DECISION DOCUMENT

Route 561 Dump Site

Operable Unit 2

Gibbsboro, New Jersey

U.S. Environmental Protection Agency
Region II
September 2016

393183

DECLARATION STATEMENT

DECISION DOCUMENT

SITE NAME AND LOCATION

Route 561 Dump Site (NJ0000453514), Borough of Gibbsboro, Camden County, New Jersey.
Operable Unit 2 – Soil, Sediment and Surface Water

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected response to address contaminated soil, sediment and surface water at the Route 561 Dump Site, in the Borough of Gibbsboro, Camden County, New Jersey. The selected remedy was chosen in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, (CERCLA) and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This decision is based on the Administrative Record established for this Site.

The State of New Jersey concurs, in part, with the preferred alternatives.

ASSESSMENT OF THE SITE

The response action selected in the decision document is necessary to protect the public health or welfare or the environment from actual or threatened releases of hazardous substances into the environment.

DESCRIPTION OF THE SELECTED RESPONSE

The response action described in this decision document addresses the soil, sediment and surface water contamination at the Site, which are contaminated with lead and arsenic. Additional actions may be necessary in the future to investigate the extent of groundwater contamination and potential remediation of groundwater contamination at the Site.

The major components of the selected response for the soil include the following:

- Removal of the majority of the contaminated soil throughout the Site;
- Off-site disposal of the contaminated soil at facilities licensed to handle the waste;
- Backfilling areas where soil is removed with clean soil and revegetating these areas;
- In limited areas where soil remains contaminated below the excavation depth, capping with an asphalt or soil cap to isolate and eliminate the spread of contamination; and
- Institutional Controls, such as deed notices, as necessary on the commercial properties where some contaminated soil will be capped.

The major components of the selected response for the sediment includes the following:

- Removal of the contaminated sediment throughout the Site; and
- Off-site disposal of the contaminated sediment at facilities licensed to handle the waste.

The scope of this response action includes sediment in White Sand Branch to the fence surrounding a portion of a nearby site called the United States Avenue Burn Superfund Site. Additional sampling of sediment between Berlin Road and the United States Avenue Burn Site is also required under this response action, to determine if additional sediment removal is also required.

EPA expects that removal of contaminated sediment, combined with soil removal and/or capping, will result in a decrease of surface water contaminants. Quarterly surface water monitoring will be included as part of the response action to assess any changes in contaminant conditions over time. If monitoring indicates that contamination levels have not decreased to below standards, EPA may require an action in the future.

DECLARATION OF STATUTORY DETERMINATIONS

Part 1: Statutory Requirements

The selected response is protective of human health and the environment, complies with Federal and State requirements that are applicable or relevant and appropriate to the response action, is cost effective and utilizes permanent solutions and treatment technologies to the maximum extent practicable.

Part 2: Statutory Preference for Treatment

The selected response does not meet the statutory preference for the use of remedies that involve treatment as a principal element because the contamination will be removed and disposed off-site. Neither the selected response nor any of the alternative remedies involved treatment due to technical infeasibility in implementing treatment methods for the contaminants of concern at this Site.

Part 3: Five-Year Review Requirements

Because this response will result in contaminants remaining in the soil on-site above levels that allow for unlimited use and unrestricted exposure, a statutory review will be conducted within five years of initiation of response implementation to ensure that the response is, or will be, protective of human health and the environment.

DECISION DOCUMENT DATA CERTIFICATION CHECKLIST

The following information is included in the Decision Summary for this decision document. Additional information can be found in the Administrative Record file for this 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.

- Cleanup levels established for contaminants of concern and the basis for these levels can be found in the "Response Action Objectives" section.

- Current and reasonably anticipated future land use assumptions used in the baseline risk assessment and decision document can be 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, discount rate, and the number of years over which the response cost estimates are projected can be found in the "Description of Alternatives" section.

- Key factors that led to selecting the response may be found in the "Comparative Analysis of Alternatives" and "Statutory Determinations" sections.

Walter E. Mugdan, Director
Emergency & Remedial Response Division
EPA-Region II

September 26, 2016
Date

DECISION DOCUMENT

DECISION SUMMARY

Route 561 Dump Site
Gibbsboro
New Jersey

U.S. Environmental Protection Agency
Region II
New York, New York
September 2016

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APPENDICES

SITE NAME, LOCATION AND DESCRIPTION

The Route 561 Dump Site (Site or Dump Site), EPA ID #NJ0000453514, is one of three sites which collectively make up what is commonly referred to as the "Sherwin-Williams sites." Located in areas of Gibbsboro and Voorhees, New Jersey, the Sherwin-Williams sites are the *Sherwin-Williams/Hilliard's Creek Superfund Site* located in both Gibbsboro and Voorhees, the *Route 561 Dump Site* in Gibbsboro, and the *United States Avenue Burn Superfund Site* (Burn Site) in Gibbsboro (Figure 1). The Sherwin-Williams sites include source areas from which contaminated soil and sediment have migrated, predominately through natural processes, to downgradient areas within Gibbsboro and Voorhees.

Sherwin-Williams/Hilliards Creek Superfund Site: The Sherwin-Williams/Hilliards Creek Superfund Site includes the Former Manufacturing Plant area, Hilliards Creek and Kirkwood Lake. The Former Manufacturing Plant area is approximately 20 acres in size and is comprised of commercial structures, undeveloped land and the southern portion of Silver Lake. The Former Manufacturing Plant area extends from the south shore of Silver Lake in Gibbsboro and straddles the headwaters of Hilliards Creek. Hilliards Creek is formed by the outflow from Silver Lake. The outflow enters a culvert beneath a parking lot at the Former Manufacturing Plant and resurfaces on the south side of Foster Avenue, Gibbsboro. From this point, Hilliards Creek flows in a southerly direction through the Former Manufacturing Plant area and continues downstream through residential and undeveloped areas. At approximately one mile from its origin, Hilliards Creek empties into Kirkwood Lake. Kirkwood Lake is approximately 25 acres and is located in Voorhees, with residential properties lining its northern shore.

Route 561 Dump Site: The Dump Site is located approximately 700 feet to the southeast of the Former Manufacturing Plant area and is approximately 19 acres. It includes retail businesses, a portion of a residential area, wooded vacant lots and a small creek. A 2.9 acre fenced portion of the Dump Site is located at the base of an earthen dam that forms Clement Lake. The Route 561 Dump Site includes portions of White Sand Branch, a small creek which originates at the Clement Lake dam and flows in a southwest direction for approximately 1,650 feet where it enters the fenced portion of the Burn Site (Figure 2).

Burn Site: The fenced portion of the Burn Site and its associated contamination is approximately 13 acres in size and encloses the remaining 400 feet of White Sand Branch. A 500-foot portion of a small creek, Honey Run, enters the Burn Site where it joins White Sand Branch before it passes beneath United States Avenue and enters Bridgewood Lake in Gibbsboro. The six-acre Bridgewood Lake empties through a culvert beneath Clementon Road and forms a 400-foot long tributary that joins Hilliards Creek at a point approximately 1,000 feet downstream from the Former Manufacturing Plant area.

The U.S. Environmental Protection Agency (EPA) has been designated as the lead agency for cleanup of the Site, with the NJDEP functioning in a support role. Recent investigations at the Site have been performed by The Sherwin-Williams Company (Sherwin-Williams) under an Administrative Order on Consent (AOC) issued in 1999, with EPA's oversight.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

Site History

The former paint and varnish manufacturing plant property in Gibbsboro, New Jersey, was developed in the early 1800s as a saw mill, and later as a grain mill. In 1851, John Lucas & Co., Inc. (Lucas), purchased the property and converted the grain mill into a paint and varnish manufacturing facility that produced oil-based paints, varnishes and lacquers. Sherwin-Williams purchased Lucas in the early 1930s and expanded operations at the facility. Historic features at the Former Manufacturing Plant included wastewater lagoons, above-ground storage tanks, a railroad line and spur, drum storage areas, and numerous production and warehouse buildings. Industrial waste from the facility was discarded in the Dump Site. The facility was closed in 1977 and was sold to a developer in 1981.

In 1978, after plant operations closed, NJDEP directed Sherwin-Williams to excavate and properly dispose of the waste material remaining in the lagoons. During the 1980s, NJDEP entered into several administrative orders with Sherwin-Williams to oversee the characterization of contaminated groundwater and a petroleum-like seep in the Former Manufacturing Plant area.

During the 1990s, NJDEP discovered two additional source areas, the Route 561 Dump Site and the Burn Site. Contamination in both areas is attributable to historic dumping activities associated with the Former Manufacturing Plant. In the mid-1990s, enforcement responsibilities for the Dump Site and the Burn Site were transferred from NJDEP to EPA.

Pre-Response Investigation Activities at the Dump Site

The investigations at the Dump Site were conducted in phases. The first sampling of soil, sediment, surface water and groundwater was conducted by NJDEP in 1994. The samples were analyzed for metals, cyanide, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), pesticides, and polychlorinated biphenyls (PCBs). In 1995, EPA collected samples and erected a chain link fence, creating the Dump Site Fenced Area. Subsequent sampling by EPA took place in 1997.

In November 1997, EPA entered into an AOC with Sherwin-Williams to conduct a Removal Action. Under the Removal Action, areas of highly contaminated soil within the Dump Site Fenced Area were consolidated into three areas which were covered with impermeable material and revegetated. In addition, a silt fence and a new perimeter fence were installed. Sherwin-Williams also posted warning signs and monitored the property.

In 1998, EPA proposed the Dump Site to the National Priorities List (NPL), but elected not to finalize the NPL listing as long as work proceeds in accordance with the AOC. EPA does, however, maintain the Site as “proposed” so that it can be placed on the NPL if conditions change. Also in 1998, EPA sampled the upper portions of Hilliards Creek and several residential properties and detected contaminants (mainly lead and arsenic). The contaminants were similar to those detected at the Dump Site and the Burn Site. As a result, a portion of Hilliards Creek was fenced off as portions of the Dump Site and the Burn Site had been.

EPA added the Burn Site to the NPL in 1999. Also in 1999, EPA entered into two additional AOCs with Sherwin-Williams. Under the first AOC, Sherwin-Williams conducted additional sampling of Hilliards Creek and Kirkwood Lake to further characterize the extent of contamination. This sampling, which concluded in 2003, included residential properties along Hilliards Creek and Kirkwood Lake.

The second AOC, signed in September 1999, required Sherwin-Williams to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the Route 561 Dump Site, the Burn Site and Hilliards Creek. EPA added the Sherwin-Williams/Hilliards Creek Site, which includes the Former Manufacturing Plant area, Hilliards Creek and Kirkwood Lake, to the NPL in 2008.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

EPA released the RI/ FS reports and the Proposed Plan for this response action at the Site to the public for comment on June 13, 2016. EPA made these documents available to the public in the administrative record file maintained at the Gibbsboro Borough Hall/Library in Gibbsboro, NJ; the M. Allan Vogelson Regional Branch Library-Voorhees in Voorhees, NJ; the EPA Region II Records Center located at 290 Broadway, New York, NY; and online at www.epa.gov/superfund/route-561-dump. The notice of availability for these documents was published in the Courier-Post on June 13, 2016. A 60-day public comment period lasted from June 13 through August 11, 2016 after EPA granted the Borough of Gibbsboro's request for a 30-day extension of the public comment period. The extension was announced in the Courier-Post on July 15, 2016.

In addition, on June 21, 2016, EPA held a public meeting at the Gibbsboro Senior Center, 250 Berlin Road, Gibbsboro, New Jersey, to discuss the findings of the RI/FS and to present EPA's Proposed Plan to the community. At this meeting, EPA representatives answered questions about the response alternatives developed as part of the FS.

EPA addresses comments it received at the public meeting and during the public comment period in the Responsiveness Summary, which can be found in Appendix V.

SCOPE AND ROLE OF OPERABLE UNIT OR RESPONSE ACTION

Due to the complexity of multiple sites and varying land uses, EPA is addressing the cleanup of the Sherwin-Williams sites in several parts, sometimes dividing work into phases called operable units. Operable Unit 1 (OU1) for all of the Sherwin-Williams sites consists of the residential properties that are to be remediated in accordance with the Record of Decision (ROD) for OU1 which was signed in September 2015.

This decision document addresses soil, sediment and surface water at the Route 561 Dump Site as OU2 for the Dump Site. Future decision documents or RODs will address contamination at the Former Manufacturing Plant, surface water at the Sherwin-Williams/Hilliards Creek Superfund Site, and the groundwater beneath all three Sherwin-Williams sites. A response or

remedy for the Dump Site groundwater will be selected after, and based on the results of, the implementation of this selected response for the Dump Site.

SITE CHARACTERISTICS

Physical Setting

The Dump Site is approximately 19 acres and is composed of commercial, residential and undeveloped properties, wetlands and a small creek. It has been subdivided into areas based on the current use and zoning. These subdivisions are described below and shown on Figure 3.

Dump Site Fenced Area: This is an approximately 2.9-acre fenced area located along the east side of Route 561 (South Lakeview Drive) near the intersection with Kresson Road. The northern portion is characterized by a steep slope and the southern portion contains a wetland area. Under a 1997 removal order, Sherwin-Williams consolidated and capped waste in the northern portion of the Dump Site Fenced Area. The fenced area is inspected at least monthly and maintenance of the fence takes place as needed.

There are two residential properties located adjacent to the Dump Site Fenced Area. A portion of one residential property is located within the Dump Site Fenced Area.

Northern Commercial Area: This area abuts the north side of the Dump Site Fenced Area. There is one building in the Northern Commercial Area that houses a number of retail businesses. A paved parking lot surrounds much of the building, and grassy areas form a buffer between Route 561 and the Northern Commercial Area.

Vacant Lot and Vacant Lot Developed Area: These areas are on the west side of Route 561 across from the Northern Commercial Area and the Dump Site Fenced Area. There is an office complex and commercial buildings in the northeast portion of the Vacant Lot Developed Area, near the corner of Route 561 and Marlton Avenue. The Vacant Lot Developed Area is zoned commercial. In contrast, the Vacant Lot is undeveloped and is characterized by grassy and wooded areas and is zoned residential.

White Sand Branch: White Sand Branch is a small creek that originates at the base of the Clement Lake dam and flows southwest. White Sand Branch and its flood plain, from Clement Lake to the fence line of the Burn Site, are part of the Dump Site.

Summary of the Remedial Investigation

The RI serves as the mechanism for collecting data to characterize site conditions, determine the nature of the waste, and assess risk to human health and the environment. RI sampling of soil, sediment and surface water by Sherwin-Williams, under EPA oversight, began in 2005 and

continued to 2010. Additional groundwater sampling was conducted in 2013 and supplemental sampling for the Baseline Ecological Risk Assessment took place in 2014.

Sherwin-Williams, under EPA oversight, screened the results of sample analyses to determine if the levels of contamination posed a potential harm to human health and/or the environment. This was done by comparing the measured values of contaminants to the following screening standards that are protective of human health or ecological receptors.

Depending on the zoning and land use, the soil sample analytical results were compared to NJDEP's Residential Direct Contact Soil Remediation Standards also referred to hereafter as "residential cleanup goals," or the Non-residential Direct Contact Soil Remediation Standards, also referred to hereafter as "non-residential cleanup goals". The sediment sample analytical results were compared to the lowest effect levels for ecological receptors and surface water results were compared to the New Jersey Surface Water Quality Standards (NJSWQS) for Fresh Water.

In addition, a human health risk assessment and an ecological risk assessment were conducted to determine if levels of contaminants exceeded EPA's acceptable risk range. Explanations of the results of the human health and ecological risk assessments are provided in separate sections later in this document.

The results of the RI showed that lead and arsenic are the major contaminants of concern in all media tested throughout the Dump Site including soil, sediment, and surface water. Other contaminants were also found and they were generally co-located with lead and arsenic.

Soil:

Sherwin-Williams, under EPA oversight, sampled soil at over 200 locations from the ground surface to depths of approximately 34 feet. Lead and arsenic were found most frequently and at the greatest concentrations above the NJDEP Residential Direct Contact Soil Remediation Standards. Other constituents that were found in the soil above the standards include antimony, thallium, cadmium, PAHs and PCBs. These other constituents were found less frequently and are co-located with lead and arsenic. Based on the sampling results and comparison of that data to the NJDEP Residential Direct Contact Soil Remediation Standards, lead and arsenic were identified as the main contaminants of concern (COCs) in the soil.

The most highly contaminated soil was found in the southern portion of the Northern Commercial Area adjacent to the Dump Site Fenced Area, throughout the Dump Site Fenced Area and in the portions of the Vacant Lot Developed Area nearest to Route 561. Although no sampling was done under Route 561, contamination under Route 561is likely since soil contamination was found in samples on both sides of Route 561between the Northern Commercial Area and the Developed Vacant Lot. Contamination was also found in the soil adjoining White Sand Branch outside the Dump Site Fenced Area.

The sampling shows that contamination in soil is relatively shallow, generally found less than 5 feet deep. The lead concentration in soil ranges from less than the residential standard of 400 milligrams/kilogram (mg/kg) to over 80,000 mg/kg in the Northern Commercial Area and over

200,000 mg/kg in the Dump Site Fenced Area. The arsenic concentration in soil ranges from less than the residential standard of 19 mg/kg to more than 14,000 mg/kg in the Dump Site Fenced Area.

Sediment:

Sherwin-Williams, under EPA oversight, sampled sediment at more than 20 locations in White Sand Branch from its source at the base of Clement Lake through the Dump Site Fenced Area to the fence that marks the boundary of the Burn Site.

Lead and arsenic were found most frequently and at the greatest concentrations above the NJDEP lowest effect levels for ecological receptors of 31 mg/kg for lead and 6 mg/kg for arsenic. Contaminants in sediment that exceed the lowest effect level criteria generally require further evaluation. Other constituents found above this criterion were cadmium, chromium, copper, cyanide, mercury and zinc, PAHs, pesticides and PCBs. These other constituents were found less frequently and are co-located with lead and arsenic.

Lead and arsenic exceedances were found in sediment throughout the Dump Site Fenced Area and White Sand Branch. The lead concentration varies from below the lowest effect level for ecological receptors of 31 mg/kg to over 41,000 mg/kg. The arsenic levels vary from below the lowest effects level for ecological receptors of 6 mg/kg to 6,000 mg/kg. For both lead and arsenic, the highest values were found in the Dump Site Fenced Area.

Surface Water:

Sherwin-Williams, under EPA oversight, collected surface water samples from eleven locations in the Dump Site Fenced Area and in White Sand Branch from the southern portion of the Vacant Lot to the fence boundary with the United States Avenue Burn Site. Analyses of the surface water showed exceedances of the NJSWQS for Fresh Water for aluminum, iron, cyanide, arsenic, lead, cadmium, mercury and nickel. As with the other media, lead and arsenic are the main COCs.

The concentrations of metals in surface water were compared to the NJSWQS for Fresh Water of 5.4 microgram/Liter (µg/L) for lead and 150 µg/L for arsenic. The total lead and total arsenic values varied from below the NJSWQS for Fresh Water to over 100,000 µg/L for total lead and over 20,000 µg/L for total arsenic. The highest concentrations in surface water were found in the section of White Sand Branch located in the Dump Site Fenced Area.

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

The Site is located in an area of Gibbsboro that is currently zoned as “Commercial Zone, Highway Business” in a corridor along Route 561 and as “Residential” outside of the corridor (Figure 3). Wetlands, such as the area within the Dump Site Fenced Area and along White Sand Branch, are located within areas zoned as both commercial and residential.

There are two residential properties located adjacent to the Dump Site Fenced Area. A portion of one residential property is located within the Dump Site Fenced Area.

SUMMARY OF SITE RISKS

As part of the RI and FS, a baseline risk assessment consisting of a human health risk assessment (HHRA) and a baseline ecological risk assessment (BERA) was conducted to estimate current and future effects of contaminants on human health and the environment. A baseline risk assessment is an analysis of the potential adverse human health and ecological effects caused by hazardous substance exposure in the absence of any actions to control or mitigate these exposures under current and future Site uses.

