	**5E-04**
			Aldrin	**1E-03**		**2E-04**	**2E-03**
Soil Total							**2E-02**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	**1E-03**			**1E-03**
			105-PeCB	**5E-05**			**5E-05**
			118-PeCB	**9E-05**			**9E-05**
			Aroclor 1254	**8E-04**			**8E-04**
Soil/Surface Water Total							**2E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	2E-07		**1E-04**	**1E-04**
			Aroclor 1254	5E-08		**2E-05**	**2E-05**
Surface Water Total							**2E-04**
Receptor Total						Receptor Risk Total	**2E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.4.1b)
Receptor Population: Trespasser Hunter - EPC 1 and Western Pond
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**8E-05**		**1E-06**	**8E-05**
			77-TeCB	**2E-05**		**2E-08**	**2E-05**
			81-TeCB	**8E-06**		**6E-07**	**8E-06**
			126-PeCB	**3E-03**		**2E-04**	**3E-03**
			105-PeCB	**1E-04**		**1E-05**	**1E-04**
			114-PeCB	**1E-05**		**7E-07**	**1E-05**
			118-PeCB	**2E-04**		**2E-05**	**2E-04**
			156,157-HxCB	**6E-05**		**5E-06**	**7E-05**
			167-HxCB	**2E-05**		**1E-06**	**2E-05**
			Total PCBs >1000 ppm	**8E-05**		**6E-06**	**9E-05**
			Aldrin	**3E-04**		**1E-05**	**3E-04**
Soil Total							**4E-03**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	**2E-04**			**2E-04**
			105-PeCB	**9E-06**			**9E-06**
			118-PeCB	**1E-05**			**1E-05**
			Aroclor 1254	**1E-04**			**1E-04**
Soil/Surface Water Total							**3E-04**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	1E-07		**8E-05**	**8E-05**
			Aroclor 1254	1E-08		**3E-06**	**3E-06**
Surface Water							**8E-05**
Receptor Total						Receptor Risk Total	**4E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.4.2a)
Receptor Population: Trespasser Hunter - EPC 2 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**4E-05**		**9E-06**	**5E-05**
			Aroclor 1248	**5E-05**		**1E-05**	**6E-05**
			Aroclor 1254	**3E-05**		**6E-06**	**3E-05**
Soil Total							**1E-04**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	**1E-03**			**1E-03**
			105-PeCB	**5E-05**			**5E-05**
			118-PeCB	**9E-05**			**9E-05**
			Aroclor 1254	**8E-04**			**8E-04**
Soil/Surface Water Total							**2E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	2E-07		**1E-04**	**1E-04**
			Aroclor 1254	5E-08		**2E-05**	**2E-05**
Surface Water Total							**2E-04**
Receptor Total						Receptor Risk Total	**2E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current (10.4.2b)
Receptor Population: Trespasser Hunter - EPC 2 and Western Pond
Receptor Age: Juvenile

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**9E-06**		6E-07	**9E-06**
			Aroclor 1254	**6E-06**		4E-07	**6E-06**
Soil Total							**2E-05**
All Surface Soil All Surface Water	Wild Game	Deer Tissue	126-PeCB	**2E-04**			**2E-04**
			105-PeCB	**9E-06**			**9E-06**
			118-PeCB	**1E-05**			**1E-05**
			Aroclor 1254	**1E-04**			**1E-04**
Soil/Surface Water Total							**2E-03**
Surface Water	Surface Water	Western Pond	Benzo(a)pyrene	1E-07		**8E-05**	**8E-05**
			Aroclor 1254	1E-08		**3E-06**	**3E-06**
Surface Water Total							**2E-04**
Receptor Total						Receptor Risk Total	**2E-03**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Future (10.8.1a)
Receptor Population: Recreational Hiker - EPC 1 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**4E-04**		**6E-05**	**4E-04**
			77-TeCB	**1E-04**		**1E-06**	**1E-04**
			81-TeCB	**4E-05**		**3E-05**	**7E-05**
			126-PeCB	**1E-02**		**9E-03**	**2E-02**
			105-PeCB	**7E-04**		**4E-04**	**1E-03**
			114-PeCB	**5E-05**		**3E-05**	**8E-05**
			118-PeCB	**1E-03**		**7E-04**	**2E-03**
			156,157-HxCB	**3E-04**		**2E-04**	**5E-04**
			167-HxCB	**8E-05**		**6E-05**	**1E-04**
			Total PCBs >1000 ppm	**4E-04**		**3E-04**	**7E-04**
			Aldrin	**1E-03**		**7E-04**	**2E-03**
Soil Total							**3E-02**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	2E-08		**6E-05**	**6E-05**
			Benzo(a)pyrene	2E-07		**5E-04**	**5E-04**
			Indeno(1,2,3-cd)pyrene	2E-08		**5E-05**	**5E-05**
			Dibenzo(a,h)anthracene	2E-08		**9E-05**	**9E-05**
			Aroclor 1254	5E-08		**6E-05**	**6E-05**
Surface Water Total							**7E-04**
Receptor Total						Receptor Risk Total	**3E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Future (10.8.1b)
Receptor Population: Recreational Hiker - EPC 1 and Western Pond
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 1	Dioxin TEQ	**3E-04**		**5E-05**	**3E-04**
			77-TeCB	**7E-05**		**1E-06**	**7E-05**
			81-TeCB	**3E-05**		**3E-05**	**5E-05**
			126-PeCB	**8E-03**		**8E-03**	**2E-02**
			105-PeCB	**4E-04**		**4E-04**	**8E-04**
			114-PeCB	**3E-05**		**3E-05**	**6E-05**
			118-PeCB	**7E-04**		**7E-04**	**1E-03**
			156,157-HxCB	**2E-04**		**2E-04**	**4E-04**
			167-HxCB	**5E-05**		**5E-05**	**1E-04**
			Total PCBs >1000 ppm	**3E-04**		**3E-04**	**5E-04**
			Aldrin	**9E-04**		**6E-04**	**2E-03**
Soil Total							**2E-02**
Sediment	Sediment	Western Pond	126-PeCB	**2E-05**		**2E-05**	**3E-05**
Sediment Total							**3E-05**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	5E-08		**9E-05**	**9E-05**
			Benzo(a)pyrene	4E-07		**7E-04**	**7E-04**
			Indeno(1,2,3-cd)pyrene	4E-08		**7E-05**	**7E-05**
			Dibenzo(a,h)anthracene	4E-08		**1E-04**	**1E-04**
			Aroclor 1254	3E-08		**3E-05**	**3E-05**
Surface Water Total							**1E-03**
Receptor Total						Receptor Risk Total	**2E-02**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Future (10.8.2a)
Receptor Population: Recreational Hiker - EPC 2 and Western Pond
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**4E-05**		**3E-05**	**7E-05**
			Aroclor 1248	**5E-05**		**3E-05**	**8E-05**
			Aroclor 1254	**3E-05**		**2E-05**	**5E-05**
Soil Total							**2E-04**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	2E-08		**6E-05**	**6E-05**
			Benzo(a)pyrene	2E-07		**5E-04**	**5E-04**
			Indeno(1,2,3-cd)pyrene	2E-08		**5E-05**	**5E-05**
			Dibenzo(a,h)anthracene	2E-08		**9E-05**	**9E-05**
			Aroclor 1254	5E-08		**6E-05**	**6E-05**
Surface Water Total							**7E-04**
Receptor Total						Receptor Risk Total	**9E-04**

Table 6 - Continued
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Future (10.8.2b)
Receptor Population: Recreational Hiker - EPC 2 and Western Pond
Receptor Age: Youth

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Soil	Surface Soil	Surface Soil - EPC 2	126-PeCB	**3E-05**		**3E-05**	**6E-05**
			Aroclor 1248	**3E-05**		**3E-05**	**6E-05**
			Aroclor 1254	**2E-05**		**2E-05**	**4E-05**
Soil Total							**2E-04**
Sediment	Sediment	Western Pond	126-PeCB	**2E-05**		**2E-05**	**3E-05**
Sediment Total							**3E-05**
Surface Water	Surface Water	Western Pond	Benzo(b)fluoranthene	5E-08		**9E-05**	**9E-05**
			Benzo(a)pyrene	4E-07		**7E-04**	**7E-04**
			Indeno(1,2,3-cd)pyrene	4E-08		**7E-05**	**7E-05**
			Dibenzo(a,h)anthracene	4E-08		**1E-04**	**1E-04**
			Aroclor 1254	3E-08		**3E-05**	**3E-05**
Surface Water Total							**1E-03**
Receptor Total						Receptor Risk Total	**1E-03**

TABLE 7 SLERA PRGs

Sediment COPEC	Mean UCL Sediment Concentration (mg/kg) [1]	Background Concentration (mg/kg)[2]	Benthic Community PRG (mg/kg)[3]	Wildlife PRGs (mg/kg)[4]			
				Mallard	Little Brown Bat	Belted Kingfisher	Mink
Bound Brook/Tributaries							
Pesticides							
alpha-Chlordane	0.09	**2.24**	0.018	NA	NA	NA	NA
gamma-Chlordane	0.07	**2.04**	0.018	NA	NA	NA	NA
Western Pond							
PCBs Aroclors							
Aroclor 1248	1.70	ND	NA	**0.75**	1.17	NA	NA
Aroclor 1254	3.17	0.11	NA	**0.75**	1.17	NA	NA
Aroclor 1260	4.38	0.16	NA	**0.75**	1.17	NA	NA
Total PCB Aroclors	3.55	0.21	**0.68**	NA	NA	NA	NA
PCB/Dioxin/Furan Congeners							
Total PCBs	3.55	0.21	NA	2.42	NA	0.81	**0.31**

Notes:

Values in bold represent proposed preliminary remediation goals (PRGs).

[1] Mean UCL sediment concentrations from aquatic habitat area (see Tables B-4 and B-5).

[2] Based on mean UCLs of sediment sampling results from upstream Bound Brook samples (see Table B-6).

[3] from Section 6.1.2

[4] Sediment concentration resulting in HQ of 1 for MATC TRV

TABLE 7 SLERA PRGs – Continued

Sediment COPEC	Mean UCL Surface Soil Concentration (mg/kg) [1]	Mean Surface Soil Concentration (mg/kg) [1]	Mean Background Concentration (mg/kg)[2]	Wildlife PRGs (mg/kg)[3]				
				Mourning Dove	White-Footed Mouse	American Robin	Short-Tailed Shrew	Red Fox
Eastern Dumping Area								
HWM PAHs	32.1	13.5	2.66	NA	NA	12.5	**6.55**	NA
PCBs Aroclors								
Aroclor 1248	9.43	0.99	ND	NA	NA	1.98	**1.43**	NA
Aroclor 1254	1.17	0.61	ND	NA	NA	NA	**1.43**	NA
Aroclor 1260	1.52	0.24	0.038	NA	NA	NA	**1.43**	NA
PCB/Dioxin/Furan Congeners								
Total PCBs	9.39	1.55	0.047	NA	NA	0.41	1.75	NA
Inorganics								
Cadmium	131	18.1	1.24	NA	NA	6.81	**4.58**	NA
Copper	433	263	28.8	NA	NA	**196**	NA	NA
Lead	1801	1070	62.0	590	NA	**206**	710	NA
Selenium	11.7	4.23	1.52	7.45	NA	NA	**5.31**	NA

Notes:

Values in bold represent proposed preliminary remediation goals (PRGs).

[1] Mean UCL and mean surface soil concentrations from terrestrial habitat area (see Tables B-7 and B-8).

[2] Based on mean of surface soil sampling results from background samples (see Table B-9).

[3] Surface soil concentration resulting in HQ of 1 for MATC TRV

TABLE 7 SLERA PRGs - Continued

Sediment COPEC	Mean UCL Surface Soil Concentration (mg/kg) [1]	Mean Surface Soil Concentration (mg/kg) [1]	Mean Background Concentration (mg/kg)[2]	Wildlife PRGs (mg/kg)[3]				
				Mourning Dove	White-Footed Mouse	American Robin	Short-Tailed Shrew	Red Fox
Western Dumping Area								
Pesticides								
Total DDT	62.7	6.45	0.0089	NA	NA	7.78	**6.46**	NA
Aldrin	400	25.0	ND	35.2	137	0.63	**0.43**	NA
Dieldrin	0.046	0.024	0.0023	NA	NA	NA	**0.03**	NA
Endrin	0.47	0.061	ND	NA	NA	0.14	**0.07**	NA
Heptachlor Epoxide	1.17	0.12	0.0017	NA	NA	NA	**0.63**	NA
PCBs Aroclors								
Aroclor 1242	862	94.0	ND	62.4	91.8	2.20	**1.43**	236
Aroclor 1248	2091	530	ND	54.3	91.8	1.98	**1.43**	236
Aroclor 1254	53652	5300	ND	57.0	94.8	1.98	**1.43**	236
Aroclor 1260	39.4	23.0	0.038	NA	NA	1.98	**1.43**	NA
PCB/Dioxin/Furan Congeners								
Total PCBs	53392	5800	0.047	77.0	892	0.41	1.75	2210
Inorganics								
Cadmium	39.2	20.0	1.24	NA	NA	6.81	**4.58**	NA
Copper	775	440	28.8	NA	NA	**196**	458	NA
Lead	2242	1400	62.0	590	NA	**206**	710	NA
Mercury	5.04	2.80	0.10	NA	NA	**3.15**	NA	NA

Notes:

Values in bold represent proposed preliminary remediation goals (PRGs).

[1] Mean UCL and mean surface soil concentrations from terrestrial habitat area (see Tables B-7 and B-8).

[2] Based on mean of surface soil sampling results from background samples (see Table B-9).

[3] Surface soil concentration resulting in HQ of 1 for MATC TRV

TABLE 8 ARARs and TBCs				
TYPE OF ARAR or TBC	**REGULATORY REQUIREMENT**	**REGULATION / CITATION**	**APPLICABILITY / RELEVANCE**	**SITE-SPECIFIC ARAR/TBC**
CHEMICAL-SPECIFIC ARAR/TBC				
Federal	Toxic Substances Control Act (TSCA)	40 CFR 761.61	Requirements for remediation of PCB contamination; ARARs for onsite PCB removal and containment.	ARAR for PCB impacts and associated remedial activities
	Safe Drinking Water Act	40 CFR 141	Drinking water standards which apply to specific contaminants that have been determined to have an adverse impact on human health; expressed as Maximum Contaminant Levels (MCLs). [for groundwater and surface water cleanup as needed]	ARAR for Surface water, if needed
	Ambient Water Quality Criteria	Guidance Criteria	Guideline established to protect human health and/or aquatic organism; ARARs for contaminants that lack a promulgated MCL, otherwise criteria are considered TBCs. [for ground water and surface water cleanup as needed]	ARAR for contaminants lacking promulgated MCL (TBC) if needed
	RCRA Ground Water Protection Standards	40 CFR 264.94	Maximum concentrations for ground water protection at hazardous waste management facilities. Not Listed/ Not Applicable for PCBs but for other contaminants. [for ground water cleanup as needed]	ARAR for ground water cleanup, if needed.
State	Soil Remediation Standards	NJAC 7:26D	NJDEP sets standards for soil remediation based on site use	ARAR for various contaminants
	Ground Water Quality Standards	NJAC 7:9-6	NJDEP sets standards for ground water based on classes.	ARAR for various contaminants.
	Surface water Quality Standards	NJAC 7:9-B	NJDEP sets standards for surface water based on classes.	ARAR for various contaminants.
	Safe Drinking Water Act Standards	NJAC 7:10-5.2	Contains the state's discretionary changes to the federal drinking water standards.	ARAR for ground water or surface water, if needed.
	Industrial Site Recovery Act	NJSA 13:1K	Requires for soil remediation standards for human carcinogen in excess of established standards.	ARAR for establishing soil remediation criteria when more stringent than federal risk standards

TABLE 8 ARARs and TBCs - Continued				
TYPE OF ARAR or TBC	**REGULATORY REQUIREMENT**	**REGULATION / CITATION**	**APPLICABILITY / RELEVANCE**	**SITE-SPECIFIC ARAR/TBC**
LOCATION-SPECIFIC ARAR/TBC				
Federal	Wetlands Protection	Executive Order 11990	Requires consideration of impacts to wetlands in order to minimize any destruction, loss, or degradation and to preserve their values.	ARAR for impacts/remedial action in wetlands areas and buffer zones.
	Clean Water Act, Section 404(b)(1) Guidelines [regards to wetlands]	40 CFR 230.10	Guidelines established criteria for evaluating impacts to waters of the US (including wetlands) and sets forth factors for considering mitigation measures.	ARAR for impacts/remedial action in wetlands areas and buffer zones and streams.
	Floodplain Protection	Executive Order 11988	Requires consideration of impacts to floodplain areas in order to minimize any flood impacts on human health, safety and welfare, reduce flood loss risks, and to preserve/ restore their values.	ARAR for impacts/remedial action in floodplain areas.
	Code of Federal Regulations-Location Standards [regards to floodplains]	40 CFR 264.18	Regulates the design, construction, operation, and maintenance of hazardous waste management facilities within the 100-year floodplain.	ARAR for impacts/remedial action in floodplain areas.
	Cultural Resources	National Historic Preservation Act of 1996 (amended Section 106) 36 CFR 800	Section 106 requires each Federal agency to do two things prior to carrying out, approving financial assistance to, or issuing a permit for a project that may affect properties listed or eligible for listing in the National Register of Historic Places. First, the agency must consider the impact of the project on historic properties. Second, the agency must seek the Council's comments on the project.	ARAR for effect on cultural resources (if present).
State	Wetlands Protection	NJAC 7:7A	Regulates the disturbance or alteration of freshwater wetlands and their respective buffer.	ARAR for impacts/remedial action in wetlands areas and buffer zones.
	Freshwater Wetlands Protection Act	N.J.S.A. 13:9B-1 et seq.	Related to Freshwater wetlands permit, procedures, and exemption to engage or work in wetland areas.	ARAR for impacts/remedial action in wetlands areas and buffer zones.
	Floodplain/Flood Hazard Area Protection	NJAC 7:13	Regulates the disturbance, the placement of fill, grading, excavation, or other disturbance within the defined flood hazard area/ floodplain of rivers/streams.	ARAR for impacts/remedial action in floodplain areas.

TABLE 8 ARARs and TBCs - Continued				
TYPE OF ARAR or TBC	**REGULATORY REQUIREMENT**	**REGULATION / CITATION**	**APPLICABILITY / RELEVANCE**	**SITE-SPECIFIC ARAR/TBC**
ACTION-SPECIFIC ARAR/TBC				
Federal	Toxic Substances Control Act (TSCA)	40 CFR 761.61	Handling, storage, disposal of PCB wastes.	ARAR for management of PCB wastes (on-site and during off-site disposal).
	Resource Conservation and Recovery Act (RCRA)	40 CFR 262, 263, 264, 265.	Hazardous waste handling, storage, disposal.	ARAR for off-site disposal of hazardous wastes; for on-site treatment and storage activities.
	USDOT Hazardous Material Transportation Regulations	49 CFR 171-180	Classification, packaging and labeling requirements for shipments of hazardous	ARAR for preparation of hazardous materials generated on-site for off-site shipment.
	Clean Air Act	40 CFR 50	Particulate and fugitive dust emission requirements.	ARAR for on-site activities with potential to generate particulate and/or fugitive dust emissions.
	Clean Water Act	40 CFR 122, 401	Requirements for point source discharges and storm water discharges from industrial activities.	TBD if needed.
	USEPA Test Methods		Analytical requirements for laboratory analyses.	TBC for analyses of environmental samples.
State	Site Remediation Reform Act (SRRA)	NJSA 58:10C-1 et seq.	Requirements for remediation of contaminated sites. Specifies rules, standards, and guidance for all aspects of remedial activities through case closure.	ARARs for investigation/ delineation of site impacts, development of remedial action plans, implementation of remedial action plans, fees, etc..
	Administrative Requirements for the Remediation of Contaminated Sites (ARRCS)	NJAC 7:26C		
	Technical Requirements for Site Remediation (TRSR)	NJAC 7:26E		
	Soil Erosion and Sediment Control	NJSA 4:24	Requirements for controlling erosion during land disturbances over 5000 sf.	ARAR for applicable activities (e.g., excavation).
	NJ Pollutant Discharge Elimination System (NJPDES)	NJAC 7:14A	Requirements for water discharge to surface water, ground water and POTWs.	ARAR for discharge of waste waters associated with remedial activities.
	Air Quality	NJAC 7:27	Requirements for air pollution sources.	ARAR for emission of air pollution during remedial activities.
	Treatment Works Approvals	NJAC 7:14A-22	Requirements for design and construction of wastewater treatment systems.	ARAR for on-site wastewater treatment associated with remedial activities.
	Hazardous Waste	NJAC 7:26G	Requirements for management and transportation of hazardous wastes.	ARAR for off-site disposal of hazardous wastes; for on-site treatment and storage activities.

Table 9 FS Alternatives					
Proposed Plan Alternative	**Feasibility Study Designation**		**Western Dump: Principal Threat Hot Spots**	**Western Dump: Residual Soil and Debris**	**Eastern Dump: Residual Soil and Debris**
1	a	No Action	X	X	X
	b	Monitoring/ICs			
	c	Capping/Consolidation			
	d	On-site Treatment			
	e	Excavation/Off-site Disposal			
2	a	No Action			
	b	Monitoring/ICs			
	c	Capping/Consolidation		X	X
	d	On-site Treatment	X		
	e	Excavation/Off-site Disposal			
3	a	No Action			
	b	Monitoring/ICs			
	c	Capping/Consolidation			
	d	On-site Treatment	X	X	X
	e	Excavation/Off-site Disposal			
4	a	No Action			
	b	Monitoring/ICs			
	c	Capping/Consolidation		X	X
	d	On-site Treatment			
	e	Excavation/Off-site Disposal	X		
5	a	No Action			
	b	Monitoring/ICs			X
	c	Capping/Consolidation		X	
	d	On-site Treatment			
	e	Excavation/Off-site Disposal	X		
6	a	No Action			
	b	Monitoring/ICs			
	c	Capping/Consolidation			
	d	On-site Treatment			
	e	Excavation/Off-site Disposal	X	X	X

Table 10 Cost Estimate Summary for the Selected Remedy				
Description	**Quantity**	**Units**	**Unit Cost**	**Cost**
Soil Excavation				
Construction Roads	5300	ft	$31.00	$164,300
Clearing and Grubbing	17.28	acre	$4240.00	$73,284
Excavation	122,333	cy	$5.00	$611,667
Create Staging Area	3	LS	$10,000	$30,000
Transport to Staging Area	122,333	cy	$2.00	$244,666
On-site Facilities	13.75	months	$3,000.00	$36,750
Off-site Disposal				
TSCA Waste	13,975.75	ton	$200.00	$2,795,076
Non-TSCA Waste	168,960	ton	$54.00	$9,123,837
Debris Disposal	564.75	ton	$60.00	$33,885
Wetlands Rehabilitation				
Wetlands Replanting	1.57	acre	$300,000.00	$471,000
Controls and Restoration				
Dust Suppression	55	week	$2750.00	$126,500
Hydroseeding	17.28	acre	$766.14	$13,241
Vegetation	14.16	acre	$6000.00	$84,960
Subtotal				$13,724,206
Contingency (40%)				$5,489,682
Project Management and Support				$4,563,991
Total Capital Cost				$23,777,879*

* Amounts were taken from Appendix B of the Draft Final FS. Although summing the total cost from each total excavation alternative (1e, 2e and 3e from the FS) results in the ROD text of $24.4 million, summary of the individual costs from Appendix B results in $23.8 million due to addition errors in the FS.

Appendix III

ADMINISTRATIVE RECORD INDEX

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

09/27/2013 **REGION ID: 02**

Site Name: WOODBROOK ROAD DUMP
CERCLIS ID: NJSFN0204260
OUID: 01
SSID: 02NX
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Beginning Bates:	Ending Bates:	Addressee Name:	Addressee Organization:	Author Name:	Author Organization:
140164	09/27/2013	ADMINISTRATIVE RECORD INDEX FOR OU1 FOR THE WOODBROOK ROAD DUMP SITE	13	[INDEX]			[]	[]	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]
688433	08/01/1990	US EPA GUIDANCE ON REMEDIAL ACTIONS FOR SUPERFUND SITES WITH PCB CONTAMINATION	152	[REPORT]	R2-0000001	R2-0000152	[]	[]	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]
140158	04/01/2000	CAPACITOR REMOVAL REPORT FOR THE SOUTH PLAINFIELD PROPERTY FOR THE WOODBROOK ROAD DUMP SITE	54	[REPORT]	R2-0000153	R2-0000206	[]	[]	[,]	[TEXAS EASTERN TRANSMISSION CORPORATION]
115043	03/01/2001	INTEGRATED ASSESSMENT REPORT (DISMAL SWAMP) - VOLUME I OF III FOR THE WOODBROOK ROAD DUMP SITE	1505	[REPORT]	R2-0000207	R2-0001711	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]	[BUTTERFIELD, W S, GEERS, DEAN , GILLILAND, GERALD V]	[ROY F. WESTON, INC.]
115044	03/01/2001	INTEGRATED ASSESSMENT REPORT (DISMAL SWAMP) - VOLUME II OF III FOR THE WOODBROOK ROAD DUMP SITE	1861	[REPORT]	R2-0001712	R2-0003572	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]	[BUTTERFIELD, W S, GEERS, DEAN , GILLILAND, GERALD V]	[ROY F. WESTON, INC.]
115045	03/01/2001	INTEGRATED ASSESSMENT REPORT (DISMAL SWAMP) - VOLUME III OF III FOR THE WOODBROOK ROAD DUMP SITE	1662	[REPORT]	R2-0003573	R2-0005234	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]	[BUTTERFIELD, W S, GEERS, DEAN , GILLILAND, GERALD V]	[ROY F. WESTON, INC.]
140022	01/01/2002	REMOVAL SITE ASSESSMENT REPORT FOR WOODBROOK ROAD DUMP SITE	286	[REPORT]	R2-0005235	R2-0005520	[,]	[US ENVIRONMENTAL PROTECTION AGENCY REGION 2]	[,]	[ROY F. WESTON, INC.]
140021	06/20/2003	PUBLIC HEALTH ASSESSMENT FOR DISMAL SWAMP FOR WOODBROOK ROAD DUMP SITE	65	[REPORT]	R2-0005521	R2-0005585	[]	[]	[,]	[AGENCY FOR TOXIC SUBSTANCES AND DISEASES REGISTRY]
140020	07/23/2003	TRANSMITTAL OF THE PUBLIC HEALTH ASSESSMENT FOR DISMAL SWAMP FOR WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0005586	R2-0005588	[MANNINO, PIETRO]	[EPA, REGION 2]	[BLOCK, ARTHUR]	[AGENCY FOR TOXIC SUBSTANCES AND DISEASES REGISTRY]
140157	08/11/2003	ADMINISTRATIVE ORDER ON CONSENT FOR THE WOODBROOK ROAD DUMP SITE - INDEX NO. CERCLA-02-2003-2025	70	[ORDER]	R2-0005589	R2-0005658	[]	[]	[BILINSKI, GREGORY P, KENNY, JANE M]	[EPA, REGION 2, TEXAS EASTERN TERMINAL COMPANY]
198906	08/11/2003	ADMINISTRATIVE ORDER FOR REMOVAL ACTION AND REMEDIAL INVESTIGATION / FEASIBILITY STUDY - INDEX NO. CERCLA-02-2003-2026 FOR THE WOODBROOK ROAD DUMP SITE	60	[ORDER]	R2-0005659	R2-0005718	[]	[]	[KENNY, JANE M]	[EPA, REGION 2]
114228	10/27/2003	REMOVAL ACTION WORKPLAN FOR THE WOODBROOK ROAD DUMP SITE	21	[PLAN]	R2-0005719	R2-0005739	[,]	[TEXAS EASTERN TERMINAL CO.]	[,]	[TRC SOLUTIONS, INC.]

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114219	08/09/2004	SAMPLING AND ANALYSIS PLAN (FIELD SAMPLING PLAN / QUALITY ASSURANCE PROJECT PLAN) FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY OVERSIGHT FOR THE WOODBROOK ROAD DUMP SITE	66	[PLAN]	R2-0005740	R2-0005805	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]	[BARINKA, LOU , DESMOND, WILLIAM]	[TETRA TECH EM, INC.]
114234	08/13/2004	WETLANDS DELINEATION & MITIGATION PLAN FOR THE WOODBROOK ROAD DUMP SITE	56	[PLAN]	R2-0005806	R2-0005861	[MANNINO, PETER]	[EPA]	[BOWIE, JOHN F]	[TEXAS EASTERN TERMINAL CO.]
140026	08/16/2005	CONCEPTUAL SITE MODEL FOR THE WOODBROOK ROAD DUMP SITE	38	[REPORT]	R2-0005862	R2-0005899	[]	[]	[,]	[TRC COMPANIES, INC.]
140025	08/16/2005	TRANSMITTAL OF CONCEPTUAL SITE MODEL FOR THE WOODBROOK ROAD DUMP SITE	1	[LETTER]	R2-0005900	R2-0005900	[MANNINO, PETER]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
114227	09/15/2005	FINAL CONTROL MEASURES REPORT FOR REMOVAL ACTION FOR THE WOODBROOK ROAD DUMP SITE	45	[REPORT]	R2-0005901	R2-0005945	[,]	[TEXAS EASTERN TERMINAL CO.]	[,]	[TRC SOLUTIONS, INC.]
140162	02/10/2006	CORRESPONDENCE FROM THE STATE OF NEW JERSEY REGARDING 01/10/2006 DISCUSSION ABOUT THE CLEANUP OF THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0005946	R2-0005947	[PAVLOU, GEORGE]	[EPA, REGION 2]	[SEEBODE, JOSEPH J]	[NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION]
140163	05/17/2006	COMMUNITY INVOLVEMENT PLAN FOR THE WOODBROOK ROAD DUMP SITE	38	[PLAN]	R2-0005948	R2-0005985	[MANNINO, PIETRO]	[EPA, REGION 2]	[JOHNSTONE, ERIC]	[TETRA TECH EM, INC.]
140160	05/17/2006	TRANSMITTAL OF THE COMMUNITY INVOLVEMENT PLAN FOR THE WOODBROOK ROAD DUMP SITE	1	[LETTER]	R2-0005986	R2-0005986	[MANNINO, PIETRO]	[EPA, REGION 2]	[JOHNSTONE, ERIC]	[TETRA TECH EM, INC.]
114215	02/01/2007	REMEDIAL INVESTIGATION AND FEASIBILITY STUDY WORKPLAN - REVISION 4 FOR THE WOODBROOK ROAD DUMP SITE	211	[MAP, PLAN]	R2-0005987	R2-0006197	[]	[]	[,]	[TRC COMPANIES, INC.]
114216	02/01/2007	FIELD SAMPLING PLAN FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY - REVISION 4 FOR THE WOODBROOK ROAD DUMP SITE	143	[MAP, PLAN]	R2-0006198	R2-0006340	[]	[]	[,]	[TRC COMPANIES, INC.]
114218	02/01/2007	QUALITY ASSURANCE PROJECT PLAN FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY FOR THE WOODBROOK ROAD DUMP SITE	1034	[MAP, PLAN]	R2-0006341	R2-0007374	[]	[]	[,]	[TRC COMPANIES, INC.]
114217	02/05/2007	SITE-SPECIFIC HEALTH AND SAFETY PLAN FOR REMEDIAL INVESTIGATION AND FEASIBILITY STUDY - REVISION 3 FOR THE WOODBROOK ROAD DUMP SITE	420	[PLAN]	R2-0007375	R2-0007794	[]	[]	[DELORENZO, ROSE , NACHMAN, DANIEL A]	[TRC COMPANIES, INC., TRC RAVIV ASSOCIATES, INC.]

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114221	11/01/2007	PHASE I ARCHAEOLOGICAL INVESTIGATION FOR THE WOODBROOK ROAD DUMP SITE	35	[REPORT]	R2-0007795	R2-0007829	[]	[]	[,]	[TRC ENVIRONMENTAL CORP]
140027	04/11/2008	REVISED PROPOSAL FOR MANAGEMENT OF INVESTIGATION-DERIVED WASTE FOR THE WOODBROOK ROAD DUMP SITE	136	[PLAN]	R2-0007830	R2-0007965	[MANNINO, PETER]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140161	05/01/2008	DATA USABILITY ASSESSMENT REPORT FOR THE WOODBROOK ROAD DUMP SITE	144	[REPORT]	R2-0007966	R2-0008109	[]	[]	[,]	[TRC ENVIRONMENTAL CORP]
140029	01/01/2009	TECHNICAL MEMORANDUM: IDENTIFICATION OF CANDIDATE REMEDIATION TECHNOLOGIES AND TREATABILITY TESTING WORK PLAN FOR THE WOODBROOK ROAD DUMP SITE	61	[PLAN]	R2-0008110	R2-0008170	[]	[]	[,]	[TRC ENVIRONMENTAL CORP]
140159	06/01/2009	COMMUNITY UPDATE FOR THE WOODBROOK ROAD DUMP SITE	2	[FACTSHEET]	R2-0008171	R2-0008172	[]	[]	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]
198909	06/01/2009	US EPA RECOMMENDATION FOR THE COMMUNITIES OF SOUTH PLAINFIELD AND EDISON TO ESTABLISH A COMMUNITY ADVISORY GROUP FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0008173	R2-0008176	[]	[]	[SEPPI, PAT]	[EPA]
140024	06/16/2009	LEGAL NOTICE: FORMATION OF COMMUNITY ADVISORY GROUP FOR THE WOODBROOK ROAD DUMP SITE	2	[NOTICE]	R2-0008177	R2-0008178	[]	[]	[]	[]
140028	03/01/2010	PROPOSAL FOR MANAGEMENT OF INVESTIGATION-DERIVED WASTE FOR THE WOODBROOK ROAD DUMP SITE	43	[PLAN]	R2-0008179	R2-0008221	[MANNINO, PETER]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
198908	11/17/2010	COMMUNITY ADVISORY GROUP MEETING MINUTES FOR MEETING ON 11/17/2010 FOR THE WOODBROOK ROAD DUMP SITE	4	[MEETING MINUTES]	R2-0008222	R2-0008225	[]	[]	[]	[]
198907	06/15/2011	COMMUNITY ADVISORY GROUP MEETING MINUTES FOR MEETING ON 06/15/2011 FOR THE WOODBROOK ROAD DUMP SITE	5	[MEETING MINUTES]	R2-0008226	R2-0008230	[]	[]	[]	[]
198905	10/11/2011	COMMUNITY ADVISORY GROUP MEETING MINUTES FOR MEETING ON 10/11/2011 FOR THE WOODBROOK ROAD DUMP SITE	6	[MEETING MINUTES]	R2-0008231	R2-0008236	[]	[]	[]	[]
198902	01/18/2012	COMMUNITY ADVISORY BOARD MEETING MINUTES FOR MEETING ON 01/18/2012 FOR THE WOODBROOK ROAD DUMP SITE	5	[MEETING MINUTES]	R2-0008237	R2-0008241	[]	[]	[]	[]