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 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 (e.g., ingesting contaminated well-water) 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 which exceed acceptable levels, defined by the NCP as an excess lifetime cancer risk greater than 1×10^{-6} to 1×10^{-4} or a noncancer Hazard Index (HI) greater than 1; contaminants at these concentrations are considered contaminants of concern (COCs) 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

In this step, the contaminants of potential concern (COPCs) in each medium were identified based on such factors as toxicity, frequency of detection, fate and transport of the contaminants in the environment, concentration, mobility, persistence and bioaccumulation.

The HHRA characterized the risk to human health from exposure to soil, sediment, surface water and groundwater at the Dump Site. COPCs were determined for each exposure area and medium by comparing the available analytical data to appropriate risked-based screening criteria. Analytical data collected to determine the nature and extent of contamination at the Site

indicated the presence of metals, polycyclic aromatic hydrocarbons (PAHs) polychlorinated biphenyls (PCBs), and pesticides in various media above screening criteria.

Only the COCs, or these chemicals requiring a response, are listed in Appendix II-B, Table 1. Lead was also identified as a COC; the relevant subset of information for lead is summarized in Table 7 of Appendix II-B. However, a full list of all COPCs identified in the risk assessment (entitled "Human Health Risk Assessment for the Route 561 Dump Site" dated July 2015), is available in the administrative record for the Site.

Exposure Assessment

Consistent with Superfund policy and guidance, the HHRA is a baseline human health risk 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 a site.

For purposes of the HHRA, the Dump Site was divided into the following seven exposure areas: the Dump Site Fenced Area (DFA), Eastern Dump Site Area (ESD), Northern Commercial Area (NCA), Western Commercial Area (WCA), Vacant Lot (VL), White Sand Branch-East (WSB-E), and White Sand Branch-West (WSB-W). The exposure areas are geographic designations created for the risk assessment in order to define areas with similar anticipated current and future land use and/or similar levels of contamination. Since the eastern portion of White Sand Branch (i.e., WSB-E) is located within the VL, exposure to sediment and surface water in WSB-E were evaluated as part of the VL.

The varying exposure areas within the Dump Site are currently zoned commercial, residential, conservation or mixed commercial/residential. The HHRA evaluated potential risks to populations associated with both current and potential future land uses at each exposure area.

Considering current zoning and potential future land use in each exposure area, the following exposure populations and pathways were evaluated under the current/future land use scenario:

- Construction worker and utility worker in the DFA, EDS, NCA, WCA and VL: incidental ingestion, dermal contact and inhalation of surface and subsurface soils and dermal contact with shallow groundwater for adults.
- Outdoor worker in the DFA, NCA, WCA and VL: incidental ingestion, dermal contact and inhalation of surface soils by adults.
- Recreator in the VL/WSB-E and WSB-W: incidental ingestion, dermal contact and inhalation of surface soils, incidental ingestion and dermal contact with sediment as well as dermal contact to surface water by adolescents and adults.

The future land use scenario included the following populations and exposure pathways:

- Resident in the EDS, VL/WSB-E and WSB-W: incidental ingestion, dermal contact and inhalation of surface soils, ingestion, dermal contact and inhalation of vapors potentially emitted from sitewide groundwater, incidental ingestion and dermal contact with sediment and dermal contact with surface water by a child and adult
- Recreator in the DFA and EDS: incidental ingestion, dermal contact and inhalation of surface soils, incidental ingestion and dermal contact with sediment as well as dermal contact to surface water by adolescents and adults

A summary of all the exposure pathways considered in the HHRA can be found in Table 2 (Appendix II-B). Typically, exposures are evaluated using a statistical estimate of the exposure point concentration (EPC), which is usually an upper-bound estimate of the average concentration for each contaminant, but in some cases may be the maximum detected concentration. For lead exposures, the arithmetic mean of all samples collected from the appropriate soil interval was used as the EPC. A summary of the exposure point concentrations for COCs other than lead in each medium can be found in Appendix II-B, Table 1; lead EPCs are summarized in Table 7. A comprehensive list of exposure point concentrations for all COPCs can be found in Appendix C (table 3 series) of the HHRA.

Toxicity Assessment

In this step, the types of adverse health effects associated with contaminant exposures and the relationship between magnitude of exposure and severity of adverse health effects were determined. Potential health effects are contaminant-specific and may include the risk of developing cancer over a lifetime or other noncancer health effects, such as changes in the normal functions of organs within the body (e.g., changes in the effectiveness of the immune system). Some contaminants are capable of causing both cancer and noncancer health effects.

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.

Toxicity data for the HHRA were provided by the Integrated Risk Information System (IRIS) database, the Provisional Peer Reviewed Toxicity Database (PPRTV), or another source that is identified as an appropriate reference for toxicity values consistent with EPA guidance (http://www.epa.gov/oswer/riskassessment/pdf/tier3-toxicityvalue-whitepaper.pdf). This information is presented in Appendix II-B Table 3 (Noncancer Toxicity Data Summary) and Table 4 (Cancer Toxicity Data Summary). Additional toxicity information for all COPCs is presented in the HHRA for the Site.

Risk Characterization

This step summarized and combined outputs of the exposure and toxicity assessments to provide a quantitative assessment of site risks. Exposures were evaluated based on the potential risk of

developing cancer and the potential for noncancer health hazards. Exposure from lead was evaluated using blood lead modeling and is discussed in more detail later in this section.

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) which are thought to be safe over a lifetime of exposure. The key concept for a noncancer HI is that a "threshold level" (measured as an HI of less than or equal to 1) exists at which noncancer health effects are not expected to occur. The estimated intake of chemicals identified in environmental media (e.g., the amount of a chemical ingested from contaminated soil) 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 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, 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 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 Table 5 of Appendix II-B.

It can be seen in Table 5 that the noncancer hazard estimates exceeded EPA's threshold value of 1 for the future resident in EDS, VL/WSB-E and WSB-W with HIs ranging from 42 to 77. The majority of the noncarcinogenic hazard for these populations were primarily attributable to metals (arsenic, cobalt, cyanide, iron, manganese and thallium) in sitewide groundwater, arsenic and/or cyanide in surface soils and arsenic in sediment on WSB-E. An adolescent recreator in the DFA had a HI of 12 which was driven by arsenic and cyanide in surface soil and arsenic in

sediment and surface water. The adult recreator HI of 8 was predominantly based on exposure to arsenic in surface soil and sediment. An outdoor worker at the DFA exposed to arsenic in soil contributed the majority of the total noncancer HI of 6. Finally, a construction worker's HI in the DFA, NCA, WCA and VL ranged from 2 to 13. Exposure to arsenic in soil was the primary contributor to the hazard exceedance for the construction worker.

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 under the conditions described in the Exposure Assessment, 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 unitless 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 Exposure Assessment. Current Superfund guidance identify the range for determining whether a remedial action is necessary as an individual lifetime excess cancer risk of 10^{-4} to 10^{-6} (corresponding to a one-in-ten-thousand to a one-in-a-million excess cancer risk), with 10^{-6} being the point of departure.

As summarized in Table 6 of Appendix II-B, the estimated cancer risk for the future resident at the EDS, VL/WSB-E and WSB-W exceed EPA's target risk range of 1×10^{-6} to 1×10^{-4}. Cancer risk exceedances ranged from 1×10^{-3} to 2×10^{-3} as a result of exposure to arsenic in: sitewide groundwater, surface soil on the VL and surface soil on the WSB-W. For an adult recreator in the DFA, exposure to arsenic in surface soil, sediment and surface water was found to exceed the 10^{-4} risk range. The cancer risk estimate for the adolescent recreator on the DFA of 6×10^{-4} was predominantly due to arsenic in sediment and surface soil. An adult recreator exposed to arsenic-contaminated surface soil on the VL had an estimated cancer risk of 2×10^{-4}. Lastly, an outdoor worker's carcinogenic risk to arsenic contaminated soils on the DFA and VL was equal to 7×10^{-4} and 2×10^{-4}, respectively.

Lead was detected in site media at elevated concentrations. Because there are no published quantitative toxicity values for lead it is not possible to evaluate risks from lead exposure using the same methodology as for the other COCs. However, since the toxicokinetics (the absorption, distribution, metabolism, an excretion of toxins in the body) of lead are well understood, lead is evaluated based on blood lead concentrations. In lieu of evaluating risk using typical intake calculations and toxicity criteria, EPA developed models which are used to predict blood lead concentration and the probability of a child's blood lead level concentration (BLL) exceeding 10

micrograms per deciliter (µg/dL) based on a given multimedia exposure scenario. EPA's risk reduction goal for lead contaminated sites is to limit the probability of a typical child's (or that of a group of similarly exposed individual's) blood lead concentration exceeding 10µg/dL to 5% or less. In the Dump Site HHRA, lead risks for child residents were evaluated using EPA's Integrated Exposure Uptake Biokinetic (IEUBK) model; the Adult Lead Methodology (ALM) model was used for all other adolescent and adult receptors.

As summarized in Table 7 of Appendix II-B, the predicted probabilities of a child's BLL exceeding 10µg/dL surpassed EPA's risk reduction goal of 5% for a child residing on the EDS, VL and WSB-W exposure areas. Based on the IEUBK results, the predicted probabilities at these exposure areas ranged from 11 to 77%. Additionally, results of the ALM model indicated that a recreator, outdoor worker and construction worker at the DFA exceeded the risk reduction goal with predicted fetal BLL probabilities ranging from 53% to 78%. For the construction worker at the NCA, blood lead modeling indicated that the probability of fetal BLL exceeding 10 ug/dL was 49%.

The response action selected in this decision document is necessary to protect the public health or welfare of the environment from actual or threatened releases of contaminants into the environment.

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
- 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.

A noteworthy source of uncertainty in the HHRA for the Dump Site deals with the large number of tentatively identified compounds (TICs) detected at the Site. Toxicity factors are needed to quantify risks and hazards from exposure to chemicals. Since toxicity values were not available for the majority of the detected TICs, risks and hazards could not be quantified for these compounds. The omission of these chemicals from the quantitative risk evaluation tends to underestimate total noncancer and cancer risks.

In addition, due to limited data, a 95% Upper Confidence Limit (UCL) could not be calculated for COCs in groundwater. Instead, the maximum detected concentration was used as the EPC. Using the maximum concentration as the EPC is a conservative (i.e., health protective) assumption, which is likely to overestimate risks from exposure to sitewide groundwater.

More specific information concerning public health risks, including a quantitative evaluation of the degree of risk associated with various exposure pathways, is presented in the risk assessment report.

Ecological Risk Assessment

A BERA was conducted to evaluate how likely it is that the environment may be impacted from the presence of contaminants in surface soil, sediment, surface water and groundwater. Media contaminant concentrations were compared to ecological screening values. Concentrations that exceed screening values indicated the potential for adverse effects to ecological receptors by habitat type. The ecological receptors evaluated for the Site include the benthic invertebrate community (i.e., organisms that live in or on the bottom sediment of rivers, streams, and lakes), fish, terrestrial and wetland plants, soil invertebrates, wildlife (i.e., herbivorous, insectivorous, carnivorous, and piscivorous birds and mammals), and amphibians and reptiles. The major habitats at the Site are forested upland areas, open water, emergent wetland, and riparian areas.

The Site was evaluated based upon three defined ecological exposure areas, shown in Figure 3: East Dump Site Exposure Area (Dump Site Fenced Area and Eastern Dump Site Area), West Dump Site Exposure Area (undeveloped portion of the Vacant Lot and upland areas of White Sand Branch-West) and White Sand Branch (White Sand Branch itself and associated aquatic areas, from its origin in the Dump Site Fenced Area to its western boundary with the Vacant Lot). Exposure to both terrestrial wildlife in the upland exposure areas (East Dump Site Exposure Area and West Dump Site Exposure Area) through ingestion of contaminated soil and biota, and exposure of aquatic wildlife to contaminants in the White Sand Branch Exposure Area through ingestion of contaminated sediment, surface water and biota were evaluated. Biological data were collected from benthic invertebrates and fish and soil invertebrates to assist in understanding site-specific bioaccumulation rates and subsequent exposure to upper trophic level receptors such as wildlife. In addition, COC concentrations and biological responses (sediment toxicity and benthic community diversity) were evaluated to understand potential community level impacts associated with sediment COCs. The drivers of ecological risk were lead, arsenic, chromium and cyanide.

A complete summary of all exposure scenarios and ecological receptor groups can be found in the baseline ecological risk assessment (BERA) which is part of the Administrative Record.

Summary of the Baseline Ecological Risk Assessment

The BERA provided evidence that COCs, primarily arsenic, lead and chromium, in both aquatic and terrestrial environments within several portions of the Site potentially pose unacceptable ecological risk to wildlife receptors. Overall, wildlife risks at the Site are driven by elevated concentrations detected in localized portions of the three exposure areas, primarily in soil and sediment in the central portion of the Dump Site Fenced Area and in White Sand Branch and its immediate vicinity. Insectivorous wildlife (the American Robin and Short-Tailed Shrew) were identified as the wildlife receptors with the highest predicted exposures and hazard quotients in the terrestrial area of the Site. Similarly, the Spotted Sandpiper, an aquatic insectivore, was identified as the receptor with the highest exposure and hazard quotient associated with the aquatic community in White Sand Branch.

Based on the results of the ecological risk assessment a response action is necessary to protect the environment from actual or threatened releases of hazardous substances.

RESPONSE ACTION OBJECTIVES

Response action objectives are specific goals to protect human health and the environment. The response action objectives (RAOs) for contaminated media provided below address the human health and ecological risks at the Site. Response action objectives have not been identified for the Dump Site groundwater, however they will be selected after, and based on the results of, the implementation of the selected response.

No active cleanup response is proposed for surface water, therefore there are no response action objectives for surface water. Instead, surface water monitoring is included as part of each sediment response alternative except for the no action alternative.

Soil

- Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of soil contaminants by plants, ingestion of contaminated soils and food items by humans and ecological receptors, and direct contact with contaminated soils.

- Minimize migration of Site-related contaminants in the soil to sediment, surface water and groundwater.

Sediment

- Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of sediment contaminants by plants, ingestion of contaminated

sediment by humans and ecological receptors and direct contact with contaminated sediment.

- Minimize migration of Site-related contaminants from the sediment to surface water.

By addressing the soil and sediment, EPA expects that the risks posed by dermal contact to surface water will also be addressed.

To achieve RAOs, EPA has selected soil and sediment cleanup goals for the primary COCs. The soil cleanup goals for the COCs are consistent with New Jersey human health direct contact standards or ecological risk-based goals.

The Site consists of active commercial properties, as well as undeveloped commercial and residential zoned properties, some of which contain ecological habitat. To meet the RAOs, there are specific, and sometimes different, soil cleanup goals for non-residential, residential, and ecological areas or land uses of the Site.

Soil ecological cleanup goals are site-specific and based on the most sensitive terrestrial wildlife receptors at the Site. Soil ecological cleanup goals apply to the top foot of soil at all properties in the Site that contain ecological habitat. Specifically, the ecological cleanup goals would apply to the top foot of soil on all properties except the Vacant Lot Developed Area and the Northern Commercial Area because these two areas are the only parts of the Site that do not contain ecological habitat.

For undeveloped commercially zoned properties that contain ecological habitat, after applying ecological cleanup goals to the top foot of soil, the non-residential cleanup goals would apply through the remaining soil depth.

The residential-zoned properties at the Site all contain ecological habitat. After applying the ecological cleanup goals to the top foot of soil, the residential cleanup goals would apply through the remaining soil depth.

For sediment in White Sands Branch, the human health risk-based cleanup goals, which are more stringent than the ecological cleanup goals, apply for arsenic. Thus, the sediment cleanup goal for arsenic is the human health direct contact cleanup goal of 19 mg/kg since this value is lower than the calculated site-specific ecological cleanup goal of 21 mg/kg.

Site-specific impact to groundwater levels for unsaturated soil will be determined during remedial design. EPA considers areas of saturated soil containing arsenic at levels exceeding 100 mg/kg to be source areas of groundwater contamination for this Site.

For lead, the soil cleanup goals vary based on the land use of each property. However, there is only one sediment cleanup goal for lead. The lead sediment cleanup goal is the ecological cleanup goal, which is based on the most sensitive wildlife receptor in sediment.

The cleanup goals for the Route 561 Dump Site are as follows:

Soil:

Arsenic:

- Non-residential cleanup goal: 19 mg/kg
- Residential cleanup goal: 19 mg/kg
- Ecological cleanup goal: 19 mg/kg

Lead:

- Non-residential cleanup goal: 800 mg/kg
- Residential cleanup goal: 400 mg/kg
- Ecological cleanup goal: 213 mg/kg

Sediment:

Arsenic: 19 mg/kg
Lead: 235 mg/kg

DESCRIPTION OF ALTERNATIVES

CERCLA §121(b)(l), 42 U.S.C. §9621(b)(l) requires that a remedial action 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 alternatives to the maximum extent practical. In addition, Section 121(b)(1) of the statue includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances. While the response measure selected in this document falls within the category of removal action, it is the permanent remedy selected for the soils, sediment, and surface water at the Site. As such, it is appropriate to apply the criteria listed in CERCLA Section 121 to the response measure.

The FS identified potential technologies applicable to soil and/or sediment remediation and screened them using effectiveness, implementability, and cost criteria, with emphasis on effectiveness. The FS then assembled those technologies that passed the initial screening into response alternatives for soil and sediment.

For alternatives that incorporate removal of contaminated soil or sediment, the proposed depths of excavation are based on the soil boring data taken during the RI. The FS relied upon these depths to estimate the quantity of soil to be removed and the associated costs. The actual depths and quantity of soil to be removed will be finalized during design and implementation of the selected response. Full descriptions of each proposed alternative can be found in the FS, which is part of the Administrative Record.

The time frames below are for construction. They do not include the time it will take to negotiate with the responsible party, design a response or procure necessary contracts. Five-year reviews will be conducted as a component of the alternatives that would leave contamination in place above levels that allow for unlimited use and unrestricted exposure.

For all soil and sediment alternatives requiring five-year reviews, the Present Worth Cost includes the periodic present worth cost of five-year reviews.

Common Element for Soil and Sediment Alternatives: Surface Water Monitoring

The FS included two surface water alternatives, a no action alternative and a surface water monitoring alternative. EPA decided not to carry these forward as separate surface water alternatives. Monitoring would be conducted on a quarterly basis to assess any changes in contaminant conditions over time. EPA expects that removal of sediment, combined with soil removal and/or capping, will result in a decrease of surface water contaminants to levels below NJSWQS. If monitoring indicates that contamination levels have not decreased to below the NJSWQS, EPA may require an action in the future. The cost of surface water monitoring is included in sediment alternatives.

Soil Alternatives:

Note: The FS evaluated seven Soil Alternatives. Alternatives 4 and 5 contain elements of Alternatives 3, 6 and 7 and therefore EPA decided not to carry forward Soil Alternatives 4 and 5 into this decision document. Soil Alternative 6 incorporates elements of Soil Alternatives 4 and 5.

Soil Alternative 1 – No Action

Capital Cost:	*$0*
Annual O&M Cost:	*$0*
Present Worth Cost:	*$0*
Timeframe:	*0 years*

The NCP requires that a “No Action” alternative be evaluated to establish a baseline for comparison with other remedial alternatives. Under this alternative, no action would be taken to remediate the contaminated soil at the Site.

Soil Alternative 2 – Institutional Controls and Monitoring

Capital Cost:	*$268,402*
Annual O&M Cost:	*$4,960*
Present Worth Cost:	*$458,908*
Time Frame including O&M:	*30 years*

This alternative would use Institutional Controls, such as deed notices, to prevent exposure to Site contaminants. The alternative would use monitoring to assess any change in contaminant

conditions over time. The existing fence around the Dump Site Fenced Area would be maintained, but no other physical barriers would be installed. Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Soil Alternative 3 – Capping and Institutional Controls

Capital Cost:	*$6,390,196*
Annual O&M Cost:	*$39,600*
Present Worth Cost:	*$6,982,546*
Construction Time Frame:	*5 months*

This alternative would use soil or asphalt covers as the primary method to prevent exposure to contaminants in Site soils. In the parking lots of the commercial properties, asphalt would be maintained as an engineering control to prevent contact with underlying soil where contamination levels exceed the non-residential cleanup goals.