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198904	05/16/2012	COMMUNITY ADVISORY GROUP MEETING MINUTES FOR MEETING ON 05/16/2012 FOR THE WOODBROOK ROAD DUMP SITE	7	[MEETING MINUTES]	R2-0008242	R2-0008248	[]	[]	[]	[]
123507	06/08/2012	FINAL DRAFT REMEDIAL INVESTIGATION REPORT FOR WOODBROOK ROAD DUMP SITE INDEX NUMBER CERCLA-022003-2025 VOLUME I OF V	118	[REPORT]	R2-0008249	R2-0008366	[]	[]	[,]	[TRC ENVIRONMENTAL CORP]
123513	06/08/2012	FINAL DRAFT REMEDIAL INVESTIGATION REPORT FOR WOODBROOK ROAD DUMP SITE INDEX NUMBER CERCLA 02-2003-2025 VOLUME II OF V	1443	[REPORT]	R2-0008367	R2-0009809	[]	[]	[,]	[TRC]
123514	06/08/2012	FINAL DRAFT REMEDIAL INVESTIGATION REPORT FOR WOODBROOK ROAD DUMP SITE INDEX NUMBER CERCLA 02-2003-2025 VOLUME III OF V	7707	[REPORT]	R2-0009810	R2-0017516	[]	[]	[,]	[TRC]
123515	06/08/2012	FINAL DRAFT REMEDIAL INVESTIGATION REPORT FOR WOODBROOK ROAD DUMP SITE INDEX NUMBER CERCLA-02-2003-2025 VOLUME IV OF V	1731	[REPORT]	R2-0017517	R2-0019247	[]	[]	[,]	[TRC]
123516	06/08/2012	FINAL DRAFT REMEDIAL INVESTIGATION REPORT FOR WOODBROOK ROAD DUMP INDEX NUMBER CERCLA-02-2003-2025 VOLUME V OF V	489	[REPORT]	R2-0019248	R2-0019736	[]	[]	[,]	[TRC SOLUTIONS, INC.]
206228	05/14/2013	CORRESPONDENCE REGARDING CONCERNS ABOUT THE DELAYS IN FINALIZING THE REMEDIAL INVESTIGATION / FEASIBILITY STUDY, RECORD OF DECISION, AND PURSUING RESPONSIBLE PARTIES FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0019737	R2-0019738	[MUGDAN, WALTER]	[EPA]	[MCKINNEY, JR., JOHN A]	[WOLFF & SAMSON]
198903	05/22/2013	PRINCETON HYDRO DOCUMENT REVIEW TO EVALUATE THE PROPOSED REMEDIAL MEASURES AND HABITAT RESTORATION / MITIGATION ACTIONS IN THE CONTEXT OF PROTECTING ECOLOGICAL RESOURCES REGARDING THE WOODBROOK ROAD DUMP SITE	15	[LETTER]	R2-0019739	R2-0019753	[MAURO, MATHEW J]	[EXCEL ENVIRONMENTAL RESOURCES, INC.]	[SHALLENBERGER, JAMES P]	[PRINCETON HYDRO LLC]

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204818	06/18/2013	COMMUNITY ADVISORY BOARD MEETING MINUTES FOR MEETING ON 06/18/2013 FOR THE WOODBROOK ROAD DUMP SITE	7	[MEETING MINUTES]	R2-0019754	R2-0019760	[]	[]	[]	[]
688437	07/26/2013	DRAFT FINAL FEASIBILITY STUDY FOR THE WOODBROOK ROAD DUMP SITE	148	[REPORT]	R2-0019761	R2-0019908	[]	[]	[,]	[TRC ENVIRONMENTAL CORP]
198900	08/06/2013	NATIONAL REVIEW BOARD RECOMMENDATIONS FOR THE PROPOSED CLEANUP FOR THE WOODBROOK ROAD DUMP SITE	5	[MEMORANDUM]	R2-0019909	R2-0019913	[MUGDAN, WALTER E]	[EPA, REGION 2]	[LEGARE, AMY R]	[EPA]
198901	08/08/2013	US EPA RESPONSE TO NATIONAL REMEDY REVIEW BOARD RECOMMENDATIONS FOR THE PROPOSED REMEDIAL ACTION FOR THE WOODBROOK ROAD DUMP SITE	5	[MEMORANDUM]	R2-0019914	R2-0019918	[LEGARE, AMY R]	[EPA]	[MUGDAN, WALTER E]	[EPA, REGION 2]
206226	08/08/2013	CORRESPONDENCE REQUESTING A MEETING TO DISCUSS A SIGNIFICANT AND UNWARRANTED DEVIATION FROM A LONG STANDING NATIONAL SUPERFUND POLICY AND PRECEDENT BEING CONTEMPLATED DURING THE REMEDY SELECTION PROCESS FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0019919	R2-0019923	[FELDT, LISA]	[US ENVIRONMENTAL PROTECTION AGENCY]	[HERMAN, STEVEN A]	[BEVERIDGE & DIAMOND, PC]
206227	08/08/2013	CORRESPONDENCE REGARDING THE REMOVAL ALTERNATIVE BEING CONTEMPLATED BY THE USEPA IS INCONSISTENT WITH THE NATIONAL CONTINGENCY PLAN (NCP), CONTRARY TO SUBSTANTIAL PRECEDENT FOR PCB REMEDIES, AND UNLAWFUL FOR THE WOODBROOK ROAD DUMP SITE	15	[LETTER]	R2-0019924	R2-0019938	[MUGDAN, WALTER]	[EPA]	[MCKINNEY, JR., JOHN A]	[WOLFF & SAMSON]
688762	08/15/2013	EXCEL ENVIRONMENTAL RESOURCES INCORPORATED'S COMMENTS ON THE DRAFT FINAL FEASIBILITY STUDY FOR THE WOODBROOK ROAD DUMP SITE	9	[LETTER]	R2-0020331	R2-0020339	[SPIEGEL, ROBERT]	[EDISON WETLANDS ASSOCIATIONS, INC.]	[DODGE, LAWRA J]	[EXCEL ENVIRONMENTAL RESOURCES, INC.]
688717	08/15/2013	PROPOSED PLAN FOR OU1 FOR THE WOODBROOK ROAD DUMP SITE	16	[PLAN]	R2-0020340	R2-0020355	[]	[]	[,]	[US ENVIRONMENTAL PROTECTION AGENCY]
206810	05/29/2011	TRC ENVIRONMENTAL CORPORATION'S RESPONSE TO US EPA COMMENTS ON FEASIBILITY STUDY TECHNICAL MEMORANDUM NO. 3 FOR THE WOODBROOK ROAD DUMP SITE	14	[OUTLINE]	R2-0020356	R2-0020369	[PETERSON, CAROLE]	[EPA]	[,]	[TRC ENVIRONMENTAL CORP]

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206809	05/04/2012	US EPA COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT DATED 02/2012 FOR THE WOODBROOK ROAD DUMP SITE	7	[LETTER]	R2-0020370	R2-0020376	[HANSEN, PATRICK J]	[TRC ENVIRONMENTAL CORP]	[SALKIE, DIANE]	[EPA]
216705	05/04/2012	TRC'S RESPONSE TO US EPA COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR THE WOODBROOK ROAD DUMP SITE	17	[OUTLINE]	R2-0020377	R2-0020393	[]	[]	[]	[]
206808	05/29/2012	US EPA COMMENTS ON THE DRAFT FEASIBILITY STUDY TECHNICAL MEMORANDUM - DETAILED ANALYSIS OF ALTERNATIVES DATED 03/2012 FOR THE WOODBROOK ROAD DUMP SITE	15	[LETTER]	R2-0020394	R2-0020408	[HANSEN, PATRICK J]	[TRC ENVIRONMENTAL CORP]	[SALKIE, DIANE]	[EPA]
178332	03/01/2013	SUPPLEMENTAL CONTAMINATION LEVELS IN THE UPSTREAM REACHES NEAR THE FORMER CORNELL DUBILIER FACILITY AND THE WOODBROOK ROAD DUMP SITE	3	[FIGURE]	R2-0020409	R2-0020411	[]	[]	[,]	[LOUIS BERGER GROUP, INC.]
692089	09/26/2013	TRC ENVIRONMENTAL CORPORATION'S SUPPLEMENTAL COMMENTS CONCERNING COMMUNITY ACCEPTANCE OF THE PROPOSED REMEDIAL PLAN FOR THE WOODBROOK ROAD DUMP SITE	16	[LETTER]	R2-0020412	R2-0020427	[SALKIE, DIANE]	[EPA]	[FAECHER, MARC]	[TRC ENVIRONMENTAL CORP]
692103	09/27/2013	STATE OF NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION'S CONCURRENCE ON THE RECORD OF DECISION FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020428	R2-0020430	[MUGDAN, WALTER]	[EPA, REGION 2]	[PEDERSEN, MARK]	[NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION]

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140081	09/12/2003	PROGRESS REPORT NO. 1 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019939	R2-0019941	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140080	10/15/2003	PROGRESS REPORT NO. 2 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019942	R2-0019944	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140079	11/13/2003	PROGRESS REPORT NO. 3 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019945	R2-0019947	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140078	12/16/2003	PROGRESS REPORT NO. 4 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019948	R2-0019950	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140077	01/14/2004	PROGRESS REPORT NO. 5 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019951	R2-0019953	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140076	02/13/2004	PROGRESS REPORT NO. 6 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019954	R2-0019956	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140075	03/15/2004	PROGRESS REPORT NO. 7 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019957	R2-0019959	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140074	04/15/2004	PROGRESS REPORT NO. 8 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019960	R2-0019962	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140073	05/14/2004	PROGRESS REPORT NO. 9 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019963	R2-0019965	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140072	06/15/2004	PROGRESS REPORT NO. 10 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019966	R2-0019968	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140071	07/14/2004	PROGRESS REPORT NO. 11 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019969	R2-0019971	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140070	08/13/2004	PROGRESS REPORT NO. 12 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0019972	R2-0019975	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140069	09/14/2004	PROGRESS REPORT NO. 13 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019976	R2-0019978	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140068	10/15/2004	PROGRESS REPORT NO. 14 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0019979	R2-0019982	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140067	11/15/2004	PROGRESS REPORT NO. 15 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019983	R2-0019985	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140066	12/15/2004	PROGRESS REPORT NO. 16 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019986	R2-0019988	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140065	01/14/2005	PROGRESS REPORT NO. 17 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0019989	R2-0019992	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140064	02/15/2005	PROGRESS REPORT NO. 18 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019993	R2-0019995	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140063	03/15/2005	PROGRESS REPORT NO. 19 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0019996	R2-0019998	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140062	04/15/2005	PROGRESS REPORT NO. 20 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0019999	R2-0020002	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

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140092	05/10/2005	FENCE INSPECTION REPORT NO. 1 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020003	R2-0020006	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140060	06/15/2005	PROGRESS REPORT NO. 22 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020007	R2-0020009	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140059	07/15/2005	PROGRESS REPORT NO. 23 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020010	R2-0020011	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140091	08/15/2005	FENCE INSPECTION REPORT NO. 2 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020012	R2-0020014	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140058	08/15/2005	PROGRESS REPORT NO. 24 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020015	R2-0020016	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140057	09/15/2005	PROGRESS REPORT NO. 25 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020017	R2-0020018	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140056	10/14/2005	PROGRESS REPORT NO. 26 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020019	R2-0020020	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140055	11/15/2005	PROGRESS REPORT NO. 27 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020021	R2-0020022	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140090	11/29/2005	FENCE INSPECTION REPORT NO. 3 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020023	R2-0020025	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140054	12/15/2005	PROGRESS REPORT NO. 28 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020026	R2-0020027	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140053	01/13/2006	PROGRESS REPORT NO. 29 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020028	R2-0020029	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140089	02/16/2006	FENCE INSPECTION REPORT NO. 4 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020030	R2-0020031	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140052	02/16/2006	PROGRESS REPORT NO. 30 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020032	R2-0020033	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140051	03/15/2006	PROGRESS REPORT NO. 31 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020034	R2-0020035	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140050	04/17/2006	PROGRESS REPORT NO. 32 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020036	R2-0020037	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140088	05/10/2006	FENCE INSPECTION REPORT NO. 5 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020038	R2-0020041	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140061	05/13/2006	PROGRESS REPORT NO. 21 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020042	R2-0020044	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140049	05/15/2006	PROGRESS REPORT NO. 33 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020045	R2-0020046	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140048	06/15/2006	PROGRESS REPORT NO. 34 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020047	R2-0020048	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140047	07/14/2006	PROGRESS REPORT NO. 35 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020049	R2-0020050	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

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140087	08/15/2006	FENCE INSPECTION REPORT NO. 6 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020051	R2-0020054	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140046	08/15/2006	PROGRESS REPORT NO. 36 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020055	R2-0020057	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140045	09/15/2006	PROGRESS REPORT NO. 37 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020058	R2-0020060	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140044	10/17/2006	PROGRESS REPORT NO. 38 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020061	R2-0020063	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140086	11/15/2006	FENCE INSPECTION REPORT NO. 7 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020064	R2-0020065	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140043	11/15/2006	PROGRESS REPORT NO. 39 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020066	R2-0020067	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140042	12/15/2006	PROGRESS REPORT NO. 40 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020068	R2-0020070	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140041	01/15/2007	PROGRESS REPORT NO. 41 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020071	R2-0020072	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140085	02/15/2007	FENCE INSPECTION REPORT NO. 8 FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0020073	R2-0020077	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140040	02/15/2007	PROGRESS REPORT NO. 42 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020078	R2-0020080	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140039	03/19/2007	PROGRESS REPORT NO. 43 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020081	R2-0020083	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140038	04/16/2007	PROGRESS REPORT NO. 44 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020084	R2-0020087	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140084	05/15/2007	FENCE INSPECTION REPORT NO. 9 FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0020088	R2-0020092	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140037	05/15/2007	PROGRESS REPORT NO. 45 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020093	R2-0020096	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140036	06/15/2007	PROGRESS REPORT NO. 46 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020097	R2-0020100	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140035	07/13/2007	PROGRESS REPORT NO. 47 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020101	R2-0020104	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140083	08/13/2007	FENCE INSPECTION REPORT NO. 10 FOR THE WOODBROOK ROAD DUMP SITE	7	[LETTER]	R2-0020105	R2-0020111	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140034	08/13/2007	PROGRESS REPORT NO. 48 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020112	R2-0020114	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140033	09/14/2007	PROGRESS REPORT NO. 49 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020115	R2-0020117	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140032	10/15/2007	PROGRESS REPORT NO. 50 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020118	R2-0020120	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

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140082	11/15/2007	FENCE INSPECTION REPORT NO. 11 FOR THE WOODBROOK ROAD DUMP SITE	7	[LETTER]	R2-0020121	R2-0020127	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140031	11/15/2007	PROGRESS REPORT NO. 51 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020128	R2-0020130	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140030	12/13/2007	PROGRESS REPORT NO. 52 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020131	R2-0020133	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140112	01/15/2008	PROGRESS REPORT NO. 53 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020134	R2-0020136	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140095	02/15/2008	FENCE INSPECTION REPORT NO. 12 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020137	R2-0020138	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140113	02/15/2008	PROGRESS REPORT NO. 54 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020139	R2-0020141	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140114	03/14/2008	PROGRESS REPORT NO. 55 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020142	R2-0020144	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140115	04/18/2008	PROGRESS REPORT NO. 56 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020145	R2-0020147	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140096	05/15/2008	FENCE INSPECTION REPORT NO. 13 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020148	R2-0020149	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140116	05/15/2008	PROGRESS REPORT NO. 57 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020150	R2-0020152	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140117	06/15/2008	PROGRESS REPORT NO. 58 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020153	R2-0020155	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140174	07/11/2008	PROGRESS REPORT NO. 59 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020156	R2-0020158	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140097	08/15/2008	FENCE INSPECTION REPORT NO. 14 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020159	R2-0020160	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140118	08/15/2008	PROGRESS REPORT NO. 60 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020161	R2-0020163	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140119	09/15/2008	PROGRESS REPORT NO. 61 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020164	R2-0020166	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140120	10/15/2008	PROGRESS REPORT NO. 62 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020167	R2-0020169	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140098	11/14/2008	FENCE INSPECTION REPORT NO. 15 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020170	R2-0020171	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140121	11/14/2008	PROGRESS REPORT NO. 63 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020172	R2-0020174	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140122	12/12/2008	PROGRESS REPORT NO. 64 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020175	R2-0020177	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140123	01/15/2009	PROGRESS REPORT NO. 65 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020178	R2-0020180	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

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140099	02/13/2009	FENCE INSPECTION REPORT NO. 16 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020181	R2-0020182	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140124	02/13/2009	PROGRESS REPORT NO. 66 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020183	R2-0020185	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140125	03/13/2009	PROGRESS REPORT NO. 67 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020186	R2-0020188	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140126	04/14/2009	PROGRESS REPORT NO. 68 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020189	R2-0020191	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140100	05/14/2009	FENCE INSPECTION REPORT NO. 17 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020192	R2-0020193	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140127	05/14/2009	PROGRESS REPORT NO. 69 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020194	R2-0020196	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140128	06/12/2009	PROGRESS REPORT NO. 70 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020197	R2-0020199	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140129	07/15/2009	PROGRESS REPORT NO. 71 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020200	R2-0020202	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140101	08/13/2009	FENCE INSPECTION REPORT NO. 18 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020203	R2-0020204	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140130	08/13/2009	PROGRESS REPORT NO. 72 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020205	R2-0020207	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140131	09/14/2009	PROGRESS REPORT NO. 73 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020208	R2-0020210	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140132	10/14/2009	PROGRESS REPORT NO. 74 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020211	R2-0020213	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140102	11/13/2009	FENCE INSPECTION REPORT NO. 19 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020214	R2-0020215	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140133	11/13/2009	PROGRESS REPORT NO. 75 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020216	R2-0020218	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140134	12/14/2009	PROGRESS REPORT NO. 76 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020219	R2-0020221	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140135	01/15/2010	PROGRESS REPORT NO. 77 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020222	R2-0020224	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140103	02/12/2010	FENCE INSPECTION REPORT NO. 20 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020225	R2-0020226	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140136	02/12/2010	PROGRESS REPORT NO. 78 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020227	R2-0020229	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140106	02/15/2010	FENCE INSPECTION REPORT NO. 24 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020230	R2-0020231	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

09/27/2013 **REGION ID: 02**

Site Name: WOODBROOK ROAD DUMP
CERCLIS ID: NJSFN0204260
OUID: 01
SSID: 02NX
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Beginning Bates:	Ending Bates:	Addressee Name:	Addressee Organization:	Author Name:	Author Organization:
140137	03/12/2010	PROGRESS REPORT NO. 79 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020232	R2-0020234	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140138	04/15/2010	PROGRESS REPORT NO. 80 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020235	R2-0020237	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140104	05/14/2010	FENCE INSPECTION REPORT NO. 21 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020238	R2-0020239	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140139	05/14/2010	PROGRESS REPORT NO. 81 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020240	R2-0020242	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140140	06/14/2010	PROGRESS REPORT NO. 82 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020243	R2-0020245	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140141	07/14/2010	PROGRESS REPORT NO. 83 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020246	R2-0020248	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140105	08/13/2010	FENCE INSPECTION REPORT NO. 22 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020249	R2-0020250	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140142	08/13/2010	PROGRESS REPORT NO. 84 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020251	R2-0020253	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140143	09/15/2010	PROGRESS REPORT NO. 85 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020254	R2-0020256	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140144	10/15/2010	PROGRESS REPORT NO. 86 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020257	R2-0020259	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140173	11/15/2010	FENCE INSPECTION REPORT NO. 23 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020260	R2-0020261	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140145	11/15/2010	PROGRESS REPORT NO. 87 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020262	R2-0020264	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140146	12/15/2010	PROGRESS REPORT NO. 88 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020265	R2-0020267	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140147	01/14/2011	PROGRESS REPORT NO. 89 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020268	R2-0020270	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140148	02/15/2011	PROGRESS REPORT NO. 90 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020271	R2-0020273	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140149	03/15/2011	PROGRESS REPORT NO. 91 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020274	R2-0020276	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140150	04/15/2011	PROGRESS REPORT NO. 92 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020277	R2-0020279	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140151	05/12/2011	PROGRESS REPORT NO. 93 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020280	R2-0020282	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140107	06/14/2011	FENCE INSPECTION REPORT NO. 25 FOR THE WOODBROOK ROAD DUMP SITE	4	[LETTER]	R2-0020283	R2-0020286	[SALKIE, DIANE]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140152	06/14/2011	PROGRESS REPORT NO. 94 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020287	R2-0020289	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]

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09/27/2013 **REGION ID: 02**

Site Name: WOODBROOK ROAD DUMP
CERCLIS ID: NJSFN0204260
OUID: 01
SSID: 02NX
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Beginning Bates:	Ending Bates:	Addressee Name:	Addressee Organization:	Author Name:	Author Organization:
140153	09/14/2011	PROGRESS REPORT NO. 95 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020290	R2-0020292	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140108	09/15/2011	FENCE INSPECTION REPORT NO. 26 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020293	R2-0020294	[SALKIE, DIANE]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140109	12/12/2011	FENCE INSPECTION REPORT NO. 27 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020295	R2-0020297	[SALKIE, DIANE]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140154	12/12/2011	PROGRESS REPORT NO. 96 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020298	R2-0020300	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140110	03/15/2012	FENCE INSPECTION REPORT NO. 28 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020301	R2-0020302	[SALKIE, DIANE]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140155	03/15/2012	PROGRESS REPORT NO. 97 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020303	R2-0020305	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140111	06/15/2012	FENCE INSPECTION REPORT NO. 29 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020306	R2-0020307	[SALKIE, DIANE]	[EPA]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
140156	06/15/2012	PROGRESS REPORT NO. 98 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020308	R2-0020310	[MANNINO, PIETRO]	[EPA, REGION 2]	[NACHMAN, DANIEL A]	[TRC RAVIV ASSOCIATES, INC.]
206221	09/14/2012	FENCE INSPECTION REPORT NO. 30 FOR THE WOODBROOK ROAD DUMP SITE	2	[LETTER]	R2-0020311	R2-0020312	[SALKIE, DIANE]	[EPA]	[HANSEN, PATRICK J]	[TRC COMPANIES, INC.]
206222	09/14/2012	PROGRESS REPORT NO. 99 FOR THE WOODBROOK ROAD DUMP SITE	3	[LETTER]	R2-0020313	R2-0020315	[SALKIE, DIANE]	[EPA]	[HANSEN, PATRICK J]	[TRC COMPANIES, INC.]
206223	12/14/2012	PROGRESS REPORT NO. 100 AND FENCE INSPECTION REPORT NO. 31 FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0020316	R2-0020320	[SALKIE, DIANE]	[EPA]	[HANSEN, PATRICK J]	[TRC COMPANIES, INC.]
206224	03/20/2013	PROGRESS REPORT NO. 101 AND FENCE INSPECTION REPORT NO. 32 FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0020321	R2-0020325	[SALKIE, DIANE]	[EPA]	[HANSEN, PATRICK J]	[TRC COMPANIES, INC.]
206225	06/13/2013	PROGRESS REPORT NO. 102 AND FENCE INSPECTION REPORT NO. 33 FOR THE WOODBROOK ROAD DUMP SITE	5	[LETTER]	R2-0020326	R2-0020330	[SALKIE, DIANE]	[EPA]	[HANSEN, PATRICK J]	[TRC COMPANIES, INC.]

Appendix IV

STATE CONCURRENCE LETTER

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SITE REMEDIATION PROGRAM
Mail Code 401-06
P. O. Box 420
Trenton, New Jersey 08625-0420
Tel. #: 609-292-1250
Fax. #: 609-777-1914

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 27, 2013

Mr. Walter Mugdan, Director
Emergency and Remedial Response Division
U.S. Environmental Protection Agency
Region II
290 Broadway
New York, NY 10007-1866

Re: Woodbrook Road Dump Superfund Site
Record of Decision
EPA ID#NJSFN0204260
DEP PI#G000041275

Dear Mr. Mugdan:

The New Jersey Department of Environmental Protection (DEP) completed its review of the "Record of Decision, Woodbrook Road Dump, Borough of South Plainfield, Middlesex County, New Jersey" prepared by the U.S. Environmental Protection Agency (EPA) Region II in September 2013 and concurs with the selected remedy to address polychlorinated biphenyl (PCB) contamination in soil and debris at this site in the Dismal Swamp.

DEP supports excavation and off-site removal of PCB-contaminated soils and debris under the selected remedy estimated at a cost of $24.3 million to protect human health and prevent ecological impacts. Further investigation of the Bound Brook, which transects the site, will be conducted as part of work at the nearby.Cornell-Dubilier Electronics Superfund site.

The selected remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan. This decision is based on the Administrative Record file for this site. The response action selected in this Record of Decision is necessary to protect public health and the environment from actual releases of hazardous substances into the environment.

The components of the selected remedy include:

- Excavation and off-site disposal of an estimated 4,000 cubic yards of soil and debris that contains capacitors, capacitor parts and PCB-contaminated soil and debris with PCB concentrations greater than 100 parts per million (ppm) to an approved off-site disposal facility;
- Excavation and off-site disposal of an estimated 120,000 cubic yards of soil and debris that contains PCBs at concentrations greater than 1 ppm to an approved off-site disposal facility; and,
- The establishment of institutional controls, specifically a deed notice to prevent a change in land use to an unrestricted land use such as residential without further remedial measures.

This remedy addresses the soil and debris contamination known to be attributable to capacitors that were dumped on site. Based on data from the remedial investigation/feasibility study (RI/FS), a groundwater remedial action is not required. Principal threat wastes in the form of capacitors, capacitor parts and PCB-contaminated soils will be addressed as part of this remedy to prevent contamination from spreading to the Bound Brook and other surface water bodies at the site. This is expected to be the final action for this site; EPA is conducting an RI/FS on the entire Bound Brook as part of the Cornell-Dubilier Electronics site, Operable Unit 4, including the section that passes through this site. EPA is not assessing Bound Brook sediments and surface water in this decision, and will make a determination on the nature and extent, risks posed, and response actions needed as part of the Bound Brook investigation.

By removing the principal threat wastes, the selected remedy meets the statutory preference for remedies that employ treatment that reduces toxicity, mobility, or volume as a principal element is satisfied.

DEP appreciates the opportunity to participate in the decision making process to select an appropriate remedy and is looking forward to future cooperation with EPA in remedial action at this site. If you have any questions, please call me at 609-292-1250.

Sincerely,

Mark J. Pedersen
Acting Assistant Commissioner
Site Remediation Program

C: Ken Kloo, Director, Division of Remediation Management, DEP
Ed Putnam, Assistant Director, Publicly Funded Response Element, DEP
Carole Petersen, Chief, New Jersey Remediation Branch, EPA Region II

Appendix V

RESPONSIVENESS SUMMARY

APPENDIX V

RESPONSIVENESS SUMMARY
Woodbrook Road Dump Superfund Site

INTRODUCTION

This Responsiveness Summary provides a summary of the public's comments and concerns regarding the Proposed Plan for the Woodbrook Road Dump Superfund Site, and EPA's responses to those comments. All comments summarized in this document have been considered in EPA's final decision for the selection of the remedy for the Site.

This Responsiveness Summary is divided into the following sections:

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS This section provides the history of community involvement and interests regarding the site; and

II. COMPREHENSIVE SUMMARY OF MAJOR QUESTIONS, COMMENTS, CONCERNS AND RESPONSES

This section contains summaries of oral and written comments received by EPA at the public meeting and during the public comment period, and EPA's responses to these comments. The last section of this Responsiveness Summary includes attachments which document public participation in the remedy selection process for this site. They are as follows:

Attachment A - August 2013 Proposed Plan for the Woodbrook Road Dump Superfund Site;

Attachment B - Public Notice published in *South Plainfield Observer*;

Attachment C - August 26, 2013 Public Meeting Attendance Sheet and Transcript of the August 26, 2013 Public Meeting;

Attachment D - Copies of public comments received;

Attachment E - National Remedy Review Board memorandum, regional response, and associated stakeholder position papers; and

Attachment F - TRC's Appendix II of "Public Comments on the Proposed Remedial Plan for the Woodbrook Road Dump Superfund Site, South Plainfield, New Jersey" with EPA responses

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

Since its discovery in 1999, community interest in the Site has been high. EPA has held a number of public sessions, beginning at the time of the removal actions, to keep community members and other interested parties apprised of ongoing Site activities.

In 2009, while remedial investigation (RI) field activities were underway, EPA received a request from the Edison Wetlands Association (EWA) to form a Community Advisory Group (CAG) to keep the public better apprised of activities at the Site. After public notice, a CAG was formed that included members of EWA, the Raritan Riverkeeper, local residents and municipal leaders. EPA attended meetings, and the consulting firm TRC Environmental Corporation (TRC), performing the remedial investigation/feasibility study (RI/FS) on behalf of a potentially responsible party (PRP), was an active participant in CAG meetings. The CAG met every three to four months or as needed for updates, presentations and discussions about the RI/FS processes at the Woodbrook Road Dump Site. EPA also provided other information relevant to the Woodbrook Site in response to requests from the CAG. Specifically, because EPA is performing a separate RI/FS for the Bound Brook, which is being done as part of the Cornell-Dubilier Electronics (CDE) Site (downstream of the Woodbrook Site), EPA presented data and figures to the CAG that included the combined data from both Sites. The data allowed CAG members to understand better why EPA was planning to separate the Bound Brook surface water and sediments from the remedy for the Woodbrook Site.

In 2010, on behalf of the CAG, EWA applied for and was awarded a Technical Assistance Grant (TAG). A TAG allows communities to hire a Technical Advisor (TA) to review site-related documents and share the information with the CAG, local officials and other interested community members. Two consulting firms, Excel Environmental Resources, Inc. and its subcontractor, Princeton Hydro, LLC, have been reviewing documents, meeting with the CAG and other interested community members, and providing comments on the RI/FS and Proposed Plan.

As mentioned in several comments, EPA Region 2 brought the preferred remedy for the Site before EPA's National Remedy Review Board (NRRB) in June 2013. The NRRB reviews proposed Superfund cleanup decisions that meet cost-based review criteria to assure they are consistent with Superfund law, regulations, and guidance. The NRRB is composed of managers or senior technical and/or policy experts from EPA offices important to Superfund remedy selection issues. The NRRB encourages the regions to solicit stakeholder input when coming before the board. At this Site, many of the commenters on the Proposed Plan had earlier submitted position papers for the NRRB. These earlier position papers have also been included in this Responsiveness Summary. The memo from the NRRB and stakeholder position papers can be found as Attachment E.

EPA's Proposed Plan for the OU1 soil remedial action was released to the public on August 16, 2013. A copy of the Proposed Plan, RI sampling results, FS for soil remediation alternatives and other documents which comprise the administrative record (AR) file were made available to the public in the information repository located at the South Plainfield Public Library as well as the EPA Region 2's Record Center. A copy of the Proposed Plan can be found as Attachment A. A public notice was published in *South Plainfield Observer* on August 16, 2013, advising the public of the availability of the Proposed Plan, see Attachment B. This notice also announced the opening of a 30-day public comment period, from August 16 to September 16, 2013, and invited the interested parties to attend an upcoming public meeting. At this public meeting, held on August 26, 2013, at the South Plainfield Municipal Building Courtroom, at 2480 Plainfield Avenue, South Plainfield, New Jersey 07080, EPA presented the preferred alternative for the soil remedy, answered questions regarding the Woodbrook Road Dump Site, and accepted verbal comments regarding the Proposed Plan.

II. COMPREHENSIVE SUMMARY OF MAJOR QUESTIONS, COMMENTS, CONCERNS, AND RESPONSES

Part 1: Overview

Consolidation and Capping vs. Excavation and Off-site Disposal

Commenters generally agreed that capacitors, capacitor parts and polychlorinated biphenyls (PCBs) at concentrations greater than 100 parts per million (ppm) should be excavated and transported off-site for disposal. For the remaining PCBs at concentrations between 1.0 ppm and 100 ppm, the written and oral comments included strongly contrary positions, with several parties such as TRC strongly advocating for the on-site consolidation and capping of this material, and other parties, for example, EWA, opposing on-site capping, and preferring excavation and off-site transportation and disposal. Both approaches were considered in the FS and the Proposed Plan. EPA's rationale for selecting excavation and off-site disposal is included in the Decision Summary.

Part 2: Written Comments

Subpart 2.1: Comments Received from TRC and TRC's Legal Representatives

2.1.1 Letters from Legal Representatives of TRC On August 08, 2013, two letters were received by EPA concerning the Woodbrook Road Dump Site from legal firms representing TRC, a consultant to one of the PRPs. Although the letters were received prior to the public comment period, some of content of the letters concerns remedy selection; therefore, EPA considered them prior to issuing the selected remedy, and included responses to remedy selection in this Responsiveness Summary. The letters are highly critical of the Agency, repeatedly claim,

for a variety of reasons echoed and amplified in the TRC submission (Section 2.1.3), that EPA is being arbitrary and capricious in its preferred remedy for the Site. Since the letters address similar points, some responses are combined.

2.1.1.1: National Oil and Hazardous Substances Pollution Contingency Plan One letter stated that EPA's remedy proposal was an "unwarranted deviation from long-standing national Superfund policy and precedent" and fails "to follow longstanding [EPA] practice and to apply as required the balancing criteria under the [NCP]". According to the author, the remedy would "result in an inconsistency with the NCP at the Site and expose the Agency to a substantial legal challenge as a result of an arbitrary and capricious decision" and "would violate the NCP's requirement for cost-effectiveness." The letter also speaks of inconsistencies such as "establishing a new "floor" for PCB cleanups nationwide that EPA would be under pressure to satisfy to ensure nationwide consistency regarding the requirements of the [CERCLA] and the NCP." Finally, the letter states, "elevation of the "permanence" factor as the pre-eminent remedy selection criterion, without regard to how other remedial alternatives compare under the rest of the remedial selection criteria, including costs, is contrary to the NCP."

In a similar manner, a second author states that the preferred alternative would be "contrary to CERCLA, the NCP, the approved RI/FS and create a substantial precedent regarding final PCB remedies in both Region 2 and other regions." This letter also claims that the remedy would serve as a "new floor" for PCB cleanup. Finally, the letter states that the preferred alternative could establish "an unwarranted precedent to which EPA would be under unnecessary pressure to conform at other Superfund sites." This letter also claims that the "Complete Removal Alternative is unlawful and TETC/TRC is not prepared to implement it." The letter then identifies defenses that the PRP would claim if EPA were to attempt to seek recovery costs, including an innocent landowner defense and several other defenses. The second letter "urges" EPA to choose a "Removal/Capping Remedy," meaning either Alternative 4 or 5.

> **EPA Response:** The Agency disagrees that there are irregularities in EPA's assessment of the Site. EPA's preferred remedy and TRC's preferred remedy were both screened through the nine criteria in TRC's FS. The commenter suggests that inclusion of an excavation alternative (the "complete removal alternative") was in error, that this alternative should have been eliminated from "further consideration" in the FS. Contrary to this comment, it is common for EPA to consider excavation and off-site disposal as one of a variety of remedial alternatives. The FS includes several remedial alternatives that rely on excavation and off-site disposal; these alternatives were properly screened through the FS and retained. As discussed in the Proposed Plan, cost-effectiveness is but one of the NCP criteria. Similarly, consideration of engineering controls (capping) as an element of a remedial alterative must occur within the overall context of the NCP criteria evaluation.

Each site is unique, and each remedy selection is site-specific. That said, EPA's basic approach has been used at many sites around the country and in Region 2, and is not a departure from earlier practices with regard to PCBs.

EPA will not comment on the liability defenses discussed in the letter in this Responsiveness Summary as this does not pertain to selection of the remedy.

2.1.1.2: Feasibility Study The position of the first author is that in the FS, the PRP's preferred remedy of "Removal/Capping" "ranks best" and that by EPA's approval of the FS, EPA supports or endorses this claim. The second author states that the RI/FS "convincingly demonstrates" which alternative would demonstrate "best balance and achieve the remedy selection criteria" under the NCP.

EPA Response: The purpose of the FS is not to choose an alternative, but to present several types of remedies that are appropriate for a particular site.