In all other areas of the Site, two feet of soil would be excavated to allow the installation of a two foot thick soil cap to prevent contact with soils that exceed the soil cleanup goals for each area. Approximately 12,000 cubic yards of soil would be excavated to accommodate a cap. The excavated soil would be transported to an appropriate disposal facility. Areas that receive a soil cap will be revegetated.

Institutional controls, such as a deed notice, would be required on all properties where residential soil standards are not met.

Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Soil Alternative 6 – Excavation, Capping and Institutional Controls

Capital Cost:	*$11,551,458*
Annual O&M Cost:	*$28,600*
Present Worth Cost:	*$12,016,239*
Construction Timeframe:	*8 months*

Figure 4 depicts this alternative. In the commercial areas, namely the Northern Commercial Area and Vacant Lot Developed Area, unsaturated soil that exceeds the non-residential cleanup goals would be removed to a depth of approximately two to four feet or deeper where utilities are located. This soil removal includes contaminated soil under parking lots, but does not include inaccessible soil under buildings. Soil below the excavated depth that exceeds the cleanup goals would be capped with either an impermeable cap or clean soil. Areas that receive an impermeable cap or a soil cap will be revegetated.

Any remaining unsaturated soil in the commercial areas that exceeds site-specific impact-to-groundwater values would receive an impermeable cap. The impermeable cap would be expected to minimize surface water percolation through the soil thereby reducing the impact on groundwater.

Additionally, several areas of saturated soil that are sources of groundwater contamination will be completely removed, requiring deep excavation. This includes an area of saturated soil located beneath the Northern Commercial Area adjoining Route 561 where soil removal is estimated to extend to a depth of 14 feet. This also includes areas in northern and central portions of the Dump Site Fenced Area where soil removal is estimated to extend to between four to 12 feet.

Parking lots in the commercial areas that exceed the non-residential cleanup goals at depth after excavation would be backfilled with clean soil and capped with asphalt. The unpaved portions of these commercial areas would receive a soil cap after excavation. The pavement of Route 561 will function as a cap for the likely contamination under the road.

Institutional controls, such as a deed notice, would be required for all commercial properties where residential standards are not met and Route 561 because that road is serving as a cap for likely contamination below.

Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

On residential properties adjoining White Sands Branch or in the Dump Site Fenced Area, the first foot of soil would be excavated to meet the ecological cleanup goals and soil exceeding the residential cleanup goals would be removed to depth. Since it is anticipated that no soil exceeding the residential cleanup goals would remain on residential properties, no institutional controls or five-year reviews for these properties would be required.

In total, approximately 23,000 cubic yards of soil would be removed under this alternative.

Soil Alternative 7 – Excavation and Institutional Controls

Capital Cost:	*$17,485,771*
Annual O&M:	*$0*
Present Worth Cost:	*$17,618,871*
Construction Timeframe:	*10 months*

At commercial properties, this alternative would result in the excavation of all accessible soil containing contaminants at concentrations that exceed the residential cleanup goals, specifically the Northern Commercial Area, Vacant Lot Developed Area, Vacant Lot and the commercial portion of the Dump Site Fenced Area. Contaminated soil beneath Route 561 and the commercial buildings would not be removed.

For residential properties within the White Sand Branch flood plain, all soils exceeding the residential cleanup goals would be removed. Any remaining soil that exceeds ecological cleanup goals in the top foot of soil outside the footprint of the residential soil cleanup goal excavation would also be removed.

Approximately 37,000 cubic yards of soil would be removed under this alternative.

Since all the accessible contaminated soils would be removed from excavated areas, no capping would be necessary in the excavated areas. Route 561 and the commercial buildings would function as a cap.

Institutional controls, such as a deed notice, would be required on all properties where residential standards are not met. Because this alternative includes removal of all accessible contaminated soil, institutional controls would only be necessary for inaccessible soil under buildings and roads.

Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Sediment Alternatives:

Note: The FS evaluated five Sediment Alternatives. Sediment Alternative 4 contains elements of Sediment Alternative 5 as described in the FS; therefore EPA did not carry forward Sediment Alternative 5 into this decision document. The cost of surface water monitoring is included in sediment alternatives.

Sediment Alternative 1 – No Action

Capital Cost:	*$0*
Annual O&M Cost:	*$0*
Present Worth Cost:	*$0*
Timeframe:	*0 years*

The NCP requires that a "No Action" alternative be evaluated to establish a baseline for comparison with other remedial alternatives. Under this alternative, no action would be taken to remediate the contaminated sediment at the Dump Site.

Sediment Alternative 2 – Institutional Controls and Monitored Natural Recovery

Capital Cost:	*$70,323*
Annual O&M Cost:	*$160,600*
Present Worth Cost:	*$1,177,591*
Timeframe including O&M:	*30 years*

Under this alternative, no removal or capping of sediment would be conducted and exposure to contaminants would not be prevented. Periodic monitoring would be performed to determine if contaminant concentrations in surface sediment were declining to a level that is protective of ecological receptors. Institutional controls, such as a deed notice, would be required since contaminants remain above unrestricted levels.

Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Sediment Alternative 3 – Excavation and Capping

Capital Cost:	*$2,023,809*
Annual O&M Cost:	*$140,800*
Present Worth Cost:	*$2,909,217*
Construction Timeframe:	*2 months*

Under this Alternative, up to one foot of sediment containing contaminants at concentrations exceeding the sediment cleanup goals would be removed from the small streams within the Dump Site Fenced Area and White Sand Branch from the Dump Site Fenced Area to the fence at the Burn Site located west of Berlin Road. In areas where removal of up to one foot of sediment is sufficient to meet the sediment cleanup goals, natural sedimentation would be allowed to restore the stream to its previous elevation. A cap would be installed on areas of the stream where levels of contaminants exceeding the cleanup goals remain after excavation. The cap would consist of six inches of sand covered by three inches of stone that would act as an armoring layer. Natural sedimentation would then fill in above the armoring layer and reestablish the previous elevation of the stream. Approximately 448 cubic yards of sediment would be removed under this alternative.

A minimum of five years of sampling would take place to confirm that restoration was successful and that contaminant levels remain below the cleanup goals.

Under CERCLA Section 121(c), five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Sediment Alternative 4 – Excavation

Capital Cost:	*$1,927,968*
Annual O&M Cost:	*$160,600*
Present Worth Cost:	*$2,444,410*
Construction Timeframe:	*2.5 months*

Figure 5 depicts this alternative. This alternative consists of removal of all sediment with site-related contaminants exceeding sediment cleanup goals from the small streams within the Dump Site Fenced Area and the 1,050-foot section of White Sand Branch extending from the Dump Site Fenced Area to Berlin Road. No capping of sediment would be necessary since all sediment exceeding the cleanup goals would be removed. Areas where sediment is removed would be backfilled with clean material and the area would be restored.

Although levels of contaminants in surface water exceeded the NJSWQS in White Sand Branch between Berlin Road and the Burn Site fence, only one deep sediment sample exceeded the sediment cleanup goal in this section of the creek. As a result, sediment in this 650-foot section of White Sand Branch would undergo additional sampling during design to determine if sediment removal is needed.

It is estimated that 765 cubic yards of sediment would be removed under this alternative. A minimum of five years of monitoring would be conducted to ensure that the concentration of contaminants in the sediment remain below the cleanup goals.

Because no contamination would remain above unrestricted levels, five-year reviews would not be required.

COMPARATIVE ANALYSIS OF ALTERNATIVES

In selecting a response, EPA considered the factors set out in CERCLA § 121, 42 U.S.C. § 9621, by conducting a detailed analysis of the viable 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 nine evaluation criteria and a comparative analysis focusing upon the relative performance of each response measure against the criteria. The first part discusses the nine evaluation criteria for the soil and the second part discusses the nine evaluation criteria for the sediment.

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

Evaluation of Soil Alternatives

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.

The No Further Action Alternative, Alternative 1, is not considered protective of human health and the environment, because it does not contain measures to prevent exposure to contaminated soil. This presents an unacceptable human health and/or ecological risk.

Alternative 2 would protect human health by restricting access to the contaminated soil through use of institutional controls, but such controls would not be protective of ecological receptors. Institutional controls also would not address migration of soil contaminants to the sediment, surface water and groundwater.

Alternatives 3, 6 and 7, provide an increasing progression of control of contaminated soil through a combination of excavation and capping. However, Alternative 3 would not completely

control migration of soil contaminants at depth to groundwater since only shallow soil would be removed.

Alternatives 6 and 7 would be more protective of human health and the environment than Alternative 3 because sources of groundwater contamination in deep saturated soil would be removed from the Northern Commercial Area and the Dump Site Fenced Area. Removal and capping of soil under Alternative 6 and more extensive removal of soil under Alternative 7, combined with institutional controls, would prevent exposure to contaminants and are equally protective.

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 that are 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 invoking a waiver.

There are three types of ARARs, chemical-specific, location-specific, and action-specific. These are explained below.

Chemical-Specific: These ARARs include health- or risk-based numerical values or methodologies that establish the acceptable amount or concentration of a chemical in the environment. Where more than one requirement addressing a contaminant is determined to be an ARAR, the most stringent value should be used.

Location-Specific: These ARARs address activities based on geographical or land use concerns. Examples include standards and requirements for addressing wetlands, historic places, floodplains, or sensitive ecosystems and habitats.

Action-Specific: These ARARs address activities or the operation of certain technologies at a particular site. Examples include regulations concerning the design, construction, and operating characteristics of a treatment system or a landfill.

Applicable chemical-specific ARARs for lead and arsenic in the soil at this Site include the New Jersey Residential and Non-residential Direct Contact Soil Remediation Standards depending on zoning and land use. The New Jersey Surface Water Quality Standards are ARARs for surface water.

Location-specific ARARs include the Federal Fish and Wildlife Coordination Act and the New Jersey Freshwater Wetlands Protection Act and Clean Water Act. Location-specific ARARs affect some portions of the Site, such as the Dump Site Fenced Area and the flood plain of White Sands Branch, which are wildlife areas.

Action-specific ARARs are determined by the specific technology of each alternative. In this case, all the active alternatives include excavation and off-site disposal. Action-specific ARARs include the Federal Resource Conservation and Recovery Act. Also included are the New Jersey Solid Waste Rules and certain portions of the Technical Requirement for Site Remediation.

A complete list of potential ARARs can be found in Appendix II-A.

Alternative 1, No Further Action, will not comply with chemical-, location- or action-specific ARARs.

Alternative 2 would not meet chemical-specific ARARs because no contaminated soil will be removed. Alternative 2 does not involve any construction. Therefore, there are no relevant location- and action-specific ARARs.

Alternative 3 would meet all the chemical-specific standards by excavation removal of soil or on-site capping. Location- and action-specific ARARs would be met during the construction phase.

Alternatives 6 and 7 would be in compliance with chemical-specific ARARs by removing contaminated soil both in the shallow and deep zones and through capping. Location- and action-specific ARARs would be met by Alternatives 6 and 7 during the construction phase by proper design and implementation of the action including disposal of excavated soil at an appropriate disposal facility.

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

A similar degree of 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 cleanup 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.

Alternative 1, No Action Alternative and Alternative 2, Institutional Controls and Monitoring would not provide long-term effectiveness or permanent protection to human health or ecological receptors, or to sediment, groundwater or surface water because the soil contaminants would remain uncontrolled. Under Alternative 2 there would be provisions to monitor the fate and transport of the contaminants.

Alternative 3 provides more long-term effectiveness and permanence than Alternative 2 because surface soil contamination would be removed.

However, Alternative 3 provides less long-term effectiveness and permanence than Alternatives 6 and 7 because contamination in the deep saturated soil, which could act as a source of groundwater contamination, will not be removed from the Northern Commercial Area or the Dump Site Fenced Area. In Alternative 3, although the ecological cleanup goals and non-residential cleanup goals would be used throughout the Site, enough subsurface contamination would remain that it would likely be necessary to construct caps throughout the entire Site, including along White Sand Branch.

In Alternative 6, surface soil above the non-residential cleanup goals in the commercial areas and subsurface soil, which could act as a source to groundwater contamination, would be removed. Based on the RI soil core data, this alternative includes the removal of contaminated subsurface soils from multiple depths, down to 14 feet, for example in the northern portion of the Dump Site Fenced Area (Figure 4). Also, in Alternative 6, the ecological cleanup goals and the residential cleanup goals would be used in the White Sand Branch flood plain. Therefore, Alternative 6 would achieve a greater degree of long-term protectiveness and permanence than Alternative 3.

Alternative 7 offers the greatest degree of long-term permanence by removing all contaminants above the ecological cleanup goals or residential cleanup goals in the surface and accessible subsurface soil.

4. Reduction of Toxicity, Mobility, or Volume 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.

All of the active soil alternatives involve removal and/or capping of soil. There is no treatment of the contaminants in any of the alternatives and, therefore, no reduction in toxicity. Removal of the contaminated soil would decrease the volume of contaminants at the Site and capping would

decrease accessibility and contaminant mobility. The excavated material would be transferred to a landfill without treatment and therefore the overall reduction of toxicity mobility or volume through treatment would not be achieved.

Alternatives 1 and 2 would not reduce the toxicity, mobility or volume of soil contaminants since no material will be removed or capped.

The amount of contamination removed or capped increases progressively from Alternatives 3 to 6 to 7. Alternative 7 would leave the least amount of contamination on the Site, but would not reduce the toxicity mobility or volume of contaminants any more than the other alternatives because it does not include treatment.

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.

Alternatives 1 and 2 do not present any short-term risks to Site workers or the environment because they do not include any active remediation work.

Under Alternatives 3, 6 and 7, potential adverse short-term effects to the community include increased traffic, noise, road closures and, at times, limited access to businesses.

Risks to site workers, the community and the environment include potential short-term exposure to contaminants during excavation of soil. Potential exposures and environmental impacts associated with dust and runoff would be minimized with proper installation and implementation of dust and erosion control measures and monitoring. Portions of the Site, such as the Dump Site Fenced Area and White Sand Branch, consist of large areas of wetlands. Under Alternatives 3, 6 and 7, it would be necessary to remove trees and vegetation as well as disrupt the small streams and associated wildlife.

Alternatives in which the largest quantity of soil is removed would have the greatest area of impact, would require the longest period of time to complete, and would have the highest potential for short-term adverse effects. Alternatives 3, 6 and 7 would take 5, 8, and 10 months respectively to complete. Among Alternatives 3 through 7, Alternative 3 would take the shortest time to achieve protection of human health and the environment and would, therefore, have the lowest potential for short-term adverse effects.

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.

Because Alternatives 1 and 2 would not entail any construction, they would be easily implemented.

Alternatives 3 through 7 have common implementability issues related to the removal of contaminated soil. These include short-term traffic disruption on Route 561 and to local businesses since there are areas of contamination immediately adjacent to Route 561 and the commercial buildings. The amount of disruption depends on the location of the contaminated soil, the amount of soil removed and the amount of time it takes for removal and reconstruction of the area.

In general, Alternative 3, which has the least amount of soil removal and does not remove the subsurface soil, would be the easiest to implement.

The increased volume of soil removal associated with Alternatives 6 and 7 increases the implementation difficulties compared to Alternative 3.

In Alternative 6, deep excavations to remove potential sources of groundwater contamination in the Northern Commercial Area and Dump Site Fenced Area present implementability challenges. Shallow excavations on areas of commercial properties to the non-residential cleanup goal to a depth of approximately two to four feet for soil, would be relatively less challenging.

Alternative 7 presents the greatest challenges to implement because it requires removing the most soil at the greatest depth. Based on data from the RI, in the Northern Commercial Area excavation to remove contamination greater than the residential cleanup goal would extend over 20 feet in depth in one corner of the parking lot. Excavations of 8 to 10 feet would take place immediately adjacent to the structures in the Vacant Lot Developed Area.

Because of the deep excavation, Alternative 7 would require extensive and rigorous structural supports to safely excavate material on the Dump Site Fenced Area, Northern Commercial Area, Vacant Lot Developed Area and adjacent to Route 561. Such structural challenges include the use of sheet piling and secant walls to protect buildings and roadways during soil excavation to depths greater than 4 feet and protection of the earthen dam at Clement Lake. In addition, deeper excavations associated with Alternative 7 would generate more than twice the quantity of groundwater among the alternatives. The management of a significant amount of groundwater places additional challenges to implementation of Alternative 7.

In general, the depth of the soil to be removed and the total amount for soil to be removed increases from Alternatives 3 to 7. Therefore, Alternative 3 is the easiest to implement. Alternative 6 would be more difficult to implement and Alternate 7 would be the most difficult to implement.

7. Cost

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

The total estimated present worth costs increase with the amount of material removed. The estimated costs are $459,000 for Alternative 2; $6,982,000 for Alternative 3; $12,016,000 for Alternative 6; and $17,619,000 for Alternative 7. Alternative 1 has no cost.

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.

The State of New Jersey concurs with the preferred alternative of soil removal including off-site soil disposal. However the state does not concur with the capping and institutional control component of the preferred soil alternative unless property owners provide their consent to the placement of a cap and a deed notice.

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 response measures for soils proposed for the site. Oral comments were recorded from attendees of the public meeting. The attached Responsiveness Summary addresses the comments received during the public comment period. The community (residents, business owners, nearby property owners) had varied positions, from support to strong reservations about EPA's Proposed Plan. EPA received written and oral comments from local and federal elected officials indicating that the preferred soil alternative was not thorough enough to address the site problems, and was not protective enough. These issues are discussed in EPA's comprehensive response to comments received during the public comment period in the Responsiveness Summary, Appendix V.

Evaluation of Sediment Alternatives

1. Overall Protection of Human Health and the Environment

The No Further Action Alternative, Alternative 1, is not considered protective of human health and the environment, because it does not contain measures to prevent exposure to contaminated sediment. This presents an unacceptable human health and/or ecological risk.

Alternative 2 would protect human health by restricting access to the contaminated sediment through use of institutional controls, but such controls would not be protective of ecological receptors. Institutional controls also would not address migration of sediment contaminants to the surface water.

Alternative 3 would be protective because one foot of contaminated sediment would be removed and the remaining contaminated sediment would be capped.

Alternative 4 would also be protective because sediment contamination above the cleanup goals would be removed.

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

Sediment cleanup goals are site specific risk-based. There are no chemical-specific Federal or State of New Jersey standards for the COCs in sediment.

Location-specific ARARs for the sediment are applicable because White Sand Branch contains wildlife areas. Location specific ARARs include the Federal Fish and Wildlife Coordination Act and the New Jersey Freshwater Wetlands Protection Act and Clean Water Act.

Action-specific ARARs are determined by the specific technology of each alternative. In this case, all the active alternatives include excavation and off-site disposal. Action-specific ARARs include the Federal Resource Conservation and Recovery Act. Also included are the New Jersey Solid Waste Rules and certain portions of the Technical Requirement for Site Remediation.

A complete list of potential ARARs can be found in Appendix II-A, Table 4.

Alternative 1, No Further Action, will not comply with location- or action-specific ARARs.

Alternative 2 does not involve any construction. Therefore, there are no location- and action-specific ARARs that apply to this alternative.

Alternatives 3 and 4, which require response action, would comply with location- and action-specific ARARs that apply to remediation and filling in floodplains, work in wetland areas, waste management, and storm water management.

3. Long-Term Effectiveness and Permanence

Alternatives 1 and 2 would allow existing contamination, and ecological exposures and risks to continue while natural recovery occurs. Natural recovery alone will not reduce surface sediment concentrations to levels that are protective of ecological receptors.