2.1.1.3: Cornell-Dubilier Electronics Site Both letters compare the remedy selected at the nearby CDE Site (OU2, the 26-acre facility on Hamilton Boulevard in South Plainfield, New Jersey) to the preferred alternative for the Woodbrook Road Dump Site, identifying two points of comparison: the PCB principal threat remediation goal selected (500 ppm at CDE and 100 ppm at Woodbrook); and the fact that capping is an essential element of the CDE OU2 but not included in the Woodbrook preferred remedy.

EPA Response: EPA's ROD for the 26-acre former CDE facility (OU2) concluded that over 90 percent of Site surface and subsurface soils exceeded 10 ppm total PCBs, and EPA did not carry forward a "complete removal" alternative for OU2. This resulted in "only" treating or removing for off-site disposal approximately 100,000 cubic yards of PCB-contaminated soils and debris exceeding 500 ppm, and containing several hundred thousand cubic yards of PCB-contaminated soils at lesser concentrations under a multi-layered, paved cap.

The CDE Site is a former industrial facility surrounded by developed commercial/ industrial land, with a clearly defined future use plan that entails redevelopment of the land for a commercial/industrial end use. The Site has little in common with the Woodbrook Site. In addition, EPA notes that each separate Superfund site is unique.

2.1.1.4: National Remedy Review Board The Region presented the Site to the NRRB on June 26, 2013. The PRPs were notified of the meeting on June 05, 2013, and invited to submit position papers to the NRRB. One of the authors complained about the short time period for the PRPs to

submit comments, and that TRC, experts about the Site, were not invited to participate in the process.

> **EPA Response:** All stakeholders were given the same three-week time period to prepare position papers. The meetings of the Board are pre-decisional, deliberative discussions and are not open to the general public. The NRRB process is intended to offer a critical discussion on key remedy selection and cost-effectiveness issues before the Agency formalizes its position on a preferred cleanup strategy. The Region has discretion to invite interested stakeholders to prepare a written submission, as explained on the NRRB webpage (in Frequently Asked Questions). Please refer to the Board's position on releasing memoranda, regional responses, and supporting material, under Frequent Questions, number 12, found on the Board's website.
> http://www.epa.gov/superfund/programs/nrrb/faqs.htm
>
> TRC received the same opportunity that stakeholders receive at sites that go before the NRRB. On August 13, 2013, EPA provided TRC with the NRRB comments on the Site and the Region's response. This provided TRC with ample opportunity to submit comments to EPA during the public comment period that respond to issues raised by the NRRB, and on the Region's responses to the NRRB.

2.1.1.5: Cost Recovery The second letter states that although EPA has identified CDE as a PRP, EPA has "elected not to pursue CDE to undertake the investigation and remediation." It also states that EPA has not investigated the capacitors to determine if they are associated with operation of the CDE Site during its control by the United States government during and after World War II. Nor has EPA pursued the Borough of South Plainfield for the portion of the Site that they own. The letter also states that TETCO/TRC will not implement the preferred remedy, and if EPA seeks to recover the costs for the selected remedy, TRC/TETCO will assert a series of legal defenses, including that are an innocent land owner.

> **EPA Response:** EPA named CDE as a PRP for the Site and offered the company the opportunity to perform the RI/FS, which the company declined. When TETCO agreed to perform the RI/FS, EPA issued a unilateral order to CDE to join TETCO in performing the work. CDE did not comply with the unilateral order.
>
> The enforcement/liability matters raised in this letter are not relevant to selecting the remedy and are not responded to here.

2.1.1.6: Remedy Selection: The second letter states that if EPA chooses Alternative 6, it would "appear to be determining that the remedy is somehow more 'permanent' than any alternative" and EPA would be weighing the permanence criteria above all other criteria. The author states

that the capping remedy fully satisfies the CERCLA preference for 'permanent solutions.'

> **EPA Response:** EPA is not relying upon any single element within CERCLA's decision matrix in selecting a remedy for this Site.

2.1.1.7: Cost: The second letter states that Alternative 6 does not provide any greater effectiveness or implementability than Alternative 4, but the costs would be more than five times greater. These costs would be "grossly excessive" with minimal benefits and, therefore, violates the NCP. EPA is unable to point to any site-specific circumstances that justify the incurrence of incremental costs.

> **EPA Response:** Refer to EPA's response to Comment 2.1.1.1 regarding the role of cost effectiveness in making Superfund decisions.

2.1.2 Separate TRC Submission On August 16, 2013, a letter was sent from TRC to EPA concerning an August 14, 2013, CAG meeting.

2.1.2.1: The author claims that there has been a "pattern of selective disclosure" of documents by EPA to EWA but not to TRC, and by not equally sharing documents, EPA was helping EWA and harming TRC. EPA's email response to TRC on August 23, 2013, clarifying specific "missing" documents enumerated by TRC, is included in Attachment D. The letter lists four particular types of documents that TRC was seeking:

*"**Bound Brook Sampling Data** EPA presented the Cornell Dubilier Electronics (CDE) Superfund Site Operable Unit (OU) 4 preliminary data and workplan for additional investigations at a CAG meeting on June 15, 2011. At that CAG meeting, EPA said that they would share RI data as it became available. TRC has repeatedly asked for CDE OU4 data and updates. To date, TRC has received no CDE data. TRC subsequently requested this information again on multiple occasions including, but not limited to, in February 2013 and at the June 2013 CAG Meeting. Nonetheless, at this week's CAG meeting it became apparent that EPA has already provided the Bound Brook data to EWA. Of course, without the data TRC has no way of knowing whether and, if so, to what extent this information has the potential to impact its assessment of, or the remedy associated with, the Site."*

> **EPA Response:** EPA took all the surface water and sediment data collected upstream of the CDE Site (from EPA and TRC's data collection efforts) and compiled it on several large-scale figures. EPA discussed these figures at a CAG meeting and provided them previously to TRC, EWA and other CAG members. They are also in the administrative record. Thus, EPA has shared the relevant data, with accompanying figures that can reasonably be associated with the Woodbrook Site. TRC and EWA have each requested

"all the data" from the OU4 study. As EPA has explained previously, the volume of validated data available for the OU4 is very large, but is currently available only as a series of tables. Without the figures and organization of the RI report, it is of little value, which is why EPA took the step of developing the Bound Brook upstream data figures just mentioned. EPA expects to release a draft RI Report in October 2013.

As a follow up to discussions that took place in 2012 regarding the CDE OU3 remedy, EWA asked for and was provided in April 2013, one piece of the Bound Brook study, seep samples collected over the past year along the banks of the Bound Brook near the CDE Site. This information is only relevant to the CDE Site, but was sent to TRC on August 23, 2013.

*"**NRRB Comment** EPA sent TRC's comments to the National Remedy Review Board ("NRRB") to EWA. However, comments from EWA, and its individual members, were not shared with TRC until yesterday, after TRC's insistence at the CAG meeting. The delay in providing TRC with this information places TRC at a distinct disadvantage, particularly given EPA's decision to issue a Proposed Plan today and select a remedy within the next sixty days.*

"On a related note, TRC renews its request to obtain a copy of EPA's submission to the NRRB. It is difficult, if not impossible, to determine whether EPA Region 2 properly characterized the remedy and Site setting to the NRRB (which is clearly referenced in the subsequent dialogue between Region 2 and the NRRB which was produced by EPA this week), without the original EPA NRRB submission."

EPA Response: Upon request, the stakeholder position papers were sent to EWA in early July 2013. TRC subsequently asked for the same, approximately one month later. See EPA's response to Comment 2.1.1.4 concerning the NRRB process. (EPA does not release the packages submitted to the NRRB because they are considered pre-decisional.)

*"**EWA Comments/Ex Parte Phone Calls** EPA held an August 13th CAG meeting for the express purpose of receiving public comments on the FS. After a lengthy discussion at that meeting devoted to regional issues that had nothing to do with the FS, EWA requested that it and its experts be permitted to discuss additional comments on the FS with EPA ex parte. EPA properly requested that TRC be allowed to be part of that discussion so that it would have the benefit of those "public comments." When EWA declined to afford TRC that opportunity, EPA acceded to EWA's position.*

"The purpose of the CAG meeting was to provide a transparent process by which all interested parties could hear public comments on the FS prepared by TRC and approved by EPA. By affording EWA the right to present comments to EPA in an ex parte fashion, EPA has seriously

undermined the purpose served by an open process whereby all interested parties have access to comments on the FS.

"EPA forwarded EWA's comments to the FS to TRC yesterday, but TRC was unable to participate on the call to determine whether the comments were cast in an appropriate light. Exacerbating this procedural irregularity is the fact that EPA will attempt to recover all CAG related costs from TRC under the AOC as it has for all prior CAG related costs over TRC's ongoing objection."

> **EPA Response:** The FS was finalized in late July, and the TAG consultants reviewed it in a relatively short period of time, a few weeks. The TAG consultants declined to present their findings at the August 14, 2013, CAG meeting; EPA does not know why. The consultants were ready to submit comments on the FS a few days later, which were shared with TRC. These comments are addressed in this Responsiveness Summary. In addition, TRC chose to review and respond to the TAG comments as part of its comment submittal which are attached as Attachment F to this Responsiveness Summary.
>
> EPA did have a telephone call with representatives of the CAG, at which they summarized some of their concerns about the FS. EPA's contribution to this call was procedural – how to disseminate these comments - and the outcome was a EWA-sponsored "public meeting," held on September 12, 2013. TRC declined to attend this meeting, citing further procedural irregularities of the way EWA managed the CAG and this meeting.

*"**NJDEP Comments** On August 15, 2013, the EPA provided TRC the NJDEP's undated commentary which was apparently submitted to the NRRB. The NJDEP commentary (provided to TRC approximately 10 weeks after the issuance of the document), indicates that the NJDEP and the EPA have been in consultation regarding remedy selection for over a year. These consultations have excluded TRC. Throughout the RI phases of the project, TRC participated in the ongoing Biological Technical Assistance Group ("BTAG") discussions that involved NJDEP. BTAG representatives, including NJDEP, came to team meetings with TRC to discuss the project on many occasions.*

"NJDEP's comments to the NRRB indicate that NJDEP and EPA have been in consultation regarding remedy selection for over a year, as part of the ongoing BTAG process. This demonstrates that EPA's discussions with NJDEP regarding a site remedy excluded TRC, the FS subject matter expert, the sole Work Party under the AOC, and private land-owner representative. Although it is certainly appropriate for EPA and NJDEP to have their own discussions regarding remedy selection, it would seem that EPA altered the approach and land use it had adopted for joint discussions without informing TRC that it was doing so.

"The EPA has stated at CAG meetings that that the NJDEP has expressed an interest in using the Woodbrook Road Site for wetland mitigation relative to an NJDEP project unrelated to Woodbrook Road. TRC, as the private land owner representative, has asked the EPA on several occasions to be included in these discussions with the NJDEP. To date, TRC has not been included, which is inappropriate and appears to have led to flawed future land use assumptions which are unsupported by current zoning or the Site owner."

> **EPA Response:** As our support agency under CERCLA, EPA has regular conversations with NJDEP about this Site and others without participation of a potential responsible party. As discussed in the Decision Summary, the current land use was evaluated in the human health risk assessment, and it is also considered a plausible future land use. EPA has had discussions with NJDEP about wetlands mitigation projects and this has been mentioned at CAG meetings. EPA has also stated that the possibility that NJDEP or other potential conservation partners may invest in a mitigation or conservation project at this location will need to await the selection a remedy for the Site. For those discussions to be productive, the land owner would need to be a willing participant. The 2005 Conceptual Site Model (CSM) prepared by TRC states, "A potential scenario for the remainder of the Site is that the restored and enhanced wetlands and will be utilized for passive recreation, hiking, and ecological education."

2.1.2.2: The letter also states that "information relevant to the FS and selection of a remedy at this Site should be made available to TRC in a timely and transparent manner, and TRC should be a participant in substantive discussions regarding analysis of remedial alternatives and remedy selection (particularly at this critical juncture of the process)." TRC further requested "copies of any such information promptly, and reserves the right to object to EPA's Proposed Plan in light of the EPA's providing documents to TRC in an incomplete and untimely manner. In particular, should TRC's review of the Bound Brook data or other such information indicate that that data or information is relevant to comments on EPA's Proposed Plan, TRC reserves the right to request an extension of the comment period."

> **EPA Response:** EPA had provided the relevant documents previous to the letter, and the perceived "selective disclosure" amounted to the one month of difference between when EWA asked for the NRRB position papers and when TRC asked for them. TRC elected not to ask for an extension to the comment period.

2.1.3: TRC Comments On September 16, 2013, the EPA received comments on the Proposed Plan from TRC. There were three main points portrayed in the letter about the selection of Alternative 6: it is inconsistent with the NCP under CERCLA; it is at odds with long standing policy and EPA precedent; and it is arbitrary and capricious.

TRC's submittal is divided under seven headings, which EPA includes to aid the reader in following EPA's summary of TRC's comments.

"I. The Required Balancing of the NCP Remedy Selection Criteria Demonstrates That Selection of Alternative 6 Would Be Inconsistent With the NCP and Otherwise Arbitrary and Capricious"

2.1.3.1: (From Footnote 2, page 4) The letter states that the Proposed Plan is in error in that it claims that the capping will "fill in and fundamentally alter the nearby wetland," because the cap, as conceived by TRC in the FS, does not lie within wetlands. The comment refers to Figure 1 of the submittal (which was also provided by TRC at the public meeting) as information to demonstrate that the cap would not be placed in wetlands.

> **EPA Response:** This footnote quotes, and slightly alters, text from Page 11 of the Proposed Plan that is generally supportive of consolidation and capping. The referenced Proposed Plan text explains how, while the alternative is "technically" filling, the consolidation and capping alternatives might still result in a net improvement of the wetland. It may be more appropriate to have said "wetland or floodplain." This is a minor matter, except that it references "Figure 1," which, along with "Figure 3" are worthy of comment, given their central importance to TRC's submittal.
>
> These figures are not from the FS Report. They were prepared in response to the TAG consultant comments on the draft FS report, discussed elsewhere in this Responsiveness Summary. They were provided to EPA on August 26, 2013, shortly before the start of the public meeting. EPA's public meeting presentation relied upon the figures in the FS Report. While EPA had not had an opportunity to review these figures prior to the meeting, they were still provided a prominent place at the meeting, and TRC and several other commenters referred to them during the evening.
>
> The RI Report does contain a wetlands delineation and approximate floodplain boundaries. The FS report does not, however, provide figures that include these multiple layers of information in one place aligned with the remedial alternatives, as these figures purport to do. This was a fundamental comment from the TAG consultants, and EPA generally agrees with the TAG consultants that Site figures with all this information in one place would have been a valuable addition to the FS report. Absent these figures, the Agency was left to infer from text in the FS report, whether and to what degree the alternatives are within the wetlands or floodplains of the Site.
>
> Figures 1 and 3 from the public meeting provide several areas of new information, not included elsewhere in TRC's FS report, information that at times appears to be contrary,

or at least not fully consistent with those reports. The following inconsistencies with the FS report lead EPA to question the reliability of these figures as truly representative of Site conditions:

- **Vegetated Soil Cap Area** The green polygon representing the "consolidation/cap" area on the Western Dump appears to be approximately the same size and shape as the polygon used in the FS report (for example, FS Figure 5), although it appears to have been altered slightly to comport with the "wetlands" line in the new figure. However, the capped area from FS Figure 5 is 5.68 acres; whereas the area on the new Figure is only 4.7 acres. Furthermore, the FS area (5.68 acres) is only for the Western Dump consolidation and capping, not including the Eastern dump (an additional 13,500 cubic yards of material). [EPA stated that the capped area would be about 5 acres at the public meeting.] The TRC submittal later refers to 5.7 acres of cap, so this is presumably a typographic error on the figure.
- **Depth of Fill** The new Figure 1 includes a cross-section of the thickness of the waste after consolidation and capping, again information not included in the FS report. The cross-section includes multiple layers to the newly created landfill, though several of the layers are not identified in the legend, leaving EPA to speculate that they may reference "existing fill," "newly placed fill that is below the flood elevation," and "newly placed fill that is above the flood elevation." While never expressly stated in the FS report, EPA inferred from cost-table assumptions that the consolidation/capping alternatives would result in a rise in height of approximately 6 to 8 feet above current land surface (including consolidated fill and cap but not accounting for sloping or the use of borrow material). This figure suggests a rise of as much as 13 feet of fill and cap material, but again, it is pure speculation on EPA's part, because this drawing lacks a sufficient explanation to be more than an aspirational sketch of howTRC might like the Site to appear.
- **Potential Wetlands Creation** The FS report states that 1.58 acres of wetlands will need to be restored as a result of either Alternative 4 or Alternative 6[1]. During the development of the FS, by explanation in a response to a comment from EPA, TRC explained that this refers to "jurisdictional" wetlands, per the wetlands delineated by TRC during RI. Furthermore, TRC stated that, with the selection of an excavation alternative, "the 1.57 acres area within the jurisdictional wetland will be replanted with appropriate wetland vegetation and the remaining 11.03 acres will be re-seeded," meaning that only the 1.58 acres would be treated as wetland for the purposes of restoration. EPA let the FS report stand as written; however, these figures revisit the extent of wetlands "creation," using information that does not appear in the RI/FS and cannot be assessed except as it appears on this figure. The new Figures 1 and 3

[1]As explained in the Proposed Plan, Alternative 6 is the sum of Alternatives 1e, 2e, and 3e from the FS report.

include three categories, none of which appear to tally with assumptions included in the FS:

- **Wetlands to be Restored** EPA speculates that this is meant to account for the 1.58 acres of jurisdictional wetlands that would be disturbed, and would require restoration. By rough calculation (based solely on this figure), EPA estimates that this area is between 3 and 4 acres. It is unclear what constitutes the 1.58 acres used in the FS.
- **Potential Wetland Creation** These are wetlands that might be newly created under either Alternative 4 or 6. While EPA, TRC and others have discussed the possibility that wetlands may be newly created, the FS is not costed as if they would be, and the concept appears to be contrary to earlier statements in the FS report and in responses to comments. The reason for including these estimates is clearly stated in TRC's submittal: to make the case that Alternative 4 (consolidation and capping) actually has the potential to create more new wetlands than Alternative 6, 12 acres versus only 11 acres. There is no information provided that might allow an independent party to verify these calculations.
- **Cap Material Mining Area** Figure 1 estimates this area to be about 4 acres, and it is by this mechanism that TRC presumably reaches the conclusion that more acres of wetland can be created by consolidating and capping in 4.7 or 5.7 acres (more or less) than by excavation and off-site disposal. Please refer to TAG consultant comment about the utility of using on-site borrow material as cap material, (See Comment 2.3.4.4), which EPA believes has merit. How the acreages are calculated not explained. It is unclear what, if any of these figures can be relied upon to supplement or inform EPA's decision-making process.