The cap associated with Alternative 3 would be installed in the small streams within the Dump Site Fenced Area and White Sand Branch between Clement Lake and Berlin Road. This alternative would be effective in maintaining protection of human health and the environment in

the capped section of the water body. Such protectiveness would be permanent as long as the cap remains in place.

Alternative 4 would remove all sediment contamination from the small streams within the Dump Site Fenced Area and White Sand Branch between Clement Lake and the Berlin Road. Alternative 4 would be more effective and have a higher degree of permanence than Alternative 3 since all contaminated sediment would be removed under Alternative 4.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

The major contamination in sediment at the Site is due to the presence of metals. All the active alternatives involve removal and/or capping of the sediment. There is no treatment of the contaminants and, therefore, no reduction of toxicity. Removal of the contaminated sediment would decrease the volume and capping would decrease the mobility of any contamination at the site. The excavated sediment would be transferred to a landfill without treatment.

Alternatives 1 and 2 would not reduce the toxicity mobility or volume of sediment contaminants. Between the two alternatives that involve sediment excavation, Alternative 3 would remove the least amount of sediment and would include sediment capping. Alternative 4 addresses the same stretch of White Sands Branch as Alternative 3, however more volume of sediment would be removed under Alternative 4 through deeper excavation.

5. Short-Term Effectiveness

Alternatives 1 and 2 do not present any short-term risks to the community, Site workers or the environment because these alternatives do not include any active remediation work.

Alternatives 3 and 4 involve excavation and thus have potential for short-term adverse effects. Potential risks posed to Site workers, the community and the environment during implementation of each of the sediment alternatives could be due to wind-blown or surface water transport of contaminants. Any potential impacts associated with dust and runoff would be minimized through proper installation and implementation of dust and erosion control measures. The areas would be monitored throughout the construction.

The potential risk of sediment releases could increase over the current conditions, due to removal of existing vegetation that currently minimizes sediment movement. There is little difference in the implementation time from the shortest (two months) to the longest (two and a half months). Therefore, Alternatives 3 and 4 are equal in terms of short-term effectiveness.

6. Implementability

Sediment Alternatives 1 and 2 would not include any construction, and therefore they would be easily implemented.

Alternatives 3 and 4 require sediment removal and face similar implementability challenges. Such challenges include access to low lying saturated areas, control of surface water flow, controlling intrusion of groundwater into excavation areas, streambed stabilization and wetland restoration.

The implementability challenges increase with the length of White Sand Branch to be remediated and volume of sediment to be removed. Alternative 3 calls for the least amount of sediment removal and therefore presents the least amount of implementability challenges among the removal alternatives. In contrast, Alternative 4 poses the greatest implementability challenges since it requires the largest remediation area and involves deeper removal of sediment.

7. Cost

The total estimated present worth costs of Alternatives 2, 3, and 4 are $1,178,000, $2,909,000 and $2,444,000. Alternative 1 has no cost.

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.

The State of New Jersey concurs with the selected alternative for the sediment of the Site.

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 response measures proposed for the Site sediment. Oral comments were recorded from attendees of the public meeting and written comments were also received. The community was supportive of EPA's Proposed Plan for sediment. Appendix V, the Responsiveness Summary, addresses comments received during the public comment period.

PRINCIPAL THREAT WASTE

Although lead and arsenic in soil and sediment act as sources to surface water contamination and lead and arsenic in soil contribute to low levels of shallow groundwater contamination, these sources are not highly mobile and are not considered principal threat wastes at this Site.

SELECTED RESPONSE

Based upon consideration of the results of the Site investigations, the requirements of CERCLA, the detailed analysis of the response alternatives and public comments, EPA has determined that the response for the soil is Alternative 6, Excavation, Capping and Institutional Controls and for the sediment, the response is Alternative 4, Excavation. As discussed above, the surface water will be monitored to determine the effectiveness of the implemented soil and sediment remedies. Together, these three elements comprise EPA's response. This response best satisfies the requirements of CERCLA Section 121 and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR § 300.430(e)(9). This response includes the following components for the soil, sediment and surface water.

Soil:

The Soil Response is Alternative 6 (Figure 4), which involves excavation, capping, and off-site disposal of soil. The major components of the Soil Response include:

- Excavation, transportation and disposal of 23,000 cubic yards of contaminated soil;
- Installation of engineering controls including asphalt caps in parking lots, vegetated soil covers in the Dump Site Fenced Area;
- Restoration and revegetation of White Sand Branch flood plain; and
- Institutional controls, such as a deed notice, to prevent exposure to residual soil that exceed levels that allow for unrestricted use.

Soil in the Northern Commercial Area and Vacant Lot Developed Area that exceed the non-residential cleanup goals, would be removed to approximately two to four feet, or deeper where utilities are located. Soil below the excavated depth that exceeds the cleanup goals would be capped with either an impermeable cap or clean soil. Areas of unsaturated soil that exceed site-specific impact to groundwater values would receive an impermeable cap. Saturated soils at depth that are a source of groundwater contamination would be removed. On a small area on the southern portion of the Northern Commercial Area, soil removal is estimated to extend to 14 feet.

Parking lots of the commercial areas where soil contamination exceeds the non-residential cleanup goals at depth would be capped with asphalt while other unpaved areas would receive a soil cap. Excavation of soil in the Dump Site Fenced Area would range from two feet, to allow for cap installation, to 12 feet in depth to remove soil that acts as a source of contamination to groundwater.

On residential properties adjoining White Sands Branch, the first foot of soil would be excavated to meet the ecological cleanup goals and soil exceeding the residential cleanup goals would be removed to depth. Since it is anticipated that no soil exceeding the residential cleanup goals would remain on residential properties, no institutional controls would be required.

Soil Alternative 6 was selected over other alternatives because it is expected to achieve substantial and long-term risk reduction through off-site disposal, and is expected to allow the Site to be used for its reasonably anticipated future land use, which is commercial/residential. Alternative 6 reduces the risk within a reasonable time frame, and at a cost comparable to or lower than other alternatives and provides for long-term reliability of the response.

Soil Alternative 6 would achieve cleanup goals that are protective for residential use on floodplain soils adjoining White Sand Branch but would not achieve levels that would allow for unrestricted use on commercial properties. Therefore, institutional controls, such as a deed notice, would be required on commercial properties. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Soil Alternative 6 was chosen because it has fewer uncertainties in addressing the source areas compared to Alternative 3 and will provide an equivalent degree of protection as Soil Alternative 7 with significantly less disruption to the commercial properties and Route 561.

Sediment:

The Sediment Response is Alternative 4 (Figure 5) includes excavation of all sediment with contaminant levels greater than the cleanup goals from small streams within the Dump Site Fenced Area and the headwaters of White Sand Branch to Berlin Road.
The major components of the Sediment Response include:

- Construction of a stream diversion system to allow access to sediment;
- Excavation, transportation and disposal of 765 cubic yards of contaminated sediment;
- Dewatering and processing of excavated sediment;
- Stream bank and revegetation and restoration.

Approximately two feet of sediment would be removed from the northern, central and southern portions of the small streams within the Dump Site Fenced Area and White Sand Branch extending to the Burn Site fence. One sediment sample exceeded the sediment cleanup goal for lead in the deep sediment downstream of Berlin Road and immediately upstream of the Burn Site fence. In addition, there are also exceedances of lead in sediment of White Sand Branch within the Burn Site near the fence bordering the Route 561 Dump Site. Under Sediment Alternative 4, additional sampling during design would determine the extent of sediment excavation in this furthest downstream reach of White Sand Branch. After remediation of sediment, the stream banks, riparian zone and wetlands would be monitored for a period of five years to assure successful restoration of these areas.

Sediment Alternative 4 was selected over other alternatives because it is expected to achieve substantial and long-term risk reduction through off-site disposal of sediment by reducing contaminant levels in White Sand Branch. Sediment Alternative 4 reduces risk within a reasonable timeframe, at a cost comparable to the other alternatives and provides for long-term reliability of the response.

Surface Water:
Surface water monitoring would be conducted on a quarterly basis to assess any changes in contaminant conditions over time. It is expected that removal of contaminated sediment, combined with soil removal, and/or capping will result in a decrease of surface water contaminants to levels below NJSWQS. If monitoring indicates that contamination levels have not decreased to below the NJSWQS, EPA may require an action in the future.

STATUTORY DETERMINATIONS

As was previously noted, 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).

While the response measure selected in this document falls within the category of removal action, it is the permanent remedy selected for the soils, sediment, and surface water at the Site. As such, it is appropriate to apply the criteria listed in CERCLA Section 121 to the response measure.

Protection of Human Health and the Environment

The components of the selected soil response will be protective of human health and the environment by removing contaminated surface soil that poses a direct contact threat and subsurface soil that poses a threat to the groundwater. The combination of soil removal and capping will prevent human and wildlife receptors from having contact with the contaminants. Where the soil is capped, institutional controls such as deed notices will be put in place to ensure that impacts to human health and the environment are minimized.

The selected sediment alternative will be protective by removing the contaminated sediment in White Sand Branch resulting in a reduction of contamination levels to below remediation goals.

In addition, removal of the contaminated soil and sediment is expected to result in contamination levels in the surface water decreasing to below the surface water cleanup goals. Surface water will be monitored to ensure protectiveness.

Implementation of the selected response will not present unacceptable short-term risks or adverse cross-media impacts and will therefore be protective of human health and the environment.

Compliance with ARARs

EPA expects that the selected response for soil and sediment will comply with federal and New Jersey ARARs. A complete list of potential ARARs can be found in Appendix II-A.

Chemical-specific ARARs are only available for the soil because there are no chemical-specific Federal or State of New Jersey standards for the COCs in sediment. Sediment cleanup goals are site specific risk-based. Therefore, there are no chemical-specific ARARs for sediment. The chemical-specific ARARs for lead and arsenic in the soil include the New Jersey Residential and Non-residential Direct Contact Soil Remediation Standards depending on zoning and land use. The New Jersey Surface Water Quality Standards are ARARs for surface water.

Location-specific ARARs affect some portions of the soil and sediment at the Site, such as the Dump Site Fenced Area and the flood plain of White Sands Branch, which are wildlife areas. Location-specific ARARs include the Federal Fish and Wildlife Coordination Act and the New Jersey Freshwater Wetlands Protection Act and Clean Water Act.

The action-specific ARARs are the same for the soil and sediment because all the active alternatives for soil and sediment include excavation and off-site disposal. For the soil and sediment, action-specific ARARs include the Federal Resource Conservation and Recovery Act. Also included are the New Jersey Solid Waste Rules and certain portions of the Technical Requirement for Site Remediation.

Cost Effectiveness

EPA has determined that the selected remedy is cost effective and represents a 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)). EPA evaluated the "overall effectiveness" of those alternatives that satisfied the threshold criteria (i.e., were both protective of human health and the environment and ARAR-compliant). Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in toxicity, mobility, or volume through treatment; and short-term effectiveness). Overall effectiveness was then compared to costs to determine cost effectiveness. The relationship of the overall effectiveness of the selected response was determined to be proportional to costs and hence, the selected response represents a reasonable value for the money to be spent. The selected response is cost-effective as it has been determined to provide the greatest overall protectiveness for its present worth costs.

Utilization of Permanent Solutions and Alternative Treatment Technologies

EPA has determined that the selected response utilizes permanent solutions and treatment technologies to the maximum extent that is practicable. The majority of the contaminated soil will be removed. Where soil contaminants remain, a minimum of two feet of soil will be removed and the area will be capped with clean soil in the Dump Site Fenced Area, Vacant Lot. In White Sand Branch, all contamination above the ecological or the residential cleanup goals

will be removed. In the commercial areas and Route 561, capping will consist of asphalt or buildings.

The selected response will provide adequate long-term control of risks to human health and the environment through eliminating and/or preventing exposure to the contaminated sediment, floodplain soils, and surface water. The selected response is protective of short-term risks.

Preference for Treatment as a Principal Element

Treatment is not an element of the selected response because contaminated soil and sediment are being addressed through a combination of removal and capping.

Five-Year Review Requirements

The selected response for the soil involves capping where the remediation goals are not attained. Therefore, contamination will likely be left in place at levels above those that allow for unlimited use and unrestricted exposure. A statutory five-year review will be conducted within five years of initiation of the response action for the Site to ensure that the response is, or will be, protective of human health and the environment.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for the Site was released for public comment on June 13, 2016. The Borough of Gibbsboro requested a 30-day extension of the 30-day comment period. EPA granted the Borough's request, and the comment period closed on August 11, 2016. The Proposed Plan identified Alternative 6 as the preferred alternative to address soil contamination, Alternative 4 to address sediment contamination, and monitoring of surface water. Upon review of all comments submitted, EPA determined that no significant changes to the selected response, as it was presented in the Proposed Plan, are warranted.

APPENDIX I: Figures

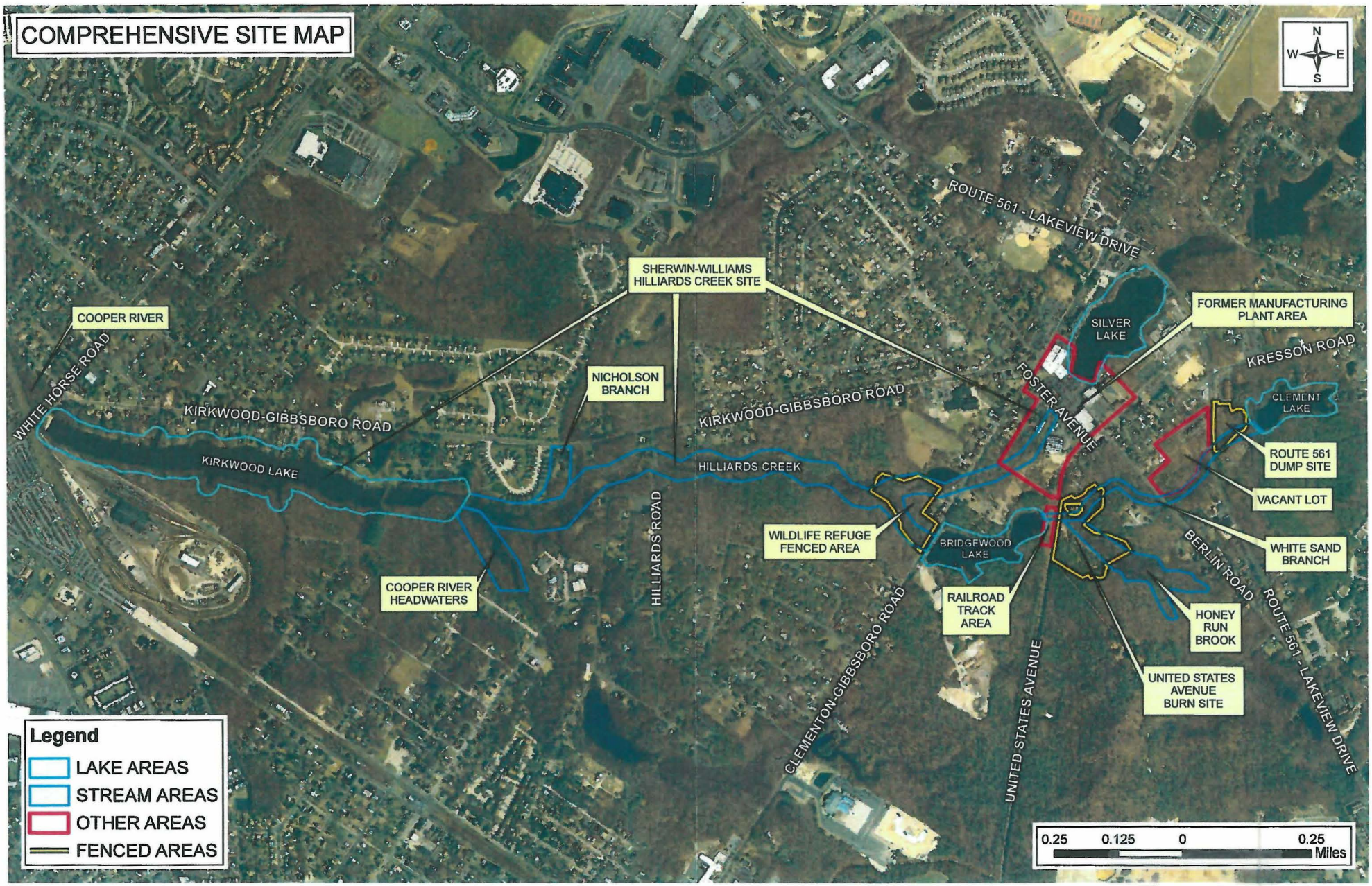
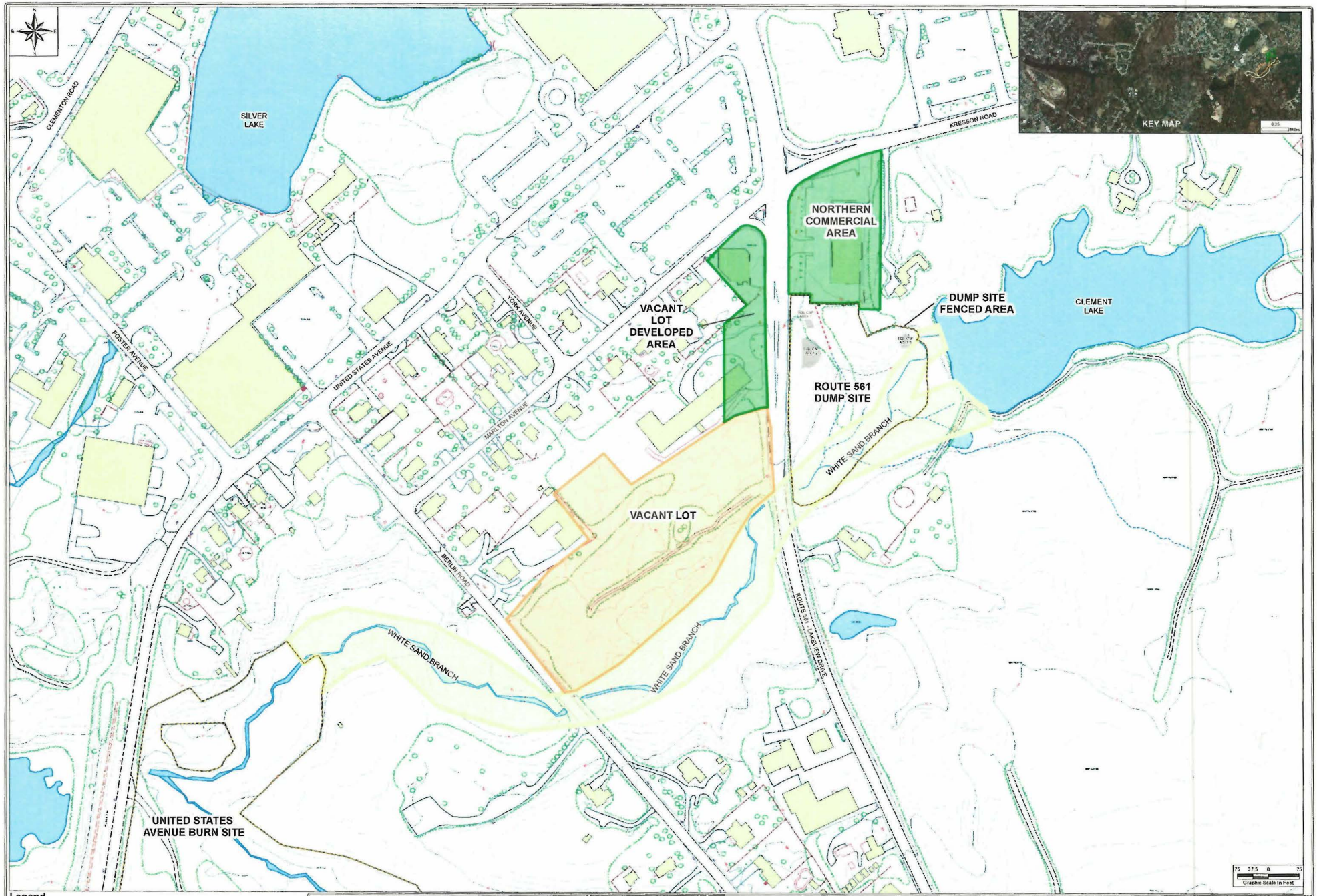

COMPREHENSIVE SITE MAP
N
W
E
S
ROUTE 561 - LAKEVIEW DRIVE
SHERWIN-WILLIAMS HILLIARDS CREEK SITE
FORMER MANUFACTURING PLANT AREA
SILVER LAKE
COOPER RIVER
WHITE HORSE ROAD
KRESSON ROAD
NICHOLSON BRANCH
KIRKWOOD-GIBBSBORO ROAD
FOSTER AVENUE
CLEMENT LAKE
KIRKWOOD LAKE
HILLIARDS CREEK
ROUTE 561 DUMP SITE
VACANT LOT
WILDLIFE REFUGE FENCED AREA
BRIDGEWOOD LAKE
WHITE SAND BRANCH
BERLIN ROAD
COOPER RIVER HEADWATERS
HILLIARDS ROAD
RAILROAD TRACK AREA
HONEY RUN BROOK
CLEMENTON-GIBBSBORO ROAD
UNITED STATES AVENUE
UNITED STATES AVENUE BURN SITE
ROUTE 561 - LAKEVIEW DRIVE
Legend
LAKE AREAS
STREAM AREAS
OTHER AREAS
FENCED AREAS
0.25
0.125
0
0.25
Miles

Figure 1



Legend

- Northern Commercial Area
- Vacant Lot Developed Area
- Vacant Lot
- White Sand Branch
- Fence Boundary
- 15-Inch Diameter Culvert From Parking Lot
- Soil Cap Area
- Perennial Stream Channel
- Intermittent Stream Channel

Note
The Dump Site fence boundary on the base map was updated on June 30, 2011.