2.1.3.2: EPA claims that capping would require monitoring and create “uncertainties” with regard to environmental receptors. However, EPA fails to consider that monitoring will be legally required in the capping remedy. In addition, this goes against EPA’s 1990 PCB guidance, which states that “containment of PCBs should generally be implemented for…low level contaminated materials remaining at the Site.” The submittal states, “EPA cannot simply assert summarily that containment and capping of low threat wastes is less effective in the long term than excavation and removal.” EPA’s concerns with the cap are “without technical foundation or merit.”

EPA Response: As to the legally binding nature of the monitoring, operation and maintenance of the cap, EPA agrees that CERCLA remedies do not require other landfill regulations to be enforceable. From a purely regulatory point of view, the Site is currently a number of disposal areas; however, one of the consequences of capping/consolidation is to create a permanent disposal cell (akin to a landfill) where one does not currently exist.

While The Agency has, in its view, fairly considered whether it is wise to place a disposal cell in a wetland/floodplain, and whether there are long-term uncertainties with managing the PCBs in place.

EPA has considered the 1990 PCB guidance in selecting this remedy. This guidance allows for consideration of actual site conditions when making remedy decisions at sites with PCBs, rather than defaulting to a set of rigid cleanup criteria as the comment suggests. For example, in section 4.3 of the guidance, different cap materials are recommended for certain concentrations of PCBs to remain on Site. The guidance suggests that, at certain PCB concentrations (5 ppm, 20 ppm, 50 ppm), certain types of cap materials would be expected (soil cap, concrete cap, 24-clay cap, respectively). The levels that would remain on-site, the types of caps EPA might consider appropriate, and the inappropriateness of certain types of cap materials in a wetland/floodplain area were all factors that EPA considered in reaching its decision.

2.1.3.3: The letter states that EPA did not fully address the short-term effectiveness of Alternative 6 including additional excavation, 14,000 additional truck trips, increased traffic, dust, and more possibilities for accidents and risks to local residents. In addition, there would be more greenhouse gas emissions and energy consumption. The letter states that rail is not an option for this Site. The letter refers to the recently issued Proposed Plan for the LCP Chemical Site in Linden, New Jersey, which discusses short-term effectiveness issues with full excavation.

EPA Response: The FS estimates 6000 truck trips for excavation of the Western Dump and 800 truck trips for excavation of the Eastern Dump. However, at the public meeting TRC uses the number 14,000 "truck trips" in their figures by assuming a "carrying capacity" of 17 cubic yards rather than the nominal carrying capacity of a waste hauling truck, 20 cubic yards, which is a reasonably conservative assumption. TRC also counted each trip as two trips, one to the Site and one from the Site, which is not typically how trips are counted (a "trip" is a round-trip) or how they were counted in the FS.

Rail transport received a cursory review by TRC and EPA has agreed to revisit the possibility of using rail in the remedial design. The rail line next to the Site is not suitable for accepting rail cars directly, but a nearby spur or rail yard may have the facilities to accept and load intermodal boxes delivered from the Site after a relatively short truck trip. Also see EPA’s response to Comment 2.1.3.9.

2.1.3.4: TRC's submittal describes how both alternative 4 and 6 have comparable “scoring” in the six of the seven threshold and balancing criteria, cost would be the determining factor, which would show Alternative 4 as the “best balance of trade-offs” and Alternative 6 as arbitrary and capricious. The letter states that the Proposed Plan did not “weigh and balance how Alternatives

4 and 6 compare to each other." EPA does not explain how and why the preferred alternative justifies the significant increased cost, when all other criteria are similar.

EPA Response: This section of TRC's submittal reviews EPA's nine criteria evaluation in the Proposed Plan, which differs from TRC's assessment. EPA refers the reader to the Comparative Analysis of Alternatives Section of the Decision Summary of this ROD. EPA stands behind its evaluation of the alternatives. Consolidation and capping in Alternatives 2, 4 and 5 would be effective in preventing direct contact exposure; however, monitoring of the cap would be necessary in the long-term for it to remain effective, and these alternatives also require long-term monitoring due to the residual soils left in place. In a wetland environment, where the water table is at or near the ground surface, the long-term effectiveness and permanence of a cap may be uncertain. Capping alternatives offer greater uncertainties with regard to long-term protectiveness for environmental receptors (e.g., maintaining cap integrity over the long term, the potential for cap damage and receptor contact caused by flood events, burrowing animals).

2.1.3.5: The EPA declined requests by TRC to be included in discussions with EPA and NJDEP regarding evaluation and selection of the preferred alternative.

EPA Response: See EPA's response to comment 2.1.2.1.

"II. Because Alternative 6 Is Not Cost-Effective, Its Selection would be Inconsistent wit the NCP"

2.1.3.6: Because Alternative 6 is not cost-effective according to the NCP, "its selection would be unlawful." Based on the NCP's "cost-effectiveness mandate," Alternative 6 should have been eliminated from further consideration.

EPA Response: See EPA's response to Comment 2.1.1.1.

2.1.3.7: Alternative 6 is five times more costly than Alternative 4 without providing greater overall protectiveness as is supported by the Administrative Record. EPA failed to provide an "exceptionally strong basis to support selection of Alternative 6 over Alternative 4."

EPA Response: The standard for determining cost-effectiveness is not by an "exceptionally strong basis of support" for one alternative over another. EPA acknowledges that Alternative 6 is more costly than several of the other remedial alternatives considered, though it is not the most costly alternative considered. As discussed in the Region's consultation with the NRRB, included as Attachment E to this

Record of Decision and available at the NRRB's web site, http://www.epa.gov/superfund/programs/nrrb/siterevs.htm, EPA expects that the volume estimates in the FS are conservative, and more sampling may reduce the volume that actually needs to be removed to satisfy the remediation goal, potentially lowering the overall cost of the remedy. The frequency of sampling surrounding the principal threat areas is very robust, and these areas are well characterized. The frequency of sampling throughout the remainder of the Western Dump and all of the Eastern Dump is relatively sparse, though adequate for the purpose of selecting a remedy. The consequences of this relatively small data set for the FS may have been to overestimate the volume that needs to be excavated (for Alternative 3 or 6) while possibly underestimating the extent that would be consolidated and capped (for Alternative 4 or 5), because the excavation alternatives extend the dig to the bottom of the fill wherever they are implemented, whereas the data suggest that PCB concentrations above cleanup criteria are within the top of the fill only.

2.1.3.8: According to the EPA's "The Role of Cost Guidance," "'large sums of money' should not be spent actively managing low level threat wastes that can be reliably contained onsite." This guidance should be given weight by EPA in its final decision.

EPA Response: "The Role of Cost in the Superfund Remedy Selection Process" is a Fact Sheet that assists in understanding about how cost affects remedy selection. The above quote about "large sums of money" is taken out of context and is actually about treatment of low level threat wastes.

2.1.3.9: The letter compares this Site to the Proposed Plan for the LCP Superfund Site where capping was chosen because of the excessive cost of complete removal.

EPA Response: Please refer to EPA's response to Comment 2.1.1.3 about comparison to the CDE site. The primary contaminant of concern at the LCP Site is mercury, and PCBs are a minor constituent. While the primary constituents of concern are dissimilar, like the CDE Site, LCP is a former factory with a long history of industrial use and extensive soil contamination. Like the CDE Site (and unlike Woodbrook) the residual soil contamination at the Site is so extensive that the "complete removal" scenario that TRC refers to was actually screened out during the feasibility study as not being cost-effective, and the "complete removal" scenario carried forward in the FS and Proposed Plan for LCP only considers principal threats for excavation (along with other remedial alternatives, including the preferred alternative, *in-situ* treatment), relying on capping for lower level threats. EPA's ROD for the 26-acre former CDE facility (OU2) concluded that over 90 percent of Site surface and subsurface soils exceeded 10 ppm total PCBs, and EPA did not carry forward a "complete removal" alternative for OU2. This resulted

in "only" treating or removing for off-site disposal approximately 100,000 cubic yards of PCB-contaminated soils and debris exceeding 500 ppm, and containing several hundred thousand cubic yards of PCB-contaminated soils at lesser concentrations.

Also similar to the CDE Site, the LCP Site is a former industrial facility surrounded by developed commercial/ industrial land, with a clearly defined future use plan that entails redevelopment of the land for a commercial/industrial end use. These Sites have little in common with the Woodbrook Site. In addition, EPA notes that each site is unique.

"**III. EPA'S Conclusion That the Reasonably Anticipated Future Land Use For the Site is A "Recreational User/Trespasser" Scenario Is Without Support In The Administrative Record**"

2.1.3.10: TRC requests the package that EPA presented to the NRRB.

EPA Response: Refer to EPA's response to Comment 2.1.2.1.

2.1.3.11: EPA arbitrarily "assumes" the land will be open space and recreational even though it is zoned commercial/industrial. This was brought up in the NRRB letter to the Region. An "assumption" should not play a significant role in remedy selection.

EPA Response: Refer to the Summary of Site Risks, Exposure Assessment Section, of the Decision Summary of the ROD. Future commercial/industrial workers were not among the exposure scenarios considered when developing the human health risk assessment, because no one at that time, or for the previous 40 years that the property owner has held this property, has anticipated its future use as commercial/industrial. TRC's responses to comments throughout the development of the RI/FS emphasize the expectation that the Site would not be developed consistent with the zoning. This is consistent with the EPA guidance "Land Use in the CERCLA Remedy Selection Process". In addition, the 2005 CSM prepared by TRC states, "A potential scenario for the remainder of the Site is that the restored and enhanced wetlands and will be utilized for passive recreation, hiking, and ecological education."

2.1.3.12: The TRC submittal states, "a preference for 'recreational/conservation' land use in the future is an impermissible consideration in selecting a Superfund remedy," whereas industrial use is permissible. TRC cites CERCLA and the NCP as not expressly identifying recreational or conservation land/open space as "permissible" land uses.

EPA Response: Please refer to EPA's guidance on developing human health risk assessments, and the human health risk assessment developed for this Site. The analysis

for potential exposures under future land use conditions is used to provide decision-makers with an understanding of exposures that may potentially occur in the future. TRC has not argued, until after the release of the Proposed Plan, that EPA's assessment of potential future exposures was incorrect. See quote from CSM in EPA's response to Comment 2.1.3.11.

EPA followed the guidance "Land Use in the CERCLA Remedy Selection Process" which assists in considering land use in making remedy selection decisions under CERCLA. Furthermore, the preamble to the NCP includes the following clarification with regard to land use and risk assessment:

"In considering land use, Superfund exposure assessments most often classify land into one of three categories: (1) residential, (2) commercial/industrial, and (3) recreational. EPA also considers the ecological use of the property and, as appropriate, agricultural use. In general, the baseline risk assessment will look at a future land use that is both reasonable, from land use development patterns, and may be associated with the highest (most significant) risk, in order to be protective. These considerations will lead to the assumption of residential use as the future land use in many cases. Residential land use assumptions generally result in the most conservative exposure estimates. The assumption of residential land use is not a requirement of the program but rather is an assumption that may be made, based on conservative but realistic exposures, to ensure that remedies that are ultimately selected for the site will be protective. An assumption of future residential land use may not be justifiable if the probability that the site will support residential use in the future is small. Where the likely future land use is unclear, risks assuming residential land use can be compared to risks associated with other land uses, such as industrial, to estimate the risk consequences if the land is used for something other than the expected future use."

2.1.3.13: The Proposed Plan's selection of the remedy that will "provide more flexibility" for future land use is arbitrary and capricious, because EPA is making its remedy decision based upon factors (increasing flood storage and creating more wetlands) that are outside the CERCLA decision-making process.

EPA Response: EPA is making its decision per the nine criteria analysis as described in the ROD.

2.1.3.14: The TRC submittal states that EPA had preselected the remedy based upon a quotation from the regional response to the NRRB memorandum.

EPA Response: TRC is referring to the following language, from the regional response to the NRRB memorandum: "a more conservative land use restriction of recreation/ conservation allowing more flexibility in the future . . . *will be more clearly reflected in the decision documents*" (emphasis added). The "decision documents" referenced in the Region's response include the Proposed Plan, which the Region had not yet issued.

2.1.3.15: Recreational land use is not supported in the administrative record. Furthermore, EPA makes an "illogical and unwarranted leap" from trespasser scenario used in the risk assessments to recreational scenario even though the property owner has restricted access to the Site.

EPA Response: Please refer to EPA's response to Comments 2.1.3.11 and 2.1.3.12. A future user might be a trespasser and use the land for recreational purposes; there is nothing inconsistent about this exposure assumption. While EPA does not consider this a desirable or likely outcome, the property owner (represented by TRC) may pursue independently future uses of these properties that are consistent with zoning (commercial/industrial) or, as suggested by this comment, may fence the property off from any future human use in perpetuity, with trespassers limited to the degree that that is possible. EPA stands behind its risk assessment process, which reached exposure scenarios that included future recreational exposure.

2.1.3.16: Although EPA "may wish" that the Site become a recreational area, this is not supported by facts or the EPA's Land Use Guidance. In fact, as EPA acknowledged, there are large amounts of debris and refuse that will remain on Site. The Site will not become a "pristine wetland" or suitable recreational area, but will remain a "waste management area" that remains fenced in to prohibit trespassers. Furthermore, TETCO has executed and will escrow with a title company for recordation of a Deed Restriction that precludes the use of the Site for recreational purposes and prevents use in perpetuity for anything other than commercial or industrial use.

EPA Response: EPA stands behind the conclusions in the human health risk assessment, prepared by TRC, with regard to potential future land uses. The Proposed Plan states that CERCLA's role at this Site is limited to addressing soil and debris that poses an unacceptable human health and ecological risk, and that other refuse will remain on the Site at the conclusion of any of the remedial alternatives. Refer to Summary of Site Risks of the Decision Summary of this ROD regarding EPA's assessment of future industrial/commercial land use. Until recently, TRC was interested in pursuing business opportunities for the land that included a wetlands mitigation bank or other type of land conservation project. Refer to the response to Comment 2.1.3.15: the land owner may pursue industrial/commercial land use if it so chooses. The deed restriction was attached to TRC's submittal without proper signature or recording.

2.1.3.17: EPA's statement of the selection of Alternative 6 would provide for "more flexibility" is arbitrary and capricious; specifically, capping would only affect five of the 70 acres of the lots, and the remaining 65 acres would be available to provide the desired flexibility.

> **EPA Response:** EPA acknowledges in the Proposed Plan that the "desired flexibility" (increased flood storage and wetlands creation) would be an outcome of many of the remedial alternatives, not only Alternative 6.

2.1.3.18: EPA acknowledges that the land will not be used for residential purposes. Per EPA's PCB guidance for CERCLA Sites, a remediation goal of 10-25 ppm and a principal threat waste threshold of 500 ppm should have been selected.

> **EPA Response:** Refer to the Remediation Goals Section of the Decision Summary of the ROD.

"IV. The Agency's Stated Basis For Its Selection Of Alternative 6 As The Preferred Remedy Is Unsupported By The Administrative Record, Contrary To EPA Policy And Precedent, And Is Otherwise Arbitrary And Capricious"

2.1.3.19: EPA provides a "very scant discussion" on its rationale for selecting Alternative 6, which are not supported in the administrative record. The preferred alternative is also inconsistent with historic EPA policy concerning protectiveness of containing low-level PCB waste and sets a precedent regarding selection of containment remedies.

> **EPA Response:** Please refer to the Evaluation of Alternatives and Selected Remedy Sections of the Decision Summary of the ROD for a discussion of the selected remedy. Each site is unique, and each remedy selection is site-specific. EPA's basic approach has been used at many sites around the country, and in Region 2, and is not a departure from earlier practices with regard to PCBs.

2.1.3.20: EPA has met with both NJDEP and Army Corps of Engineers about the use of the property for wetlands mitigation for an unrelated flood project without including the land owner despite requests for inclusion.

> **EPA Response:** As our support agency under CERCLA, EPA has regular conversations with NJDEP about this Site. As discussed in the Decision Summary, the current land use was evaluated in the human health risk assessment, and it is also considered a plausible future land use. EPA has had discussions with NJDEP about wetlands mitigation projects and this has been mentioned at CAG meetings. EPA has also stated that the possibility that NJDEP or other potential conservation partners may invest in a mitigation or

conservation project at this location will need to await the selection a remedy for the Site. For those discussions to be productive, the land owner would need to be a willing participant. Refer to response to Comment 2.1.3.16.

2.1.3.21: EPA states a reason for not selecting capping is that it requires maintenance and that burrowing animals would expose or damage the cap; however a long-term inspection and maintenance program can be implemented with the capping remedy to address these concerns.

EPA Response: EPA and TRC might disagree on the degree of cap maintenance required (the FS suggests cap maintenance would occur every five years), but the Proposed Plan and this ROD acknowledge that the issue cited here can be addressed through proper management of a cap.

2.1.3.22: The threat of flood damage to a cap is another reason for not selecting the capping remedy; however, the cap would not be placed in the floodway, and there is evidence of little contaminant migration without a cap in place. The Contaminated Sediment Remediation Guidance for Hazardous Waste Sites demonstrates that caps are able to reach “acceptable levels of effectiveness and permanence” even when completely inundated by flowing water.