WESTON SOLUTIONS SM

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SHERWIN WILLIAMS

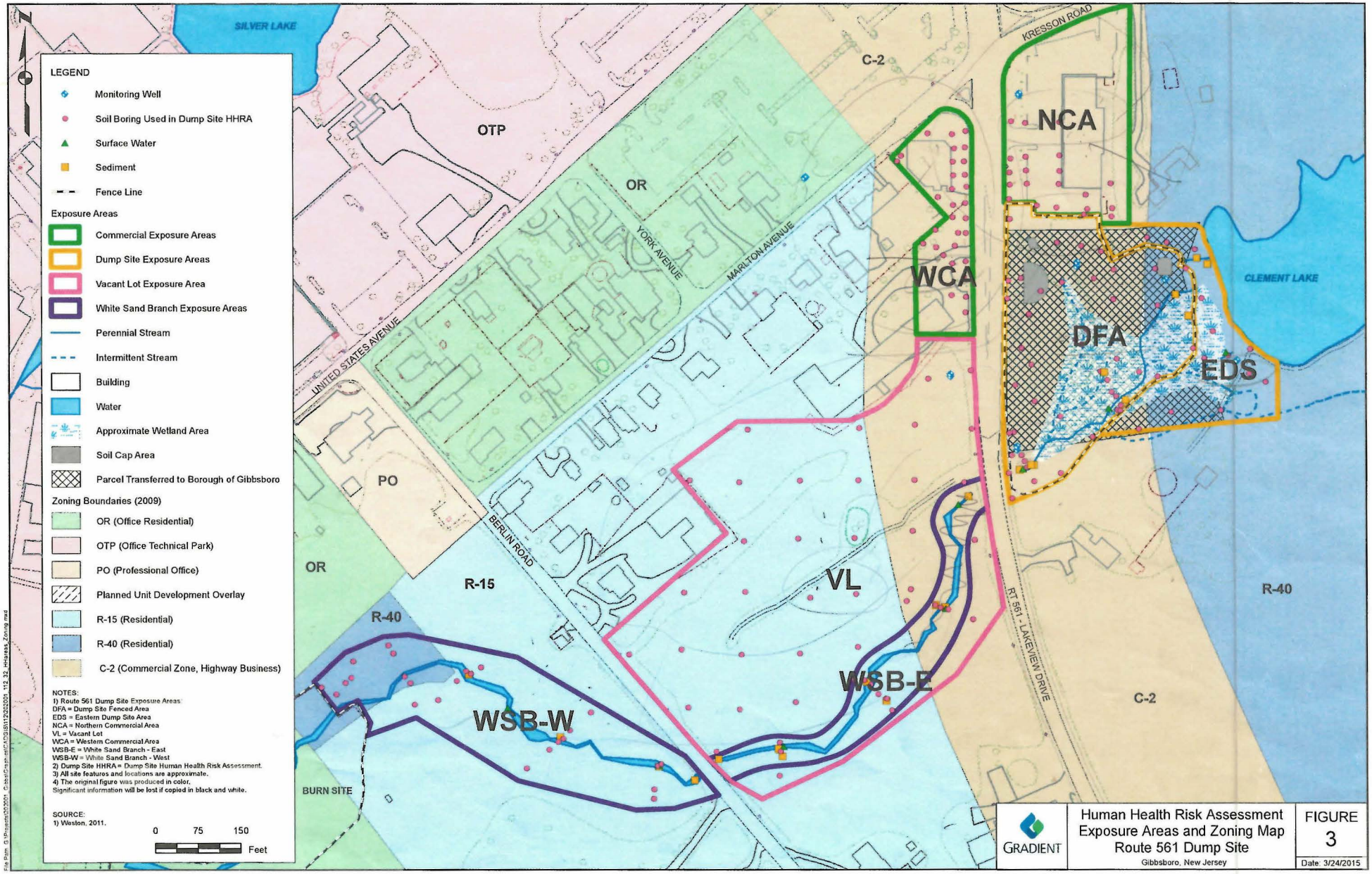
REPORT DATE: May 2016	PROJECT MANAGER: S. Jones
DRAWING: 17952_DS_VI_WSB_Key_Map.mxd PATH: L:\SHERWIN\GIS\MXD\2016_04_DS_FS	CHECKED BY: A. Fischer
REVISION No.: 0	CONTRACT No.: DELIVERY ORDER NO.:
WORK ORDER No.: 20076.022.083.0008	DRAWN/MODIFIED BY: K. Heulitt DATE CREATED: 5/2/2016

CLIENT NAME: The Sherwin-Williams Company

PROJECT NAME: Route 561 Dump Site Feasibility Study

DRAWING TITLE: ROUTE 561 DUMP SITE KEY MAP

FIGURE	SCALE	DATE
2	1 " = 75 '	5/13/2016


LEGEND
Monitoring Well
Soil Boring Used in Dump Site HHRA
Surface Water
Sediment
Fence Line
Exposure Areas
Commercial Exposure Areas
Dump Site Exposure Areas
Vacant Lot Exposure Area
White Sand Branch Exposure Areas
Perennial Stream
Intermittent Stream
Building
Water
Approximate Wetland Area
Soil Cap Area
Parcel Transferred to Borough of Gibbsboro
Zoning Boundaries (2009)
OR (Office Residential)
OTP (Office Technical Park)
PO (Professional Office)
Planned Unit Development Overlay
R-15 (Residential)
R-40 (Residential)
C-2 (Commercial Zone, Highway Business)
NOTES:
1) Route 561 Dump Site Exposure Areas:
DFA = Dump Site Fenced Area
EDS = Eastern Dump Site Area
NCA = Northern Commercial Area
VL = Vacant Lot
WCA = Western Commercial Area
WSB-E = White Sand Branch - East
WSB-W = White Sand Branch - West
2) Dump Site HHRA = Dump Site Human Health Risk Assessment.
3) All site features and locations are approximate.
4) The original figure was produced in color.
Significant information will be lost if copied in black and white.
SOURCE:
1) Weston, 2011.
0
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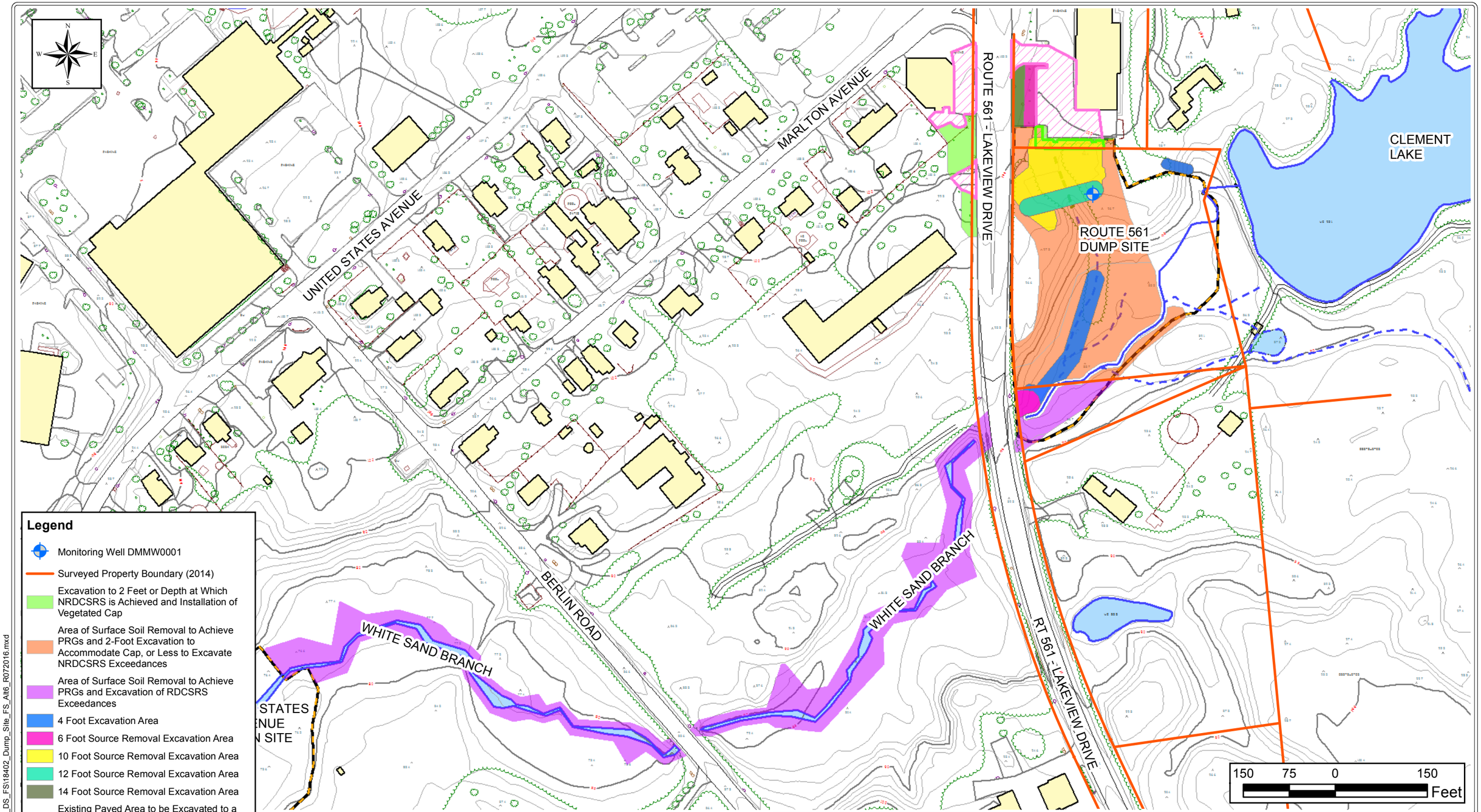
150
Feet
SILVER LAKE
OTP
OR
C-2
KRESSON ROAD
NCA
WCA
DFA
EDS
CLEMENT LAKE
YORK AVENUE
MARLTON AVENUE
UNITED STATES AVENUE
PO
BERLIN ROAD
R-15
R-40
VL
WSB-E
WSB-W
RT 561 - LAKEVIEW DRIVE
BURN SITE
GRADIENT
Human Health Risk Assessment
Exposure Areas and Zoning Map
Route 561 Dump Site
Gibbsboro, New Jersey
FIGURE
3
Date: 3/24/2015



Legend

- Monitoring Well DMMW0001
- Surveyed Property Boundary (2014)
- Excavation to 2 Feet or Depth at Which NRDCSRS is Achieved and Installation of Vegetated Cap
- Area of Surface Soil Removal to Achieve PRGs and 2-Foot Excavation to Accommodate Cap, or Less to Excavate NRDCSRS Exceedances
- Area of Surface Soil Removal to Achieve PRGs and Excavation of RDCSRS Exceedances
- 4 Foot Excavation Area
- 6 Foot Source Removal Excavation Area
- 10 Foot Source Removal Excavation Area
- 12 Foot Source Removal Excavation Area
- 14 Foot Source Removal Excavation Area
- Existing Paved Area to be Excavated to a Minimum 2 Feet and Capped with New Pavement
- New Pavement Cap Extending 20 Feet onto Dump Site Fenced Area
- 15-Inch Diameter Culvert From Parking Lot
- Perennial Stream Channel
- Intermittent Stream Channel
- Fence Boundary

Sources:
NJDEP Office of Information Resources Management, Bureau of Geographic Information Systems. Land Use/Land Cover 2012 Update, Edition 20150217, Subbasin 02040202 - Lower Delaware. http://www.nj.gov/dep/gis/lulc12c.html. February 2015.

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PROJECT NAME: Route 561 Dump Site Feasibility Study

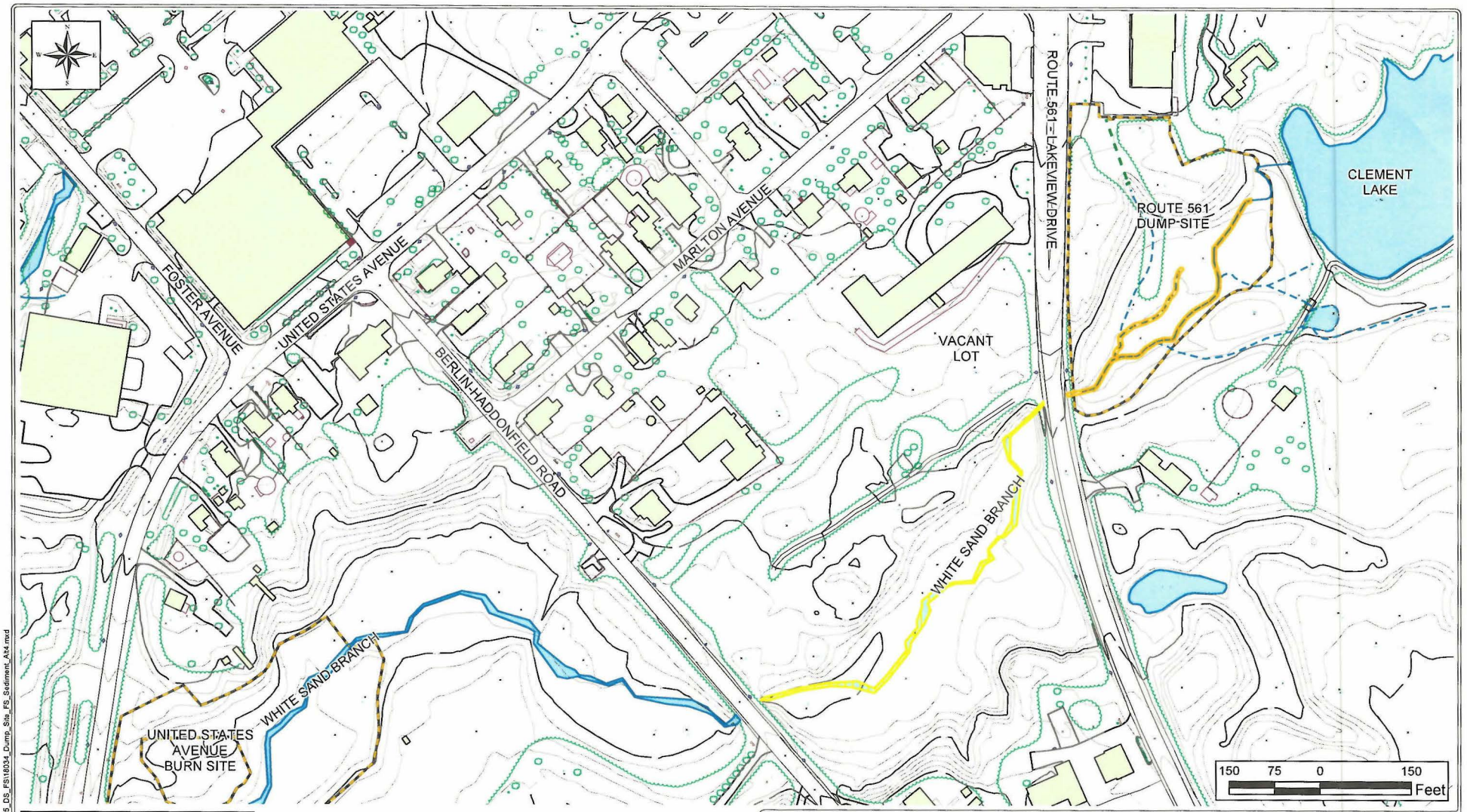
CLIENT NAME: The Sherwin-Williams Company

REPORT DATE: May 2016

TITLE: SOIL ALTERNATIVE 6 GROUNDWATER SOURCE AND TARGETED SURFACE SOIL REMOVAL, CAPPING AND INSTITUTIONAL CONTROLS

DATE: 7/20/2016

FIGURE #: 4



Legend

- 2 Foot Excavation Depth
- 2.5 Foot Excavation Depth
- 15-Inch Diameter Culvert From Parking Lot
- Perennial Stream Channel
- Intermittent Stream Channel
- Fence Boundary

Sources:
NJDEP Office of Information Resources Management, Bureau of Geographic Information Systems, Land Use/Land Cover 2012 Update, Edition 20150217, Subbasin 02040202 - Lower Delaware. http://www.nj.gov/dep/gis/lulc12c.html. February 2015.