EPA Response: EPA again refers to TRC Submittal Figure 1. Even the cross-section on this figure indicates that a portion of the cap would be flooded periodically, and there is ample evidence that most of the Site is flooded from time to time. The RI indicates that the soil and debris in some places reaches a thickness of seven feet. EPA is still uncertain, and TRC declined to clarify in the FS, the likely finished grade of a disposal cell, and Figure 1 only adds to this uncertainty (understanding that the consolidation/capping would take place not in a low-lying area but on areas of the Site where debris is already thickest, and that the fill itself is the reason that these areas are "outside the floodway"). EPA agrees that a disposal cell can be successfully engineered at the Site, though not as easily as TRC expresses; nontheless, Alternative 4 would create a mound of substantial dimensions, that would be subjected to flooding, in an area where no mound currently exists, and it is a legitimate concern of EPA that a future capped disposal cell may be less stable than current conditions.

2.1.3.23: Since EPA approved the FS and its conclusions, EPA agrees that capping can be successfully implemented and provide long-term effectiveness, is implementable and protective of the environment.

EPA Response: EPA agrees that the remedial alternatives developed in the FS and included in the Proposed Plan, including consolidation and capping, meet the basic threshold criteria for acceptable site remedies under CERCLA.

2.1.3.24: EPA's selection of Alternative 6 due to putative concerns about long-term protectiveness of a cap is at odds with longstanding EPA CERCLA guidance regarding remediation of PCB-containing waste. The Proposed Plan is "flatly inconsistent" with the EPA PCB Guidance.

> **EPA Response:** Refer to EPA's response to Comment 2.1.3.2 regarding the Region's consideration of this guidance.

"V. EPA's Stated Preference For Removal Of All PCBs Over 1 Part Per Million Is Arbitrary Given Its Decision At The Comparable Nearby Cornell-Dubilier Electronics, Inc. PCB Site And Other PCB Sites"

2.1.3.25: Since a cap was employed at the nearby CDE Site, and was recently proposed at the LCP Chemical Site in Linden, New Jersey, and EPA provided no rationale in the administrative record not to select a cap at the Woodbrook Road Site, EPA's decision is arbitrary and capricious.

> **EPA Response:** Please refer to the response to Comment 2.1.3.9. There is little in common between the referenced sites and the Woodbrook Road Dump.

2.1.3.26: EPA generalized concerns about "uncertainties" with the cap are belied by the Agency's use of caps for comparable PCB-contaminated soil at other Superfund sites as shown in Appendix VII of the TRC submittal.

> **EPA Response:** Many site-specific factors go into selecting remedies at NPL sites. For example, refer to the distinctions between the LCP, CDE (OU2) and Woodbrook Sites discussed in the response to Comment 2.1.3.9. A less selective list of NPL sites would include a number of sites with remedial actions similar to EPA's selected remedy for the Woodbrook Site.

"VI. EPA Must Provide To The Public A Rational Basis For Its Support Of Alternative 6 Before The Agency Can Select Any Such Remedy"

2.1.3.27: The Agency must furnish the basis for its decision in order to allow for informed public comment. The TRC submission cites a number of conclusions (from the Proposed Plan) that EPA relied upon, and then concludes that none of them are supported by the administrative record. Furnishing the requested rationale in the Record of Decision is insufficient to comply with public participation requirements in CERCLA and the NCP, because EPA needed to provide its written explanations to the community in the Proposed Plan and administrative record, affording the community the opportunity to a full assessment of the Site.

EPA Response: EPA understands that TRC feels the Agency's explanations for its selected remedy are insufficient. No other commenters came to the same conclusion. EPA relied upon TRC's risk assessments and RI/FS reports to assess the Site. If there were a theme to comments received from parties other that TRC and its representatives, it would be that the RI/FS reports provided an insufficient characterization of the Site, and provided a poor basis for selecting capping and consolidation. (EPA does not share this view, and the public meeting transcript in Attachment C will show that EPA came to the defense of the adequacy of TRC's RI/FS.)

"VII. EPA Has Improperly Failed To Consider New Jersey Law Which Allows A Property Owner To Select An Institutional And Engineering Control-Based Remedy Over A Complete Removal Remedy"

2.1.3.28: EPA failed to consider that New Jersey allows owners to select institutional and engineering control-based remedy over a complete removal remedy as long as is protective of human health and the environment, according to the "NJDEP Institutional Control and Engineering Control Whitepaper." The TRC submittal also indicates that NJDEP has historically supported on-site capping of PCBs, and endorsed in writing a consolidation and capping approach for this Site.

EPA Response: New Jersey concurs with the Selected Remedy. New Jersey statutes and regulations do not supersede or displace EPA's decision-making authority at an NPL site.

NJDEP's "endorsement" comes in a letter from NJDEP to EPA dated February 10, 2006, prior to the start of field work for the remedial investigation. It is included as part of TRC's submittal. The letter was the outcome of a meeting between TRC and NJDEP. As described in the letter, TRC presented a conceptual Site strategy at the meeting, and NJDEP's understanding of the Site at that time is derived from TRC's presentation.

Perhaps it is not surprising that TRC's description of the Site at the time (or NJDEP's interpretation of it) appears to be at odds with some of its current findings, and with its comments on the Proposed Plan. Specifically NJDEP refers to the Site as a "historic municipal landfill," a characterization of the Site that TRC does not endorse. After a long list of contingencies and expectations, presumably enumerated by TRC ("…the creation, enhancement and preservation of wetlands and flood storage in an…area containing…Priority Wetlands"), NJDEP acknowledges that it would "not object" to waste consolidation from what is now known as the Eastern Dump to the Western Dump. This consolidation does not appear to relate to PCB-waste consolidation, but a general endorsement that combining all of the dumps into one area would result in the net benefits cited above.

The consolidation of all of the Eastern Dump into the Western Dump was not considered in the FS, because only a small portion (approximately three of the 13 acres of the Eastern Dump) have PCB exceedances and are being addressed by the selected remedy. By this letter, NJDEP endorses that "waste" can be left on Site, though it appears to suggest that NJDEP would expect this material (including non-CERCLA wastes) would need to be capped. TRC has stated in the FS that non-CERCLA wastes remaining on Site do not need to be capped, according to New Jersey law. EPA is not taking a position on non-CERCLA waste disposition at the Site.

Subpart 2.2: Comments Received from Elected Officials and Municipal Entities

2.2.1 Letter from Attorney representing the Borough of South Plainfield A letter was sent to EPA from an attorney on behalf of the Borough of South Plainfield supporting a remedial alternative that removes PCBs greater than 100 ppm, capping remaining PCBs and imposing deed restrictions (Alternative 4 or, possibly, Alternative 5). The letter references the approved RI/FS, the remedy selected for the CDE Site, the industrial zoning of the land and "unwarranted expenditure of public funds" as reasons for preferring this alternative over other Alternatives.

EPA Response: Several of the rationales presented in this letter for preferring a consolidation/capping alternative are discussed in greater depth in other EPA responses to TRC comments. The Agency takes special note of zoning and land use positions taken by municipal governments. Please refer to the Current and Potential Future Site and Resource Uses Section of the Decision Summary for EPA's position on future land use for the Site.

2.2.2 Letters from Assemblyman Patrick Diegnan and Edison Township EPA received a letter supporting the preferred alternative from a representative of the New Jersey General Assembly, and a Resolution (R.427-082013) of support from the Township of Edison.

EPA Response: Noted.

2.2.3 Borough of South Plainfield Environmental Commission EPA received a letter dated August 26, 2013, from the Environmental Commission with a number of specific questions. A member of the Commission also read this letter into the record during the public meeting as can be seen in Attachment C.

2.2.3.1: Why is the remediation goal different for low-level and principal threat wastes?

EPA Response: The remediation goal for the entire Site is 1.0 ppm, based on the human health and ecological risk assessments. The NCP expects EPA to identify source material

at Superfund sites for extra consideration: material that is high in concentration and has potential to migrate off Site is called “principal threat waste.” EPA has guidance for PCBs called “Guidance on Remedial Action for Superfund Sites with PCB Contamination” that recommends remedial action levels for principal threats at NPL site under different land use scenarios. A level of 500 ppm is recommended for commercial/industrial properties, and this level was chosen for the CDE Site. EPA chose not to use 500 ppm because EPA does not expect the future use of the land to be developed for commercial or industrial use. EPA chose the more conservative remediation goal of 100 ppm, which applies to residential areas. Principal threat wastes must either be treated or addressed permanently (e.g., excavation and off-site disposal) from Superfund sites, to the extent practicable. Please refer to the response to Comment 2.1.3.9 for a comparison between the CDE and Woodbrook Sites.

2.2.3.2: The next question refers to the “degree of disturbance to the site, or the impact on the community for each alternative.” The commission noted that wetlands restoration (after a cleanup) can be difficult to implement successfully, and it is better to minimize the extent of wetlands disturbance where possible. The commission also asked how long each alternative would take to implement and for specifics about truck routes.

EPA Response: The Proposed Plan and ROD estimates the time frame it would take to implement the alternatives, generally as one year for capping, 2 years for on-site treatment and one year for excavation and off-site disposal. Capping would require maintenance in perpetuity, whereas alternatives that do not rely on on-site capping would not.

The commission's observation that any disturbed land would require restoration, and sometimes wetlands restoration can be challenging to implement successfully, is accurate. EPA will pursue strategies to minimize damage to existing ecosystems during the implementation of the remedy to the extent practicable. The areas to be disturbed are similar for most of the remedial alternatives. The FS estimated the wetlands that would be disturbed for the preferred alternative at approximately 1.5 acres, since most of the contaminated areas are considered uplands according to the Site-specific wetlands delineation. Other commenters disputed this 1.5-acre figure, citing other wetland delineation mapping and the proximity to the Bound Brook or its tributaries, though EPA accepts it for the purposes of selecting the remedy. In figures presented at the public meeting, and included in its written comments on the Proposed Plan, TRC argued that as much as 10 or 11 acres of wetlands may be "recovered" as a result of the consolidation/capping remedy or the excavation and off-site disposal remedy. (TRC argued that, because of borrow material that might be used as part of Alternative 4 or 5 - consolidation/capping - but that would not be removed in Alternative 6, Alternatives 4/5

would actually result in a larger area available for newly created wetlands.) These assumptions were not included in the Proposed Plan because TRC did not calculate this wetland "recovery" acreage as part of the FS.

The best, most efficient truck routes will be determined in the design no matter which alternative is chosen. Designated truck routes already exist that can route trucks out of South Plainfield without using residential streets. As discussed elsewhere, EPA will further consider rail transportation during the remedial design.

2.2.3.3: The final question concerns disruption of the "existing mature swamp ecosystem." "Are there other factors not in the Proposed Plan that could be used to evaluate which alternative would be more likely to end in a healthy, functioning wetlands ecosystem"? This question was clarified in the oral comment from the member of the Commission. The Commission would like to "weigh the impacts on the community of the two main choices."

EPA Response: A response was given orally that generally the area of wetlands to be disturbed addressed through consolidating and capping or full excavation are equal. There are no other factors that were not discussed under the nine criteria in the Proposed Plan or ROD.

Subpart 2.3: Comments Received from Edison Wetlands Association, Excel Environmental Resources Inc., Princeton Hydro, LL, New Jersey Sierra Club, New Jersey Conservation Foundation, Raritan Riverkeeper NJ Employees for Environmental Responsibility and the Public

2.3.1 Comments were received in one letter (under EWA letterhead) from EWA, New Jersey Sierra Club, New Jersey Public Employees for Environmental Responsibility, New Jersey Conservation Foundation and Raritan Riverkeeper In addition, the TAG consultants (Excel Environmental and Princeton Hydro) prepared technical comments on the FS report. These comments were initially provided to the Agency on August 15, 2013, and then submitted again under cover of this letter.
Upon receiving the FS report comments from the TAG consultants, EPA provided them to TRC, the author of FS report. As part of TRC's Proposed Plan comment submittal, TRC provided a response to each of the TAG consultant's comments, and then asked EPA to respond to TRC's response. To avoid confusion, EPA is including its responses in a separate Attachment F to this Responsiveness Summary. In that attachment, Excel's comments and TRC's responses are included word-for-word, followed by EPA's position on the comment/response.

2.3.1.1: The commenters support the selected remedy of Alternative 6. The letter requests removal of not just PCB waste, but all solid waste from the Site; restoration of wetlands; and

increased flood storage. The letter also states that "future use must include public access, passive recreation trails, bird watching and other types of low-impact passive usage."

> **EPA Response:** The remedy will only address soil and debris that poses an unacceptable risk to human health and the environment, and as stated in the Proposed Plan. CERCLA does not regulate solid waste. Other soil and debris will remain on Site at the completion of the CERCLA action.
>
> The properties that comprise the Site are privately owned land. The commenters would need to pursue access for public use, as outlined in the comment, with the property owner.

2.3.2 Letter from EWA The letter contained three attachments from the TAG recipients: comments on the figures presented at the public meeting by the PRPs, comments on the FS and comments on the FS from the TAG subcontractors which are discussed below.

2.3.2.1: Comments were received from the TAG consultants that reviews the figures presented at the public meeting by the PRPs. The contractors found the figures to be lacking the following: full extent of EPA priority wetlands, the full lateral extent of the flood hazard area, ground surface topography and the final grade of the soil cap. Figure 4 depicts the CDE cap which is in an upland area, dissimilar to this Site. Based on these comments, there is insufficient information to determine how a cap would comply with regulations and resist erosion from flooding.

> **EPA Response:** EPA also made comments on these figures elsewhere in this Responsiveness Summary. The Agency has not had an opportunity to review these figures for accuracy, and does not have some of the background information that would be necessary for such a review. Understanding that some of the information that the comment expects on these figures would be developed in remedial design, EPA understands that these figures still leave areas of uncertainty with regard to regulatory compliance and landfill stability during flooding.
>
> Please refer to EPA's Response to Comment 2.1.3.9, which compares the CDE Site to the Woodbrook. These Sites have little in common.

2.3.2.2 The letter supports the preferred remedy and would like continued to stakeholder input into implementation of the selected remedy during the design phase of the Site.

> **EPA Response:** EPA will continue with its public outreach efforts for interested stakeholders after selecting the remedy for the Site.

2.3.3 Comments from the TAG Comments were submitted by the TAG on the Draft Final FS report that addressed EPA's earlier comments (to TRC) on the 2012 Draft FS.

> **EPA Response:** An earlier (2012) draft FS report was obtained from EPA under the Freedom of Information Act. EPA is not responding to comments on earlier drafts of the FS in this Responsiveness Summary. EPA comments on RI/FS documents, and TRC's responses, are in the administrative record.

2.3.3.1 The author believes that the FS is "imbalanced and improperly favorable" to the capping remedy and the document does not adequately acknowledge the engineering challenges posed by consolidating this type of material (refuse, soil, and debris) in this environment. Neither does the FS adequately explore the wetland and floodplain impacts from the cap.

> **EPA Response:** EPA accepted the RI/FS reports and based its selected remedy on its contents. Refer to EPA's response to Comment 2.1.3.4, which responds to a TRC comment that EPA did not rely upon TRC's nine criteria evaluation from the FS as the basis for its decision.

2.3.3.2: The author questions cost changes from volumes of material and the type of waste to be addressed between the Draft Final FS and previous FS submissions. It should be noted that the "Community and Stakeholders preferred remedy" is excavation and off-site disposal, now known as Alternative 6, which they refer to as a "permanent remedy."

> **EPA Response:** EPA is not responding to comments on earlier drafts of the FS in this Responsiveness Summary. FS reports will inevitably evolve and change after review and consultation between the Agency, NJDEP and the performing party.

2.3.3.3: The author states that rail should be utilized for transportation to disposal facilities and that the O&M costs are underestimated for the capping remedy.

> **EPA Response:** Use of rail received cursory consideration during the FS, and EPA has agreed to revisit this issue during the remedial design, in the wake of a number of comments about truck traffic. The rail line that runs by the Site does not appear to be a suitable location for load out facility. EPA will evaluate whether a nearby existing rail spur or yard might be converted to a load out facility. Thus, at minimum, short truck trips should be expected to remove wastes from the Site area.
>
> Regarding O&M costs for managing a cap, the FS cost estimates include the individual components that the Agency would expect to be included. The frequency or level of effort reflected in the cost estimates may not be exactly what the Agency would require;

however, even if the extent or frequency of O&M were increased (e.g., cap maintenance annually instead of every five years), the change in O&M cost, over the life of the project, would not substantially change the cost of alternatives that rely on capping/consolidation.

2.3.3.4: This letter also states the need for figures with wetlands depictions. The letter suggests that the party responsible for remediation should consider the creation of a wetland bank and requests verification of groundwater quality.

EPA Response: In response to this request (that was made near the beginning of the public comment period), TRC developed the Figures 1 and 3 that became part of their submittal and, as discussed previously, were displayed at the public meeting. This commenter also addressed those "new" figures in a separate comment, as did EPA.

The land owner (TETCO) may consider Site uses that include a wetland bank. That is a separate discussion from selecting a remedy for the Site, though EPA acknowledges that to be a plausible future Site use.

Please review the RI report for a detailed discussion of current groundwater quality. EPA has concluded that long-term groundwater monitoring is not needed for the remedy to be protective, but expects to collect post-remedy groundwater samples to assure that the soil remedy does not adversely affect the groundwater.

2.3.3.5: The letter makes the case that the debris throughout the Site that is not being addressed by CERCLA is “solid waste” based on N.J.A.C. definitions and should be remediated.

EPA Response: EPA is not commenting on this issue because CERCLA does not regulate solid waste. The remedy will address "CERCLA wastes" that pose an unacceptable risk based upon the PCBs. Other refuse, soil and debris will be left on Site (with contouring and cover as needed for stabilization, when near contaminated soil) as discussed in the ROD.

2.3.3.6: According the FS, specific design engineering elements of capping and consolidation were deferred to the remedial design phase. The author feels that some of these design aspects should have been covered in the FS, such as the ability of the cap to sustain flooding. The author also points out the geotechnical uncertainties of differential settlement of the waste below a cap and breaching of the cap by burrowing animals and uprooted trees. The author states that the FS did not determine actual elevations or the effect of elevation change to biota, wetlands and flooding.

EPA Response: While EPA did not select a capping and consolidation remedy, EPA is satisfied that sufficient information was developed within the FS for capping to be adequately evaluated. The consolidation and capping alternatives were not well-received by these reviewers and several other stakeholders, and more thorough description of the capping alternatives, including some of the details identified in this comment, may have resulted in a more favorable reception. The additional information the commenter is seeking, while ultimately necessary for construction of a disposal cell, could have been deferred to the remedial design, if a capping remedy were selected.

2.3.3.7: The author points out conflicting information in the FS about implementation time frames for the different alternatives.

EPA Response: Please note the time frames included in the remedial alternatives in the Proposed Plan, which combined the time frames of individual components (FS Alternatives 1c, 2d, 3e, etc.) into time frames for comprehensive Site-wide alternatives.

2.3.3.8: The author claims that a RCRA-style cap should not have been removed from consideration since it would minimize future migration to groundwater.

EPA Response: EPA does not agree with this comment as it pertains to groundwater migration. There is little evidence that PCB contaminants are currently migrating to groundwater, and EPA does not expect that consolidation and capping will create new groundwater migration conditions that do not currently exist. Post remediation groundwater monitoring is included in the selected remedy and would be a component of a consolidation and capping remedy, had EPA selected it. However, the purpose of this sampling is only to demonstrate that conditions have not changed as a result of the response action.

Please refer to EPA's 1990 PCB guidance for CERCLA Remedial Actions. It describes cap materials that might be appropriate for different levels of residual PCB contamination remaining on a site. The conditions found at the Woodbrook Site may not match scenarios assumed in this guidance document; still, EPA concluded that the average concentrations remaining on-site could probably meet the threshold for a soil cap. The FS did consider an impermeable cap (clay, or some type of liner); however, the FS also evaluated capping higher concentration PCBs on the Site. Because EPA did not carry the capping of principal threats into the Proposed Plan, the Proposed Plan assumed a permeable soil cap. Furthermore, as described in the Proposed Plan, EPA concluded that placing an impermeable cap could cause more cap stability problems than a simple soil cap, because the area is prone to flooding, with a fluctuating water table, and wastes would be above and below the water table. There are tradeoffs between protectiveness

and cap stability, but EPA believes that a soil cap is a reasonable assumption for the FS.

2.3.3.9: The author points out several unsubstantiated statements, inconsistencies and contradictions in the ranking of alternatives such as short-term effectiveness, implementability, and the overall ranking. The letter states that inputs from NJDEP are not included in the FS. There is also no acknowledgement of the community's concerns about the wetlands habitat.

> **EPA Response:** TRC responded to these specific FS comments, and EPA refers the reader to Attachment F. FS reports are typically silent with regard to community concerns. NJDEP comments were incorporated in the document.

2.3.3.10: The author states that "disposal under the Western Dump Cap" for Alternative 3e in the Draft Final FS is not shown as a separate alternative in Table 4.

> **EPA Response:** EPA acknowledges that not all the details of the many permutations of these sub-alternatives are fully knitted together in the FS report. The sub-alternatives from the FS were combined to formulate the Alternatives of the Proposed Plan. For the particular example, the primary consequence appears to be an underestimate of the cost of some of the consolidation/capping alternatives, but the cost difference is likely to be small relative to the overall cost of the site-wide remedial alternatives included in the Proposed Plan. Still the FS report has sufficient information for the reader to understand what was considered.

2.3.4: Comments from TAG Subcontractor The following comments are from the TAG subcontractor (Princeton Hydro) on the Draft Final FS.

2.3.4.1: The author states that the FS did not include the ARARs, New Jersey's Flood Hazard Area Protection Act and the Federal Emergency Management Agency's Executive Order 11988 Floodplain Management and that failure to evaluate permits can mislead the ranking of alternatives.

> **EPA Response:** EPA acknowledges that this is an underdeveloped component of the FS, understanding that it is difficult to know the actual components of a permit, or how to comply with the flood management principals in the Executive Order without first performing the remedial design. As with the response to Comment 2.3.3.6, while EPA believes there is enough information in the FS report to adequately assess consolidation and capping, this remedial alternative may have received a more favorable reception with some of the stakeholders had this aspect of the FS been more comprehensive.

2.3.4.2: The commenter states that the flood hazard area and related figures should have been included, including the floodway line and riparian zones on the Site, to show how they might interact with the capped areas. The author separately indicates that Alternative 6 would satisfy the goal of Executive Order 11988.

> **EPA Response:** In response to this comment, TRC produced Figures 1 and 3 (discussed previously), which appear to include most of the details requested by this commenter. However, as stated in EPA's response to Comment 2.1.3.1, EPA is not confident with the accuracy of the figures.

2.3.4.3: The author also commented on the lack of information about the wetlands, including wetland use as a resource, Site impacts to wetlands, figures with boundaries, and details of characterization.

> **EPA Response:** The commenter is referring to the wetlands delineation report, which is a separate submittal within the RI/FS documents. EPA acknowledges that there would have been value added in including some of this information "in one place" in the FS report; however, site-specific wetlands delineation was performed. A cursory comparison of delineation boundaries with Figures 1 and 3 indicate that the wetlands boundary lines on these figures approximately match with the delineation.

2.3.4.4: The comment letter included the following statement "The Site Material Reuse section of the FS indicates that debris areas can be used for cap material as well as flood storage compensation; however there is no indication where on the site this could occur or if the reuse of on-site material will increase the area of disturbance. It is important to keep in mind that the use of borrow areas for flood storage compensation can only occur in the flood fringe." In essence, the commenter believes that Executive Order 11988 substantially limits the areas where a cap can be placed on the Site.

> **EPA Response:** EPA does not believe that addressing this Executive Order in the FS is as detrimental as the commenter suggested in the selection of a consolidation and capping remedy, though it may make it more difficult to implement.

<u>Subpart 2.4: Comments received from other interested parties</u>

2.4.1: Comments from CDE Representative EPA received comments from a firm representing CDE Corporation expressing their belief that Alternative 4 should be the remedy, based on the nine criteria of the NCP. The commenter believes the reasons that EPA chose Alternative 6 over Alternative 4 can easily be addressed. They believe there are many widely accepted and readily available engineering techniques that can be developed during the RD phase. O&M and a biota

barrier can eliminate burrowing animal concern. Plantings and soil bioengineering can prevent slope erosion from flooding.

> **EPA Response:** Noted. These comments reflect comments received from TRC and the reader is referred EPA's responses to TRC's comment 2.1.1.1.

2.4.2: EPA received 32 letters from local residents with similar content, supporting Alternative 6. The letters request that EPA pursue responsible parties for cleanup of the PCBs. The letters also ask for solid waste removal, wetland restoration, and the increased flood storage capacity that would result.

> **EPA Response:** Please refer to the response to Comment 2.1.1.5 regarding enforcement/liability issues at this Site, and responses to Comments 2.3.1.1 and 2.3.3.5 regarding solid waste that will not be addressed by CERCLA.

2.4.3: Emails from Residents EPA received seven emailed comments without separate correspondence and two emails with separate letter correspondences.

2.4.3.1: An email was received recommending the selection of Alternative 3, in order to reduce truck traffic along the local roads.

> **EPA Response:** Although the FS concluded that treatment is a viable alternative at this Site, it was found to have significant implementability issues due to construction limitations in this type of wetland/floodplain environment. EPA agrees that there would be less truck traffic with Alternative 3; however, the cost and implementability concerns of Alternative 3 are not adequate tradeoffs to reducing truck traffic.

2.4.3.2: Two emails were received with general questions about ROD issue date, chosen consultants, coordinates of the Site and the rail line near the Site.

> **EPA Response:** These general questions were answered via email which can be found in Attachment D.

2.4.3.3: An email was received questioning if the funding for the project will be by the EPA or PRP. A similar email was received with an attached letter stating that the EPA should pursue CDE.

> **EPA Response:** EPA will consider its enforcement options after issuance of the ROD.

2.4.3.4: Two emails were received supporting Alternative 4 due to excessive cost to be incurred by the taxpayers.

EPA Response: Refer to EPA's responses to Comments 2.1.3.7 and 3.3.2.

Part 3 – Verbal Comments

At the August 26, 2013, Public Meeting, EPA staff presented to the public EPA's preferred remedial action alternative to address contaminated soil and debris due to past dumping at the Site. During the public comment portion of the evening, TRC made a lengthy statement that included several Site figures that had not been previously presented to the community. Several of these figures were developed in response to questions raised at a CAG meeting held August 14, 2013, just before the opening of the public comment period on August 16, 2013. EPA received these figures from TRC as electronic files and posted them on the Region's webpage devoted to the Site.

EWA and representatives of their TAG also made a lengthy statement that also included new figures of the Site which had also not previously been provided to EPA. These figures were also posted to the Region's webpage. These various exhibits (from TRC and the TAG consultant) were subsequently submitted as part of written comments received during the public comment period, and EPA addressed them in that section of this Responsiveness Summary.

3.1: United States Congressman Frank Pallone gave a verbal comment agreeing with the preferred alternative and asked for groundwater monitoring during five year reviews.

EPA Response: Because EPA does not expect groundwater to become contaminated by the Site after the remedy has been implemented, and groundwater is not a media of concern for this remedy, groundwater monitoring is not included as a requirement of future five-year reviews. Groundwater monitoring will be performed after the completion of the selected remedy, to demonstrate that the remedy itself has not caused groundwater contamination.

3.2: Assemblyman Patrick Diegnan from the New Jersey General Assembly commented in support of the EPA's preferred remedy.

EPA Response: Noted.

3.3: A representative of the PRP's consultant read a statement that generally reiterates a number of the comments in writing. In particular it is stated that CDE is responsible and as "the polluter"

should pay for the cleanup. However, a few additional remarks were made that are addressed below.

3.3.1: To date TETCO has paid for every penny of the work required by the EPA and has voluntarily spent millions of dollars to conduct the removal action and to complete all of the work culminating with this RI/FS. This is inconsistent with every principal of fundamental fairness including the EPA's own policy that Congressman Pallone referenced that the polluter must pay.

The polluter of the Woodbrook Road Site, Cornell-Dubilier Electronics, should pay for that cleanup. To the extent that Cornell cannot or will not pay after aggressive pursuit by EPA and Department of Justice public funds should be spent wisely. Wise spending starts with selection of a remedy that provides suitable protection using proven cost-effective means in a manner consistent with Superfund.

> **EPA Response:** Refer to EPA's responses to Comments 2.1.1.5 and 2.3.1.1. EPA will consider its enforcement options after issuance of the ROD.

3.3.2: It should also be noted that a portion of the Woodbrook Road Site is owned by South Plainfield. It's not unusual for EPA to attempt to require a landowner to pay for some portion of the cleanup.

EPA should advise the borough and the citizens of South Plainfield of the potential that South Plainfield will be asked to contribute and pay for a portion of the cleanup and inform the public what portion that may be.

> **EPA response:** The ROD indicates that an area of Site is on land owned by South Plainfield. It is a relatively small part of the Site, less than an acre in size. Landowners of Superfund sites have liability under the Superfund Law, and TETCO, the current landowner of most of the Site, has stepped up to perform the RI/FS because they have been identified by EPA as an owner PRP. To date, EPA has identified two PRPs, Cornell-Dubilier Electronics and TETCO. After the remedy is selected EPA will reconsider what enforcement steps may be appropriate for this Site.

3.3.3: While we understand that flooding is a serious concern being addressed by other government agencies Superfund cannot be used to eradicate flooding issues in the region or create wetlands.

In stark contrast EPA allowed PCBs to remain beneath a huge cap at levels of 500 at the Cornell site which is less than a mile away. The Proposed Plan is inferior to the removal and capping

option because it will require approximately 14,000 additional truck trips off the Woodbrook Road site through residential neighborhoods. These 14,000 truck trips will create additional greenhouse gas emissions, safety problems, increased traffic volumes, noise in a relatively quiet portion of South Plainfield and increases the risk of an accident and spill of PCB-contaminated soil on local roadways. Additionally, this type of remedy does not create any greater permanence. It simply transfers the pollution to an off-site landfill. And it simply doesn't make sense when you compare the two sites to have a $20 million more expensive remedy and all of those truck trips. If Cornell isn't held responsible for the cleanup or if they simply refuse not to pay it's likely that the public money will be required to clean up some or all – Is it worth an extra $20 million to truck waste through local streets to a landfill in order to gain an extra five acres out of a total of seven when capping is allowed under both state and Federal requirements.

EPA is potentially selecting a much more costly remedy in the Proposed Plan without a commensurate environment benefit would be inconsistent with Superfund. EPA has done so without rationale at the potential financial peril of South Plainfield and other local taxpayers.

EPA must select the removal and capping alternative. The public once it fully considers the impacts, benefits and costs should also support that alternative.

> **EPA Response:** These comments were addressed in previous EPA responses: see EPA's response to Comment 2.1.3.9 for a comparison to the CDE Site; see EPA's response to Comment 2.1.3.3 in response to the truck trips; and for the question of permanence and remedy selection, see response to Comment 2.1.3.4. Once again, EPA will consider its enforcement options after issuance of the ROD.

3.4: A member of EWA commented on the negative impact of truck traffic on the local community, specifically their land located near the Site and the use of train. He also discussed support for increased flood storage and wetland restoration.

> **EPA Response:** Refer to response to Comment 2.1.3.3. Please note that increased flood storage and wetland creation would be a potential outcome of Alternatives 4 or 6.

3.5: Representatives of the TAG consultant stated that comparing the Site to the CDE Site is not appropriate due to different settings. They discussed capping in this environment is not appropriate due to shallow groundwater, animal breaching issues, erosion, wetlands and flood zone which they demonstrated in figures. The FS did not address these issues and there were inconsistencies in the FS's ranking process. They stated that the floodway line is not a regulatory line and can change.

EPA response: The FS was approved by EPA and is sufficient for selecting the remedy. Refer to EPA's responses to Comments under 2.3.3 and 2.3.4 and the Attachment F for TRC and EPA's response to comments on the FS.

3.6: A resident agreed that placing a cap in a floodplain is not a good idea due to increased flooding in the area. He stated that there is evidence in NJ that wetland landfill caps fail.

EPA Response: Refer to response to Comment 3.4, regarding flood storage.

3.7: A resident supported the remedy, stating the difference between this Site and CDE and wants CDE to pay for cleanup. The resident also recommended using rail as opposed to trucks.

EPA Response: EPA will consider the use of rail in the remedial design. Refer to the response to Comment 2.1.3.3.

3.8: A resident asked about remediation of the land after the remedial action is completed, particularly if any holes created from excavation will be backfilled.

EPA Response: Under the Superfund Program, EPA is responsible for addressing those constituents at a site that pose a human health or environmental risk, in this case, the PCB contamination. There may be other government entities or conservation organizations that may find the property attractive as a mitigation project, after the completion of the remedy; however, the landowner ultimately controls future plans for the property. Whereas "restoration" would typically entail returning the Site to close to its original condition, in this case the post-remedy topographic profile of the Site is expected to change. For example, for alternatives that either excavate soil and debris for off-site disposal or that consolidate soil and debris into a smaller surficial area on the Site, EPA expects that the remediated areas would not be backfilled to the current grades but would be restored to a topography closer to the natural wetland contours of the area that existed prior the dumping. Refer to the Description of Alternatives section of the ROD.

3.9: A resident asked if the Borough of South Plainfield would be responsible for some of the cost.

EPA Response: Refer to the response to Comment 3.3.2.

3.10: A resident asked what affect the cap would that have on flooding in the area around Kenneth Avenue.

EPA Response: With either capping or full excavation, the flood storage would be expected to improve, though the changes would be marginal relative to the flooding problems commonly found within the Bound Brook corridor. The solutions for flooding problems are outside EPA's jurisdiction.

3.11: Several members of the TRC team spoke personally about what they felt was the unprofessional tone of some of the criticisms directed at TRC, who was responsible for preparing the RI/FS.

EPA Response: EPA stated at the meeting that it accepts the RI/FS reports as satisfying the requirements of the administrative order and performed in accordance with appropriate statutes, regulation and guidance.

3.12: A member of EWA expressed interest in using rail and wants EPA to address flooding issues. Another member of EWA stated that the area (the Dismal Swamp in general) is a valuable educational tool for local schools to learn about the environment.

EPA Response: Refer to the response to Comment 3.4.

3.13: A resident asked how many acres would be required to create the cap and how compaction would affect the cap.

EPA Response: EPA assumes that the cap would cover approximately five acres. Some compaction of the wastes would be required as part of the consolidation and landfill construction process.

3.14: A member of EWA asked if the cap may be damaged.

EPA Response: Alternatives that include capping need to be maintained in perpetuity such that if there were some damage to it over time, EPA or a respondent to an enforcement action in the future would need to be able to maintain and repair it.

Appendix V

RESPONSIVENESS SUMMARY ATTACHMENTS

Due to size restraints the following can be found in a separate document

ATTACHMENTS TO RESPONSIVENESS SUMMARY

ATTACHMENT A - PROPOSED PLAN FOR THE WOODBROOK ROAD DUMP SUPERFUND SITE
ATTACHMENT B - PUBLIC NOTICES
ATTACHMENT C - ATTENDANCE SHEET FROM PUBLIC MEETING and TRANSCRIPT FROM THE PUBLIC MEETING
ATTACHMENT D - COPIES OF PUBLIC COMMENTS RECEIVED
ATTACHMENT E - NATIONAL REMEDY REVIEW BOARD MEMORANDUM, REGIONAL RESPONSE, AND ASSOCIATED STAKEHOLDER POSITION PAPERS
ATTACHMENT F - TRC's APPENDIX II OF "PUBLIC COMMENTS ON THE PROPOSED REMEDIAL PLAN FOR THE WOODBROOK ROAD DUMP SUPERFUND SITE, SOUTH PLAINFIELD, NEW JERSEY" WITH EPA RESPONSES