SHERWIN Williams

PROJECT NAME: Route 561 Dump Site Feasibility Study	TITLE: SEDIMENT ALTERNATIVE 4 REMOVAL OF ALL SEDIMENT WITH CONTAMINANTS GREATER THAN PRGs
CLIENT NAME: The Sherwin-Williams Company	
REPORT DATE: May 2016	WESTON SOLUTIONS, INC. DATE: 5/13/2016

Figure 5

L:\SHERWIN\GIS\MXD\2016_05_DS_FS\18034_Dump_Sts_FS_Sediment_Alt4.mxd

APPENDIX II-A: ARAR Tables

Table 1
Chemical-Specific Applicable or Relevant and Appropriate Requirements (ARARs)

Media	Authority	Citation	Law/Regulation	Description	ARAR Status
Surface Water	State of New Jersey	N.J.A.C 7:9B	Surface Water Quality Standards	Establishes the water quality standards for State's surface waters based on the type of surface water use including narrative and constituent-specific standards.	ARAR Applicable
Soil	State of New Jersey	N.J.A.C 7:26D	Soil Remediation Standards	Establishes the minimum residential and non-residential direct contact standards for soil remediation.	ARAR Applicable

Table 2
Location-Specific Applicable or Relevant and Appropriate Requirements (ARARs)

Authority	Citation	Law/Regulation	Description	ARAR Status
Federal	16 U.S.C. 1531 *et seq.* 50 C.F.R. §§ 17.21(c), 17.31(a)	Endangered Species Act	The Endangered Species Act provides broad protection for species of fish, wildlife and plants that are listed as threatened or endangered in the U.S. or elsewhere.	ARAR Potentially Applicable
Federal	16 U.S.C. § 662 40 C.F.R. 6.302(g)	Fish and Wildlife Coordination Act	Requires consideration of the effects of a proposed action on wetlands and areas affecting streams (including floodplains), as well as other protected habitats. Federal agencies must consult with the United States Fish and Wildlife Service (USFWS) and the appropriate state agency with jurisdiction over wildlife resources prior to issuing permits or undertaking actions involving the modification of any body of water (including impoundment, diversion, deepening, or otherwise controlled or modified for any purpose).	ARAR Applicable
State of New Jersey	N.J.A.C 7:5C	Endangered Plant Species Program	Details the protection of critical habitats of endangered and threatened species in New Jersey	ARAR Potentially Applicable
State of New Jersey	N.J.S.A. 13:9B-1 N.J.A.C. 7:7A	Freshwater Wetlands Protection Act	Regulates construction or other activities that will have an impact on wetlands	ARAR Applicable
State of New Jersey	N.J.S.A. 58:16A-50 N.J.A.C. 7:13	Flood Hazard Area Control Act	Regulates activities within flood hazard areas that will impact stream carrying capacity or flow velocity to avoid increasing impacts of flood waters, to minimize degradation of water quality, protect wildlife and fisheries, and protect and enhance public health and welfare	ARAR Potentially applicable

Authority	Citation	Law/Regulation	Description	ARAR Status
Federal	40 C.F.R. 6 Appendix A and 40 C.F.R. 9	Executive Order 11988, Floodplain Management	Directs federal agencies to evaluate the potential effects of actions that may be taken in a floodplain and to avoid, to the extent possible, long-term and short-term adverse effects associated with the occupancy and modification of floodplains, and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative. Applies to federally funded projects.	TBC
Federal	40 C.F.R. 6 Appendix A and 40 C.F.R. 9	Executive Order 11990, Protection of Wetlands	Directs that activities conducted by federal agencies avoid, to the extent possible, long-term and short-term adverse effects associated with the modification or destruction of wetlands. Federal agencies are to avoid direct or indirect support of new construction in wetlands when there are practical alternatives; harm to wetlands must be minimized when there is no practical alternative available. These considerations are applicable to any remedial work in wetlands.	TBC
Federal	OSWER Directive 9280.0-02	EPA's 1985 Policy, Floodplain/Wetlands Assessments for CERCLA	Superfund actions should meet the substantive requirements of E.O. 11988, E.O. 11990 and Appendix A of 40 CFR Part 6.	TBC

Table 3

Action-Specific Applicable or Relevant and Appropriate Requirements (ARARs)

Authority	Citation	Law/Regulation	Description	ARAR Status
Federal	CWA §404 40 C.F.R. Parts 230 to 233	CWA	Regulates the discharge of dredged and fill material into waters of the United States including wetlands and including return flows from such activity.	ARAR Applicable
Federal	42 U.S.C. § 6921 *et seq.*	Resource Conservation and Recovery Act (RCRA)	RCRA establishes requirements for generators, transporters and facilities that manage non- hazardous solid waste, and hazardous wastes, applicable to dredged material management: 40 C.F.R. 257 establishes criteria for use in determining which solid waste disposal facilities and practices pose a reasonable probability of adverse effects on health or the environment. 40 C.F.R. 262 provides general requirements for generators of hazardous waste including registration, manifesting, packaging, recordkeeping and accumulation time. 40 C.F.R. 264 and 265 regulate storage of hazardous waste. 40 C.F.R. 268 contains land disposal restrictions.	ARAR Applicable
Federal	49 U.S.C. §§ 1801-1819 49 C.F.R Parts 107, 171.1-172.604	Hazardous Waste Transportation	Regulates the transportation of hazardous materials, and includes the procedures for the packaging, labeling, manifesting, and transporting of hazardous waste to a licensed off-site disposal facility.	ARAR Applicable

Authority	Citation	Law/Regulation	Description	ARAR Status
State of New Jersey	N.J.A.C 7:8	Stormwater Management Rules	Contains general requirements for stormwater management plans and stormwater control ordinances. Provides the content requirements and procedures for the adoption and implementation of regional stormwater management plans and municipal stormwater management plans.	ARAR Potentially Applicable
State of New Jersey	N.J.A.C 7:14A	Pollutant Discharge Elimination System (NJPDES)	Establishes effluent discharge standards to protect water quality. N.J.A.C. 7:14, Subchapter 12, Appendix B identifies effluent standards (for specified constituents) for remediation projects.	ARAR Applicable
State of New Jersey	N.J.S.A. §13:1E-1, *et seq.* N.J.A.C 7:26	Solid Waste Management Act (NJSWMA) and Rules	Establishes standards and procedures pertaining to, among other things, the management, treatment and disposal of solid wastes. On September 14, 1998, EPA granted New Jersey full program determination of adequacy for all areas of its municipal solid waste landfill program.	ARAR Applicable
State of New Jersey	N.J.A.C 7:26G	Hazardous Waste Management	Procedure for identifying and listing hazardous wastes. Applies to any person who generates, transports, stores, treats or disposes of a hazardous waste. Establishes standards for disposal of hazardous wastes generated during remediation and the requirements for waste transporters, manifesting, and recordkeeping.	ARAR Applicable
State of New Jersey	N.J.A.C 7:26E-5	Technical Requirements for Site Remediation, May 2012	Sets forth technical requirements for site remediation including preliminary assessments, remedial investigations, remedial action work plans, remediation, post remediation monitoring and institutional controls.	ARAR Relevant and Appropriate (only certain sections are ARARs)

Authority	Citation	Law/Regulation	Description	ARAR Status
State of New Jersey	N.J.S.A. § 26:2C *et seq.* N.J.A.C. 7:27	Air Pollution Control Act	Governs emissions that introduce contaminants into the ambient atmosphere for a variety of substances and from a variety of sources; controls and prohibits air pollution, particle emissions and toxic VOC emissions.	ARAR Potentially Applicable
State of New Jersey	N.J.S.A., §13:1g-1 *et seq.* N.J.A.C. 7:20	Noise Control	Regulates noise levels for certain types of activities and facilities such as commercial, industrial, community service and public service facilities. Relevant and appropriate for establishing allowable noise levels.	ARAR Relevant and Appropriate

ARAR – applicable or relevant and appropriate requirement
C.F.R. – Code of Federal Regulations
N.J.A.C. – New Jersey Administrative Code
N.J.S.A. – New Jersey Statutes Annotated
TBC – To Be Considered
U.S.C. – United States Code

APPENDIX II-B: Risk Tables

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

Scenario Timeframe: Future
Medium: Groundwater
Exposure Medium: Sitewide Groundwater

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Tap Water (Sitewide)	Arsenic	0.00026(J)	0.0461	mg/L	14/25	0.046	mg/L	Maximum Concentration
	Cobalt	0.0016(J)	0.0066(J)	mg/L	10/25	0.0066	mg/L	Maximum Concentration
	Cyanide	0.0016(J)	0.0219	mg/L	9/23	0.022	mg/L	Maximum Concentration
	Iron	0.0185(J)	44.8	mg/L	25/25	45	mg/L	Maximum Concentration
	Manganese	0.0062(J)	0.643	mg/L	25/25	0.64	mg/L	Maximum Concentration
	Thallium	0.000034(J)	0.0023(J)	mg/L	5/25	0.0023	mg/L	Maximum Concentration

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface Soil (0-2 ft bgs)

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Surface soil on DFA	Arsenic	0.48(J)	14400(J)	mg/kg	82/86	2195	mg/kg	97.5% KM (Chebyshev) UCL
	Cyanide	0.1(J)	9963(J)	mg/kg	61/86	955	mg/kg	97.5% KM (Chebyshev) UCL
Surface Soil on EDS	Arsenic	0.47(J)	110(J)	mg/kg	12/15	55	mg/kg	97.5% KM (Chebyshev) UCL
Surface Soil on VL	Arsenic	0.4(J)	1770(J)	mg/kg	47/48	565	mg/kg	99% KM (Chebyshev) UCL
	Cyanide	0.063(J)	1630(J)	mg/kg	25/48	383	mg/kg	99% KM (Chebyshev) UCL
	Thallium	0.52(J)	4.1(J)	mg/kg	14/48	0.85	mg/kg	95% KM (t) UCL
Surface Soil on WSB-W	Arsenic	0.86(J)	211(J)	mg/kg	25/26	104	mg/kg	95% KM (Chebyshev) UCL
	Thallium	0.65(J)	1.975(J+)	mg/kg	2/26	0.92	mg/kg	95% KM (t) UCL

Scenario Timeframe: Current/Future
Medium: Soil
Exposure Medium: Surface and Subsurface Soils (0-10 ft bgs)

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Soil on DFA	Arsenic	0.43(J)	14400(J)	mg/kg	134/140	1485	mg/kg	97.5% KM (Chebyshev) UCL
	Cyanide	0.088(J)	9963(J)	mg/kg	89/140	597	mg/kg	97.5% KM (Chebyshev) UCL
Soil on NCA	Arsenic	0.95(J)	6460(+)	mg/kg	53/53	1056	mg/kg	95% Chebyshev (Mean, Sd) UCL

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

Soil on WCA	Arsenic	0.88(J)	3180	mg/kg	74/78	392	mg/kg	97.5% KM (Chebyshev) UCL
Soil on VL	Arsenic	0.27(J)	1770(J)	mg/kg	82/91	215	mg/kg	97.5% KM (Chebyshev) UCL

Scenario Timeframe: Current/Future
Medium: Sediment
Exposure Medium: Sediment (0-0.5 ft bgs)

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Sediment in DFA	Arsenic	1.3(J)	6130(J)	mg/kg	7/7	4153	mg/kg	99% KM (Chebyshev) UCL
Sediments in WSB-E	Arsenic	1.0475(J+)	1170(J)	mg/kg	9/9	357	mg/kg	95% KM (Chebyshev) UCL

Scenario Timeframe: Future
Medium: Surface Water
Exposure Medium: Surface Water

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	Exposure Point Concentration Units	Statistical Measure
		Min	Max					
Surface Water in DFA	Arsenic	0.0052(J)	62.8	mg/L	4/6	36	mg/L	95% KM (t) UCL

Footnotes:
(1) Lead was also identified as a site-related COC; the medium-specific EPCs for lead can be found in Table 7.

(2) The UCLs were calculated using EPA's ProUCL software (Version 5); when available, UCLs were used as EPCs.

Definitions:
" +" = Value is the average of a parent sample and a field duplicate sample
EPC = Exposure point concentration
ft bgs = Feet below ground surface
J = Estimated value (qualifier)
mg/kg = Milligrams per kilogram
mg/L = Milligrams per liter
UCL = Upper confidence limit of mean

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

This table presents the chemicals of concern (COCs) along with exposure point concentrations (EPCs) for each of the COCs detected in site media (*i.e.*, the concentration used to estimate the exposure and risk from each COC). The table includes the range of concentrations detected for each COC, as well as the frequency of detection (i.e., the number of times the chemical was detected in the samples collected at the site), the EPC and how it was derived.

Table 2
Selection of Exposure Pathways

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/Future	Soil	Soil (0-10 feet)	Dump Site Fenced Area (DFA) Eastern Dump Site Area (EDS) Northern Commercial Area (NCA) Western Commercial Area (WCA) Vacant Lot (VL)	Utility Worker	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil during utility work
				Construction Worker	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil during future construction activities
Current/Future	Soil	Soil (0-2 feet)	Dump Site Fenced Area (DFA) Northern Commercial Area (NCA) Western Commercial Area (WCA) Vacant Lot (VL)	Outdoor Worker	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil adjacent to commercial/industrial buildings
Current/Future	Soil	Soil (0-2 feet)	Vacant Lot (VL) White Sand Branch-West (WSB-W)	Recreator	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil while visiting site
					Adolescent	Ingestion Dermal Inhalation	Quant	Exposure to soil while visiting site
Future	Soil	Soil (0-2 feet)	Eastern Dump Site Area (EDS) Vacant Lot (VL) White Sand Branch-West (WSB-W)	Resident	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil at future residence
					Child	Ingestion Dermal Inhalation	Quant	Exposure to soil at future residence
Future	Soil	Soil (0-2 feet)	Dump Site Fenced Area (DFA) Eastern Dump Site Area (EDS)	Recreator	Adult	Ingestion Dermal Inhalation	Quant	Exposure to soil while visiting site
					Adolescent	Ingestion Dermal Inhalation	Quant	Exposure to soil while visiting site
Current/Future	Groundwater	Shallow Groundwater	Dump Site Fenced Area (DFA) Eastern Dump Site Area (EDS) Northern Commercial Area (NCA) Western Commercial Area (WCA) Vacant Lot (VL)	Utility Worker	Adult	Dermal	Quant	Exposure to groundwater during utility work
				Construction Worker	Adult	Dermal	Quant	Exposure to groundwater during construction activities
Future	Groundwater	Shallow and Deep Groundwater	Sitewide	Resident	Adult	Ingestion Dermal Inhalation	Quant	Exposure to groundwater at future residence
					Child	Ingestion Dermal Inhalation	Quant	Exposure to groundwater at future residence
Current/Future	Sediment	Sediment	White Sand Branch - East* (WSB-E) White Sand Branch - West (WSB-W)	Recreator	Adult	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
					Adolescent	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
Future	Sediment	Sediment	Dump Site Fenced Area (DFA) Eastern Dump Site Area (EDS)	Recreator	Adult	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
					Adolescent	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
Future	Sediment	Sediment	Eastern Dump Site Area (EDS) White Sand Branch - East* (WSB-E) White Sand Branch - West (WSB-W)	Resident	Adult	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
					Child	Ingestion Dermal	Quant	Exposure to sediment while wading in White Sand Branch
Current/Future	Surface Water	Surface Water	White Sand Branch - East* (WSB-E) White Sand Branch - West (WSB-W)	Recreator	Adult	Dermal	Quant	Exposure to surface water while wading in White Sand Branch
					Adolescent	Dermal	Quant	Exposure to surface water while wading in White Sand Branch
Future	Surface Water	Surface Water	Dump Site Fenced Area (DFA) Eastern Dump Site Area (EDS)	Recreator	Adult	Dermal	Quant	Exposure to surface water while wading in White Sand Branch
					Adolescent	Dermal	Quant	Exposure to surface water while wading in White Sand Branch
Future	Surface Water	Surface Water	Eastern Dump Site Area (EDS) White Sand Branch - East* (WSB-E) White Sand Branch - West (WSB-W)	Resident	Adult	Dermal	Quant	Exposure to surface water while wading in White Sand Branch
					Child	Dermal	Quant	Exposure to surface water while wading in White Sand Branch

Quant = Quantitative risk analysis performed

*Since White Sand Branch-East is located within the Vacant Lot Exposure Area, sediment and surface water exposures in the White Sand Branch-East were evaluated as part of the risks for the Vacant Lot.

Summary of Selection of Exposure Pathways

This table describes the exposure pathways associated with the varying media (soil, sediment, surface water and groundwater) that were evaluated in the risk assessment along with the rationale for the inclusion of each pathway. Exposure media, exposure points, and characteristics of receptor populations are also included.

Table 3
Noncancer Toxicity Data Summary

Pathway: Ingestion/Dermal

Chemicals of Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Absorp. Efficiency (Dermal)	Adjusted RfD for Dermal[1]	Adj. Dermal RfD Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfD
Arsenic[2]	Chronic	3.0E-04	mg/kg-day	1	3.0E-04	mg/kg-day	Skin	3	IRIS	2/1/1993
Cobalt	Chronic	3.0E-04	mg/kg-day	1	3.0E-04	mg/kg-day	Endocrine	3,000	PPRTV	NA
Cyanide	Chronic	6.0E-04	mg/kg-day	1	6.0E-04	mg/kg-day	Reproductive	3,000	IRIS	9/28/2010
Iron	Chronic	7.0E-01	mg/kg-day	1	7.0E-01	mg/kg-day	Gastrointestinal	1.5	PPRTV	NA
Lead[3]	Chronic	NA	mg/kg-day	1	NA	mg/kg-day	See Footnote 3	NA	NA	NA
Manganese	Chronic	2.4E-02	mg/kg-day	0.04	9.6E-04	mg/kg-day	Nervous system	3	IRIS[4]	5/1/1996
Thallium	Chronic	1.0E-05	mg/kg-day	1	1.0E-05	mg/kg-day	Skin	3,000	PPRTV (Appendix)	NA

Pathway: Inhalation

Chemicals of Concern	Chronic/ Subchronic	Inhalation RfC	Inhalation RfC Units	Inhalation RfD (If available)	Inhalation RfD Units (If available)	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfC
Arsenic	Chronic	1.5E-05	mg/m^3	NA	NA	Lung	30	CalEPA	12/1/2008
Cobalt	Chronic	6.0E-06	mg/m^3	NA	NA	Respiratory	300	PPRTV	8/25/2008
Cyanide	Chronic	8.0E-04	mg/m^3	NA	NA	Endocrine	3,000	IRIS (Hydrogen Cyanide & Cyanide Salts)	9/28/2010
Iron	Chronic	NA	mg/m^3	NA	NA	NA	NA	NA	NA
Lead[3]	Chronic	NA	mg/m^3	NA	NA	NA	NA	NA	NA
Manganese	Chronic	5.0E-05	mg/m^3	NA	NA	Nervous system	1,000	IRIS	12/1/1993
Thallium	Chronic	NA	mg/m^3	NA	NA	NA	NA	NA	NA

Footnotes:

(1) Adjusted RfD for Dermal = Oral RfD x Oral Absorption Efficiency for Dermal (RAGS E, 2004)

(2) An oral relative bioavailability factor of 60% was used when quantifying risks from soil ingestion.

(3) Risks and hazards from lead exposure are not evaluated in the same manner as the other contaminants; See Table 7 for the summary of risks resulting from lead exposure.

(4) The RfD for manganese was based on non-diet contributions as recommended in the IRIS assessment and User's Guide of the RSL tables; a modifying factor of 3 was also used.

Definitions:

IRIS = Integrated Risk Information System, U.S. EPA

NA = Not available

mg/m^3 = Milligrams per cubic meter

mg/kg-day = Milligrams per kilogram per day

PPRTV = Provisional Peer Reviewed Toxicity Values, U.S. EPA

PPRTV (Appendix) = PPRTV Screening Toxicity Values- available in the appendix of the PPRTV assessment

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
Arsenic[1]	1.5E+00	$(mg/kg\text{-}day)^{-1}$	1.5E+00	$(mg/kg\text{-}day)^{-1}$	A	IRIS	4/10/1998
Cobalt	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	NA	NA	NA
Cyanide	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	D	IRIS	9/28/2010
Iron	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	NA	NA	NA
Lead[2]	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	11/1/1993
Manganese	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	D	IRIS	12/1/1996
Thallium	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	D	IRIS (Thallium Soluble Salts)	9/30/2009

Pathway: Inhalation

Chemical of Concern	Unit Risk	Units	Inhalation Cancer Slope Factor	Slope Factor Units	Weight of Evidence/ Cancer Guideline	Source	Date
Arsenic	4.3E-03	$(\mu g/m^3)^{-1}$	NA	NA	A	IRIS	4/10/1998
Cobalt	9.0E-03	$(\mu g/m^3)^{-1}$	NA	NA	B2	PPRTV	8/25/2008
Cyanide	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA
Iron	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA
Lead[2]	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA
Manganese	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA
Thallium	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA

Footnotes:

(1) An oral relative bioavailability factor of 60% was used when quantifying risks from soil ingestion.

(2) Risks and hazards from lead exposure are not evaluated in the same manner as the other contaminants; See Table 7 for the summary of risks resulting from lead exposure.

Definitions:

IRIS = Integrated Risk Information System, U.S. EPA

NA = Not available

PPRTV = Provisional Peer Reviewed Toxicity Values, U.S. EPA

$(\mu g/m^3)^{-1}$ = Per micrograms per cubic meter

$(mg/kg\text{-}day)^{-1}$ = Per milligrams per kilogram per day

EPA Weight of Evidence (EPA, 1986):

A = Human carcinogen

B2 = Probable Human Carcinogen - based on sufficient evidence of carcinogenicity in animals and inadequate or no evidence in humans

D = Not classifiable as to human carcinogenicity

Summary of Toxicity Assessment

This table provides carcinogenic risk information which is relevant to the contaminants of concern at the Site. Toxicity data are provided for the ingestion, dermal and inhalation routes of exposure.

Table 5
Risk Characterization Summary - Noncarcinogens

Scenario Timeframe: Future
Receptor Population: Resident at the Eastern Dump Site (EDS)
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Groundwater	Groundwater	Tapwater	Arsenic	Skin	7.7	0.034	NA	7.7
			Cobalt	Endocrine	1.1	0.0019	NA	1.1
			Cyanide	Reproductive/ Endocrine	1.8	0.0080	13	15
			Iron	Gastrointestinal	3.2	0.014	NA	3.2
			Manganese	Nervous System	1.3	0.0059	NA	1.3
			Thallium	Skin	11.5	0.051	NA	11.5
							Groundwater Hazard Index Total[1] =	**42**
Soil	Surface Soil	Surface Soil on EDS	Arsenic	Skin	1.4	0.19	0.0011	1.6
							Soil Hazard Index Total[1] =	**2.5**
							Receptor Hazard Index[1] =	**44**
							Skin HI=	**22**
							Endocrine HI=	**14**
							Gastrointestinal HI=	**3.4**
							Nervous System HI=	**1.8**
							Reproductive HI=	**1.9**

Scenario Timeframe: Future
Receptor Population: Resident at the Vacant Lot* (VL)
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Groundwater	Sitewide Groundwater	Tapwater	Arsenic	Skin	7.7	0.034	NA	7.7
			Cobalt	Endocrine	1.1	0.0019	NA	1.1
			Cyanide	Reproductive/ Endocrine	1.8	0.0080	13	15
			Iron	Gastrointestinal	3.2	0.014	NA	3.2
			Manganese	Nervous System	1.3	0.0059	NA	1.3
			Thallium	Skin	11.5	0.051	NA	11.5
							Groundwater Hazard Index Total[1] =	**42**
Soil	Surface Soil	Surface Soil on VL	Arsenic	Skin	14.4	1.94	0.0112	16
			Cyanide	Reproductive	8.2	NA	0.00014	8.2
							Soil Hazard Index Total[1] =	**26**
Sediment	Sediment	Sediments in WSB-E	Arsenic	Skin	1.1	0.15		1.3
							Sediment Hazard Index Total[1] =	**2.4**
							Receptor Hazard Index[1] =	**71**
							Skin HI=	**39**
							Endocrine HI=	**14**
							Reproductive HI=	**10**
							Gastrointestinal HI=	**3.5**
							Nervous System HI=	**2.0**

Scenario Timeframe: Future
Receptor Population: Resident at the Western portion of White Sands Branch (WSB-W)
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total

Table 5
Risk Characterization Summary - Noncarcinogens

Groundwater	Sitewide Groundwater	Tapwater	Arsenic	Skin	7.7	0.034	NA	7.7
			Cobalt	Endocrine	1.1	0.0019	NA	1.1
			Cyanide	Reproductive/ Endocrine	1.8	0.0080	13	15
			Iron	Gastrointestinal	3.2	0.014	NA	3.2
			Manganese	Nervous System	1.3	0.0059	NA	1.3
			Thallium	Skin	11.5	0.051	NA	11.5
							Groundwater Hazard Index Total[1] =	**42**
Soil	Surface Soil	Surface Soil on WSB-W	Arsenic	Skin	2.7	0.36	0.0021	3.0
							Soils Hazard Index Total[1] =	**5.0**
							Receptor Hazard Index[1] =	**47**
							Skin HI=	**23**
							Endocrine HI=	**14**
							Gastrointestinal HI=	**3.6**
							Nervous System HI=	**2.0**
							Reproductive HI=	**1.9**

Scenario Timeframe: Future
Receptor Population: Recreator at the Dump Site Fenced Area (DFA)
Receptor Age: Adolescent

Medium	**Exposure Medium**	**Exposure Point**	**Chemical Of Concern**	**Primary target Organ**	**Noncarcinogenic Hazard Quotient**			
					Ingestion	**Dermal**	**Inhalation**	**Exposure Routes Total**
Soil	Surface Soil	Surface Soil on DFA	Arsenic	Skin	4.1	0.66	0.0062	4.7
			Cyanide	Reproductive	1.5	NA	0.000051	1.5
							Soils Hazard Index Total[1] =	**6.4**
Sediment	Sediment	Sediment in DFA	Arsenic	Skin	2.3	1.05		3.3
							Sediment Hazard Index Total[1] =	**4.0**
Surafe Water	Surface Water	Surface Water in DFA	Arsenic	Skin		1.51		1.5
							Surface Water Hazard Index Total[1] =	**2.1**
							Receptor Hazard Index[1] =	**12**
							Skin HI=	**10**
							Reproductive HI=	**1.9**

Scenario Timeframe: Future
Receptor Population: Recreator at the Dump Site Fenced Area (DFA)
Receptor Age: Adult

Medium	**Exposure Medium**	**Exposure Point**	**Chemical Of Concern**	**Primary target Organ**	**Noncarcinogenic Hazard Quotient**			
					Ingestion	**Dermal**	**Inhalation**	**Exposure Routes Total**
Soil	Surface Soil	Surface Soil on DFA	Arsenic	Skin	2.3	0.48	0.0062	2.7
							Soils Hazard Index Total[1] =	**3.7**
Sediment	Sediment	Sediment in DFA	Arsenic	Skin	1.3	0.75		2.0
							Sediment Hazard Index Total[1] =	**2.4**
							Receptor Hazard Index[1] =	**7.5**
							Skin HI=	**6.1**

Scenario Timeframe: Current/Future
Receptor Population: Outdoor Workerat the Dump Site Fenced Area (DFA)
Receptor Age: Adult

Medium	**Exposure Medium**	**Exposure Point**	**Chemical Of Concern**	**Primary target Organ**	**Noncarcinogenic Hazard Quotient**			
					Ingestion	**Dermal**	**Inhalation**	**Exposure Routes Total**
Soil	Surface Soil	Surface Soil on DFA	Arsenic	Skin	3.4	0.70	0.0093	4.1
							Soils Hazard Index Total[1] =	**5.5**

Table 5
Risk Characterization Summary - Noncarcinogens

Receptor Hazard Index[1] =	**5.5**
Skin HI=	**4.2**

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker the Dump Site Fenced Area (DFA)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Soil	Soil on DFA	Arsenic	Skin	8.4	1.32	0.0070	9.7
			Cyanide	Reproductive	2.8	NA	0.000053	2.8
							Soils Hazard Index Total[1] =	**13**
							Receptor Hazard Index[1] =	**13**
							Skin HI=	**10**
							Reproductive HI=	**2.8**

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker the Northern Commercial Area (NCA)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Soil	Soil on NCA	Arsenic	Skin	6.0	0.94	0.0050	6.9
							Soils Hazard Index Total[1] =	**8.3**
							Receptor Hazard Index[1] =	**8.3**
							Skin HI=	**7.2**

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker the Western Commercial Area (WCA)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Soil	Soil on WCA	Arsenic	Skin	2.2	0.35	0.0018	2.6
							Soils Hazard Index Total[1] =	**2.7**
							Receptor Hazard Index[1] =	**2.7**
							Skin HI=	**2.6**

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker the Vacant Lot (VL)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Soil	Soil on VL	Arsenic	Skin	1.2	0.19	0.0010	1.4
							Soils Hazard Index Total[1] =	**2.3**
							Receptor Hazard Index[1] =	**2.4**
							Skin HI=	**1.6**

Footnotes:
(1) The HI represents the summed HQs for all chemicals of potential concern at the site, not just those requiring remedial action (i.e., the chemicals of concern [COCs]) which are shown in this table.

*Since White Sand Branch-East is located within the Vacant Lot Exposure Area, sediment and surface water exposures in the White Sand Branch-East were evaluated as part of the risks for the Vacant Lot.

Definitions:
NA = Not available

Table 6
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Future
Receptor Population: Resident at the Eastern Dump Site (EDS)
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Groundwater	Sitewide Groundwater	Tap Water	Arsenic	8.9E-04	4.9E-06	NA	8.9E-04
						Groundwater Risk Total[1]=	**1.0E-03**

Scenario Timeframe: Future
Receptor Population: Resident at the Vacant Lot (VL)
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Groundwater	Sitewide Groundwater	Tap Water	Arsenic	8.9E-04	4.9E-06	NA	**8.9E-04**
						Groundwater Risk Total[1]=	**1.0E-03**
Soil	Surface Soil	Surface soil on VL	Arsenic	7.3E-04	1.1E-04	2.7E-07	8.4E-04
						Soil Risk Total[1]=	**9.9E-04**
						Total Risk[1]=	**2.1E-03**

Scenario Timeframe: Future
Receptor Population: Resident at the Western portion of White Sands Branch (WSB-W)
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Groundwater	Sitewide Groundwater	Tap Water	Arsenic	8.9E-04	4.9E-06	NA	8.9E-04
						Groundwater Risk Total=	**1.0E-03**
Soil	Surface Soil	Surface soil on WSB-W	Arsenic	1.4E-04	2.1E-05	4.9E-08	1.6E-04
						Soil Risk Total[1]=	**2.0E-04**
						Total Risk[1]=	**1.2E-03**

Scenario Timeframe: Future
Receptor Population: Recreator at the Dump Site Fenced Area (DFA)
Receptor Age: Adolescent

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on DFA	Arsenic	2.6E-04	4.3E-05	5.7E-08	3.0E-04
						Soil Risk Total[1]=	**3.1E-04**
Sediment	Sediment	Sediment on DFA	Arsenic	1.5E-04	6.7E-05		2.1E-04
						Sediment Risk Total[1]=	**2.1E-04**
						Total Risk[1]=	**6.2E-04**

Scenario Timeframe: Future
Receptor Population: Recreator at the Dump Site Fenced Area (DFA)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on DFA	Arsenic	3.8E-04	8.0E-05	1.5E-07	4.6E-04
						Soil Risk Total[1]=	**4.6E-04**
Sediment	Sediment	Sediment on DFA	Arsenic	2.1E-04	1.3E-04		3.4E-04
						Sediment Risk Total=	**3.4E-04**
Surface Water	Surface Water	Surface Water on DFA	Arsenic		1.8E-04		1.8E-04
						Surface Water Risk Total[1]=	**1.8E-04**
						Total Risk[1]=	**9.8E-04**

Table 6
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current/Future
Receptor Population: Recreator at the Vacant Lot (VL)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on VL	Arsenic	9.7E-05	2.0E-05	3.8E-08	1.2E-04
						Soil Risk Total[1]=	**1.2E-04**
						Total Risk[1]=	**1.5E-04**

Scenario Timeframe: Current/Future
Receptor Population: Outdoor Worker at the Dump Site Fenced Area (DFA)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on DFA	Arsenic	5.4E-04	1.1E-04	2.1E-07	6.6E-04
						Soil Risk Total[1]=	**6.6E-04**
						Total Risk[1]=	**6.6E-04**

Scenario Timeframe: Current/Future
Receptor Population: Outdoor Worker at the Vacant Lot (VL)
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on VL	Arsenic	1.4E-04	2.9E-05	5.5E-08	1.7E-04
						Soil Risk Total[1]=	**1.7E-04**
						Total Risk[1]=	**1.7E-04**

Footnotes:
(1) Total Risk values represent cumulative estimates from exposure to all chemicals of potential concern (COPCs) as identified in the RAGS D table 2 series, and not only from those identified in this table (i.e, the chemicals of concern [COCs]).

APPENDIX III: Administrative Record Index

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

09/26/2016

REGION ID: 02

Site Name: ROUTE 561 DUMP
CERCLIS ID: NJ0000453514
OUID: 02
SSID: 02FS
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/ Organization:
395881	9/26/2016	ADMINISTRATIVE RECORD INDEX FOR OU2 FOR THE ROUTE 561 DUMP SITE	3	ARI / Administrative Record Index		R02: (US ENVIRONMENTAL PROTECTION AGENCY)
178408	09/30/1999	ADMINISTRATIVE ORDER ON CONSENT FOR REMEDIAL INVESTIGATION / FEASIBILITY STUDY FOR INDEX NO. II CERCLA-02-99-2035 FOR ROUTE 561, UNITED STATES AVENUE BURN AND SHERWIN-WILLIAMS/HILLIARDS CREEK SITE	65	LGL / Legal Instrument		R02: Muszynski, William, J (US ENVIRONMENTAL PROTECTION AGENCY), R02: Fox, Jeanne (US ENVIRONMENTAL PROTECTION AGENCY)
351606	04/10/2015	SHERWIN-WILLAMS RESPONSE TO US EPA COMMENTS ON THE DRAFT REMEDIAL INVESTIGATION REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	16	LTR / Letter	R02: (US ENVIRONMENTAL PROTECTION AGENCY)	R02: (SHERWIN WILLIAMS COMPANY)
351604	05/14/2015	TRANSMITTAL OF THE REMEDIAL INVESTIGATION REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	2	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
351605	05/14/2015	REMEDIAL INVESTIGATION REPORT FOR OU2 PART 1 OF 2 FOR THE ROUTE 561 DUMP SITE	97	RPT / Report	R02: (SHERWIN WILLIAMS COMPANY)	R02: (WESTON SOLUTIONS)
351466	06/25/2015	PARTIAL APPROVAL OF THE MAY 2015 REVISED REMEDIAL INVESTIGATION REPORT FOR SOIL, SEDIMENT, SURFACE WATER AND GROUNDWATER AT THE ROUTE 561 DUMP SITE	2	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)
351608	08/17/2015	REVISED HUMAN HEALTH RISK ASSESSMENT REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	1033	RPT / Report	R02: (SHERWIN WILLIAMS COMPANY)	R02: (GRADIENT CORPORATION)
351607	08/17/2015	TRANSMITTAL OF THE REVISED HUMAN HEALTH RISK ASSESSMENT REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	7	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

09/26/2016

REGION ID: 02

Site Name: ROUTE 561 DUMP
CERCLIS ID: NJ0000453514
OUID: 02
SSID: 02FS
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/ Organization:
412369	11/03/2015	CLARIFICATION TO THE FINAL APPROVAL OF THE HUMAN HEALTH RISK ASSESSMENT FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)
412367	11/09/2015	TRANSMITTAL OF THE BASELINE ECOLOGICAL RISK ASSESSMENT (BERA) FOR THE ROUTE 561 DUMP SITE	3	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
412370	11/24/2015	FINAL APPROVAL OF THE BASELINE ECOLIGICAL RISK ASSESSMENT FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)
412372	05/13/2016	TRANSMITTAL OF THE BASELINE ECOLIGICAL RISK ASSESSMENT ADDENDUM FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
412368	05/13/2016	BASELINE ECOLOGICAL RISK ASSESSMENT (BERA) AND BASELINE ECOLOGICAL RISK ASSESSMENT ADDENDUM FOR THE ROUTE 561 DUMP SITE	1631	RPT / Report	R02: (US ENVIRONMENTAL PROTECTION AGENCY)	R02: (GRADIENT CORPORATION)
351609	05/13/2016	TRANSMITTAL OF THE FEASBILITY STUDY REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
351610	05/13/2016	FEASBILITY STUDY REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	238	RPT / Report	R02: (SHERWIN WILLIAMS COMPANY)	R02: (WESTON SOLUTIONS)
411249	06/07/2016	CORRESPONDENCE REGARDING US EPA CONDITIONAL APPROVAL OF THE BASELINE ECOLOGICAL RISK ASSESSMENT (BERA) ADDENDUM REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	2	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

09/26/2016

REGION ID: 02

Site Name: ROUTE 561 DUMP
CERCLIS ID: NJ0000453514
OUID: 02
SSID: 02FS
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/ Organization:
411250	06/07/2016	CORRESPONDENCE REGARDING US EPA CONDITIONAL APPROVAL OF THE REVISED FEASIBILITY STUDY REPORT FOR OU2 FOR THE ROUTE 561 DUMP SITE	2	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)
395831	06/10/2016	PROPOSED PLAN FOR OU2 FOR THE ROUTE 561 DUMP SITE	25	WP / Work Plan		R02: (US ENVIRONMENTAL PROTECTION AGENCY)
351613	05/14/2015	REMEDIAL INVESTIGATION REPORT PART 2 OF 2 FIGURES, TABLES AND APPENDICES FOR OU2 FOR THE ROUTE 561 DUMP SITE	1037	RPT / Report	R02: (SHERWIN WILLIAMS COMPANY)	R02: (WESTON SOLUTIONS)
435761	07/06/2016	EPA GRANTS A 30 DAY EXTENSION OF THE PUBLIC COMMENT PERIOD FOR THE PROPOSED PLAN FOR OU2 FOR THE ROUTE 561 DUMP SITE	1	EML / Email	R02: Klimcsak, Raymond (US ENVIRONMENTAL PROTECTION AGENCY), R02: Campbell, Edward (BOROUGH OF GIBBSBORO)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)
436208	6/27/2016	BASELINE ECOLOGICAL RISK ASSESSMENT ADDENDUM FOR OU2 FOR THE ROUTE 561 DUMP SITE	49	RPT / Report	R02: (THE SHERWIN-WILLIAMS COMPANY)	R02: (GRADIENT CORPORATION)
436209	6/27/2016	TRANSMITTAL OF THE BASELINE ECOLOGICAL RISK ASSESSMENT ADDENDUM FOR OU2 FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
451821	6/27/2016	REVISED FEASIBILITY STUDY FOR OU2 FOR THE ROUTE 561 DUMP SITE	236	RPT / Report	R02: (THE SHERWIN-WILLIAMS COMPANY)	R02: (WESTON SOLUTIONS INCORPORATED)
451820	6/27/2016	TRANSMITTAL OF THE REVISED FEASIBILITY STUDY FOR OU2 FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)
451822	6/27/2016	SHERWIN-WILLIAMS COMPANY RESPONSE TO EPA COMMENTS ON APPENDIX A TO THE REVISED FEASIBILITY STUDY FOR OU2 FOR THE ROUTE 561 DUMP SITE	2	OTH / Other		R02: (THE SHERWIN-WILLIAMS COMPANY)
393258	8/12/2016	FINAL APPROVAL OF THE BASELINE ECOLOGICAL RISK ASSESSMENT ADDENDUM AND THE FEASIBILITY STUDY FOR THE ROUTE 561 DUMP SITE	1	LTR / Letter	R02: Stroebel, Kenneth (THE SHERWIN-WILLIAMS COMPANY)	R02: Gelblat, Renee (US ENVIRONMENTAL PROTECTION AGENCY)

APPENDIX IV: State Concurrence Letter

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Site Remediation and Waste Management Program
Mail Code 401-406
P.O. Box 420
Trenton, New Jersey 08625-0420
Telephone: 609-292-1250

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

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

September 22, 2016

RE: Sherwin-Williams Sites - Route 561 Dump Site
Gibbsboro, Camden County
PI No. G000004382, EA No. RPC000005

Dear Mr. Mugdan:

The New Jersey Department of Environmental Protection (Department) has reviewed the Decision Document for the Route 561 Dump Site, Operable Unit 2, prepared by the U.S. Environmental Protection Agency (EPA) Region II, which addresses soil and sediments.

The Selected Remedy includes:

- Soil excavation, with capping and institutional controls as needed.
- Sediment excavation and surface water monitoring.

The Department concurs with the selected remedy for the remediation of sediment and surface water and for soil on those properties that will not require a deed notice. However, in regards to properties where the selected remedy for soil includes the capping and deed notices, the Department cannot concur with the selected remedy until property owner consent has been obtained. If property owner consent is obtained, the Department will concur with the overall selected remedy.

Should you wish to discuss this matter further please feel free to contact me at (609) 292-1250.

Sincerely,

Mark J. Pedersen
Assistant Commissioner

CC: Lynn Vogel, NJDEP, BCM

APPENDIX V: Responsiveness Summary

APPENDIX V

RESPONSIVENESS SUMMARY

Operable Unit 2 of the Route 561 Dump Site

Gibbsboro, New Jersey

INTRODUCTION

This Responsiveness Summary provides a summary of the public's comments and concerns regarding the Proposed Plan for Operable Unit 2 of the Route 561 Dump Site ("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 cleanup response 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 the community involvement and interests regarding the site.

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 contains the Proposed Plan that was distributed to the public for review and comments;

Attachment B contains the public notices that appeared in the Courier-Post.

Attachment C contains the transcripts of the public meeting; and

Attachment D contains the public comments received during the public comment period.

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

The subject of this Decision Document and Responsiveness Summary is the second Operable Unit (OU2) of the Route 561 Dump Site located in Gibbsboro, New Jersey. The Route 561 Dump Site along with the Sherwin-Williams/Hilliards Creek Superfund Site and the United States Avenue Burn Superfund Site comprise the three sites affected by Sherwin-Williams and are collectively referred to as the "Sherwin-Williams Sites" located in Gibbsboro and Voorhees, New Jersey. Public interest in the "Sherwin-Williams Sites" has been high.

In January 2015, EPA held a public availability session at the Gibbsboro Senior Center in Gibbsboro, New Jersey to discuss all three sites and answer questions. There was an area of the availability session specifically for the Route 561 Dump Site.

On June 13, 2016, EPA released the Proposed Plan and supporting documentation for the cleanup response for OU2 of the Route 561 Dump Site to the public for comment. EPA made these documents available to the public in the administrative record repositories maintained at the EPA Region 2 office (located at 290 Broadway, New York, New York), the Gibbsboro Hall/Library (49 Kirkwood Road, Gibbsboro, New Jersey) and the M. Allan Vogelson Regional Branch Library – Voorhees (203 Laurel Road, Voorhees, New Jersey). These documents were also available online (www.epa.gov/superfund/route-561-dump). EPA published a notice of availability for these documents in the Courier-Post and opened a public comment period from June 13, 2016 to July 12, 2016.

On June 21, 2016, EPA held a public meeting at the Gibbsboro Senior Center at 250 Haddonfield-Berlin Road in Gibbsboro to discuss the Proposed Plan for OU2 of the Route 561 Dump Site. The purpose of this meeting was to inform local officials and interested citizens about the Superfund process, to review the proposed cleanup response at the site and to respond to questions from area residents and other attendees. At the meeting, EPA reviewed the history of the site, the results of the investigation of contamination at the site, and details about the proposed cleanup response before fielding questions from meeting attendees. The transcript of this public meeting is included in this Responsiveness Summary as Attachment C.

During the public comment period, EPA received a request to extend the public comment period for an additional thirty days. EPA announced that it would extend the public comment period for an additional thirty days to August 11, 2016. EPA issued a public notice announcing the extension of the public comment period on July 15, 2016 in the Courier-Post.

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

II. a. Written Comments

Subpart 1. Overview

1) EPA has received comments from various sources about the Superfund process as it has been applied to the entire area affected by Sherwin-Williams past industrial activities including resource allocation, overall strategy and timing. This included a petition from residents who live along Kirkwood Lake advocating that the cleanup of Kirkwood Lake be completed first and comments from local officials questioning EPA's management of the three Sherwin-Williams sites.

Response: The area affected by past Sherwin-Williams industrial activities (collectively known as the "Sherwin-Williams Sites") in Gibbsboro and Voorhees consists of three separate sites. These three sites are: the Sherwin-Williams/Hilliards Creek Superfund Site, which includes the Former Manufacturing Plant, Hilliards Creek and Kirkwood Lake, the United States Avenue Burn Superfund Site and the Route 561 Dump Site. The Sherwin-Williams/Hilliards Creek Superfund Site and the United States Avenue Burn Superfund Site have been listed on the National Priorities List. The Route 561 Dump Site was proposed for listing, but EPA elected not to finalize the Site listing. Although the listing has not been finalized, Sherwin-Williams has agreed to address the Site using the Superfund process. These three sites are shown in figure 1 of this Decision Document. Under the 1999 Administrative Order on Consent, Sherwin-Williams agreed to investigate each of the three sites. If any of the investigation results determine that contaminants are present and pose an unacceptable risk to human health and/or the environment, a cleanup response will be selected.

Many commenters expressed concern about delays in the cleanup of the Sherwin-Williams sites. EPA acknowledges the community's frustration. In recent years, EPA has added resources to ensure that cleanup progresses more quickly than it has in the past.

Several commenters stated that work on the sites should be carried on concurrently. In fact, under EPA oversight, Sherwin-Williams has been conducting investigations on all three sites simultaneously. Due to the differences in previous activities at each site, the size of each site, impacted media and the nature and extent of contamination, each site is currently in a different phase of the investigation/remedy selection/design and construct process. The remedial investigation process is ongoing on each of the three sites. As a general approach, the remedy selection and implementation process will focus on portions of sites that contain higher level of contaminants located upgradient while continuing investigations of downgradient areas.

EPA has subdivided each of the three sites into Operable Units (OUs) to manage the complex nature of each site. The residential properties associated with each site have been designated as Operable Unit 1 (OU1) for each site. In 2015, EPA selected a remedy

for OU1 of the Sherwin-Williams/Hilliards Creek Superfund Site, along with OU1 of the United States Avenue Burn Superfund Site, and OU1 of the Route 561 Dump Site using one Record of Decision. The OU1 residential properties associated with each of the sites are now in the design and construct phase.

At this time, the second operable units at the United States Avenue Burn Superfund Site and Sherwin-Williams/Hilliards Creek Superfund Site are in the investigation stage.

In this Decision Document, EPA selects the cleanup response for the second operable unit (OU2) of the Route 561 Dump Site which consists of contaminated soil, sediment and surface water in the Dump Site Fenced Area, Northern Commercial Area, Vacant Lot Developed Area, Vacant Lot and White Sand Branch from the base of Clement Lake to the fence at the Burn Site shown in figure 2. The results of the investigation determined that contaminated soil and sediment at the Site are the sources of groundwater contamination. Thus, EPA anticipates that removal of the contaminated soil and sediment will result in a reduction of groundwater contamination to below unacceptable risk levels. For that reason, the groundwater will be addressed at a later date and is the third operable unit (OU3) for the Route 561 Dump Site.

After this Decision Document is signed, EPA will begin negotiating a legal document with Sherwin-Williams for Sherwin-Williams to perform design and implement the cleanup response. EPA anticipates that an agreement can be reached and, if so, design of the cleanup response will begin after the legal agreement is signed. If agreement is not reached, EPA can pursue other options including issuing an order compelling Sherwin-Williams to design and construct the cleanup response.

2) EPA has received comments questioning whether contamination at the Route 561 Dump Site has been fully characterized or whether additional investigation is needed. Commenters have specifically asked about investigations under Route 561 and commercial buildings.

Response: The remedial investigation was designed to characterize the nature and extent of contamination to determine if an action is necessary to protect human health and the environment. To characterize contamination at the Route 561 Dump Site, soil cores were taken from over 200 locations. Samples were taken and analyzed from each soil core at intervals starting near the ground surface down to, in some locations, approximately 34 feet below the ground surface. Sediment samples were taken from over 20 locations in White Sand Branch from its source at the base of Clement Lake to the fence that marks the boundary of the Burn Site. Surface water samples were taken from 11 locations. Based on this extensive sampling, EPA has determined that the contamination at the Site has been thoroughly characterized for the purpose of determining whether or not a response is necessary.

EPA has also determined that there is sufficient analytic data from samples immediately adjacent to Route 561 and the buildings to characterize contamination and determine the need for a cleanup response.

Additional sampling will take place during the design phase and will include sampling under Route 561. This sampling is necessary to determine the extent of contamination for institutional controls, such as deed notices, where contamination is left onsite.

3) EPA has received comments on how the alternatives were evaluated, why soil Alternative 6 was chosen and why complete removal of all contamination, including under roadways and buildings, was not considered. Some commenters expressed a preference for complete removal of all contaminated materials so that no capping will be necessary, even if complete removal would require the demolition of commercial buildings. Other commenters expressed a preference for a remedy that minimizes the disruption of local businesses and travel on Route 561.

Response: Based on the chemical analyses of the soil and sediment samples taken during the remedial investigation and the subsequent risk assessment, EPA determined that the material found in the soil and sediment at the Route 561 Dump Site posed an unacceptable risk to human health and/or the environment. CERCLA requires EPA to address contamination that poses an unacceptable risk to human health and/or the environment. Although CERCLA requires that a remedy be protective of human health and the environment, it does not require the complete removal of contamination or cleanup to pristine conditions advocated by some commenters. Not only is complete removal not required, but it also presents major implementability issues involved with demolishing existing buildings and an important road as well as disrupting businesses and transportation for long periods of time.

Using the results of the remedial investigation, EPA considered a number of various options for cleaning up the area. The Feasibility Study identified the most viable cleanup options for soil, sediment and surface water and then evaluated them based on the nine criteria as described in the Decision Document. For the Route 561 Dump Site, the most viable cleanup options included excavation and removal of contaminated soil or sediment in specific areas to different depths, capping contaminated soil or sediment, and institutional controls for certain areas.

Capping of contaminated soil is a common method used to contain contamination. A cap is an engineered remedy in which an area is covered using materials such as clean soil and vegetation or asphalt to prevent contact with, and minimize migration of, contaminated material.

Institutional Controls are legal documents that provide a legal basis for assuring that current and future landowners maintain the protectiveness of the remedy through their actions on the Site. For example, a deed notice is a type of institutional control added to the title of a property that provides information about the location and concentration of contamination as well as how contamination is controlled, maintained or monitored. Human health may be protected by institutional controls that prevent access to contaminated areas. However, institutional controls do not prevent ecological receptors (plants and animals) from accessing contaminated areas. Therefore, EPA does not

attempt to manage the long-term effectiveness of a site only through institutional controls.

For cleaning up the soil and sediment, the first alternatives were “No Further Action” and “Institutional Controls with Monitoring”. The “No Further Action” alternatives would not achieve overall protection of human health and the environment. The “Institutional Controls with Monitoring” would prevent contact with contaminated material only through institutional controls and, thus, would also not achieve overall protection of human health and the environment.

Soil Alternatives 3 through 7 would satisfy the requirement that cleanup responses provide overall protection of human health and the environment by preventing contact with contaminated soil and minimizing migration of the contamination through a combination of contaminated soil removal and capping. The amount of capping compared to the amount of soil removal varies, with Alternative 3 including the least soil removal and the most capping and Alternative 7 including the most removal and the least amount of capping. In Alternative 7, all contaminated soil would be removed except the soil under Route 561 and the commercial buildings. The asphalt of the road and the buildings would function as a cap.

Since Alternatives 3 through 7 are all protective, they were further analyzed using the five balancing criteria. At this point, EPA considered how the various alternatives compare to each other in terms of long-term effectiveness and permanence; reduction of toxicity, mobility or volume of contaminants through treatment (in this case, however, there is no treatment in any of the alternatives since the contaminated material will be removed); short-term effectiveness, considers risks to humans and the environment during implementation of cleanup activities; implementability which considers technical and administrative feasibility; and cost. EPA chooses cleanup activities based on all of the balancing criteria taken together. It is not necessary that a chosen cleanup response rate the highest in each of the criteria.

EPA selected Alternative 6 for the soil because it provided for removal of the top 2 to 4 feet of soil to accommodate a cap; removal of deep (estimated down to 14 feet) soil contamination in order to protect the groundwater; and removal of soil contamination to ecological risk or residential levels along White Sand Branch and residential areas and to non-residential levels in the commercial areas while minimizing impacts to businesses and travel on Route 561. It is estimated that the total amount of soil removed will include more than 90% of the arsenic and lead contamination.

EPA selected Alternative 4 for the sediment which will remove all the contaminated sediment that exceed the ecological or residential risk levels. EPA expects that all the contaminated sediment can be removed and that capping will not be necessary.

EPA expects that removing the contaminated soil and sediment that act as sources of contamination to the surface water will, over time, result in surface water contamination

concentrations that are below unacceptable risk levels. This decrease in contamination concentrations will be verified through surface water monitoring

Commercial areas where remaining soil exceeds residential soil cleanup levels will be capped to prevent contact with and minimize migration of remaining soil contamination. Institutional controls, such as deed notices, will be put in place to ensure that the public is aware of the contamination and to ensure that the caps remain protective.

4) EPA has received comments on implementation of cleanup activities including potential impacts to the public and municipalities as well as possible effects on future uses of the land and opportunities for public participation during design and implementation of the cleanup response action. Many of the comments noted that the proposed plan did not present details on matters such as additional sampling for the design (predesign sampling); overall schedule; location of staging areas; control of contaminated soil and sediment after excavation and prior to being shipped offsite; and operation and maintenance of the cleanup response action after it has been completed.

Response: The purpose of the cleanup response selection process is to evaluate cleanup alternatives and select a cleanup response to address the threats posed by the Site. The multiple technical and logistical issues associated with implementing the selected cleanup response will be resolved during the cleanup response design or implementation stage.

It is correct to note that the Proposed Plan did not include specific details about the implementation of the cleanup response. The Proposed Plan contains a summary of the alternatives to provide the basis for identifying and presenting a preferred cleanup response to the public. More details on alternatives presented in the Proposed Plan can be found in the Feasibility Study which is part of the administrative record. The specific details of the selected cleanup response will be developed during the design of the cleanup response.

Immediately after this Decision Document is signed, EPA will begin negotiations with Sherwin-Williams (the potentially responsible party) for a legal document requiring Sherwin-Williams to design and construct the cleanup response.

After the legal agreement is signed, Sherwin-Williams, with EPA oversight, will begin the design phase. Early in design phase, additional soil and sediment sampling will be conducted in the Route 561 Dump Site area to refine the scope of the cleanup response. This pre-design sampling will be conducted after a property owner signs an access agreement in which they consent to provide access to their property.

The data obtained during the remedial investigation, along with the predesign sampling, will be used to complete the design of the removal and capping activities. The completed design of the cleanup response will include such details as specifications for dewatering, stream diversion, soil and sediment excavations, staging areas, and erosion control. The details of the implementation of the design such as the schedule will be in the design work plan. It is EPA’s intention to keep the public informed on a regular basis regarding

the progress of the cleanup response and to involve the public as appropriate or necessary. All approved documents such as the design and the work plan, which is used to implement the design of the cleanup response, will become part of the public record.

An Operation and Maintenance plan that includes such elements as periodic inspection of the caps (soil or asphalt) and vegetated areas and repairs as necessary will be approved by EPA after all activities have been completed.

After the cleanup response is completed, components of the cleanup that need to be managed over the long term, such as the asphalt and soil caps, will be memorialized in institutional controls, such as deed notices. In addition, since contamination above levels that allow for unlimited use and unrestricted exposure will be left in place in the commercial areas, EPA is required to conduct five year reviews to ensure that the cleanup response continues to function as designed.

If it becomes necessary for any of the capped areas to be disturbed, EPA and NJDEP must be notified prior to any action. EPA and NJDEP will work with the appropriate parties to ensure that their tasks are accomplished safely and that the capped areas are restored, as necessary. If the use of an area affected by the cleanup response changes, for example through redevelopment, EPA will work with the land owners and/or municipality to ensure that human health and the environment remain protected.

5) EPA received a number of comments and questions concerning potential financial impacts to businesses in the Northern Commercial Area and the Vacant Lot Developed Area or the municipality if it becomes necessary to access the soils under capped areas. These concerns include potential loss of property values due to a perceived “stigma” associated with a Superfund Site, compensation for lost business during cleanup activities, costs of hiring lawyers and/or technical professionals to represent the property or business owners, or potential added costs when digging, for example, to repair utility lines and encountering contaminated soil.

Response: Under CERCLA, Congress appropriates funds to EPA to clean up contaminated sites. However, the law does not allow EPA to use appropriated funds to compensate parties for the concerns raised in this comment.

Additionally, EPA notes that any negative impact to a property is typically due to the presence of contamination on the property that may pose an unacceptable risk to human health and the environment. Such impacts may diminish when the cleanup response activities are completed and large amounts of contaminated soil is removed.

Subpart 2. Detailed Questions, Comments and Concerns for the Route 561 Dump Site

6) A representative of local businesses expressed concerns about the timing of pre-design sampling.

> Response: Pre-design sampling and testing will take place after the Decision Document is signed, the legal agreement for remedial design is negotiated and signed, and a pre-design work plan has been approved.
>
> EPA works to design a cleanup that will minimize the impacts on businesses due to cleanup activities. All businesses that will be impacted will be informed and will be asked to sign an access agreement before any work begins.

7) A representative of a local commercial property owner asked about being compensated for loss of the use of a section of the property that has been fenced off for testing for a number of years.

> Response: The area was not fenced off for testing. The purpose of the fencing is to prevent contact with the contaminated soil and sediment. Also, please refer to the response to overview comment 5 concerning issues regarding compensation.

8) A representative of a local commercial property owner noted that during the public meeting, EPA discussed that the next step would be working out a legal agreement with Sherwin-Williams followed by the design phase. EPA estimated that this process of negotiating an order with Sherwin-Williams and completing design would take two years. The commenter emphasized that the planning and timing of events is critical for the landlord and tenants and asked about the accuracy of the estimate and how the businesses would be kept informed.

> Response: The timeframe is an estimate based on past experiences. The potentially affected businesses and the community will be kept informed of the process on a regular basis and are invited to contact EPA at any point with their questions and concerns.

9) A representative of a local commercial property owner asked about input to the design phase by the public and what recourse the public would have if they do not accept the design.

> Response: As noted in comment 8, the potentially affected businesses and the community will be kept informed of the process and are invited to contact EPA at any point with their questions and concerns.

10) A representative of a local commercial property owner asked about potential impact on the building integrity structure during cleanup response activities.

> Response: Engineering controls will be designed to minimize any impact that response activities may have on building structures. It is EPA's intent that there will be very little or no impact on the structural integrity of any existing building.

11) A representative of a local commercial property owner asked about the design phase approval process.

Response: As explained in response to overview comment 1, EPA anticipates negotiating a legal agreement with Sherwin-Williams for design and construction of the cleanup response. Once that legal agreement is signed by EPA and Sherwin-Williams, Sherwin-Williams will begin work on the design. All documents and plans generated by Sherwin-Williams will be reviewed and approved by EPA before they can be implemented. EPA estimates timeframes based on past experience with similar sites. That is the basis for the estimated timeframe of two years to negotiate the legal documents, conduct pre-design sampling and complete the design. After the cleanup response is designed, Sherwin-Williams will develop and submit a work plan for construction of the cleanup response. After EPA approves the work plan, construction will begin in accordance with the schedule in the approved work plan.

12) A representative of a local commercial property owner asked about the need for local, county, state or federal approvals and the timeframe for getting the approvals.

Response: EPA will review and either request modification of or approve many of the documents associated with the design and cleanup response. The time frames for approvals of documents associated with the design of the cleanup response depends on the complexity and quality of the submitted documents and therefore timeframes are difficult to estimate with specific accuracy.

Although, the Route 561 Dump Site is not a listed Superfund site, EPA is taking a cleanup response action under the Superfund law and is exempt from obtaining permits that may be required by local, county and state governments for on-site cleanup response activities. However, all activities will comply with the substantive requirements applicable to the cleanup response activities. For off-site activities such as disposal of contaminated materials, permits are required. Timeframes for application, submittal, review and approval of permits are specific to each permit sought and the jurisdiction that requires the permit. Thus, an accurate estimate for obtaining each permit cannot be provided at this time.

13) A representative of a local commercial property owner asked about the need to file for permits and the timeframe for doing so.

Response: Please see the response to comment 12.

14) A representative of a local commercial property owner expressed concerns about the staging of construction materials, especially if material will block parking spaces or access to businesses. The representative asked to be involved prior to the start of any activities on its property.

Response: The impact on businesses will be minimized to the extent practicable while implementing the cleanup response in an efficient and safe manner. A dialogue with property and business owners will be established early in the design stage of the project to obtain property and business owners input and address their concerns. This dialogue will continue through the completion of cleanup response activities.

15) A representative of a local commercial property owner asked about accurate timing for the construction of the cleanup response.

> Response: EPA cannot accurately estimate the timing for construction at this time. The details of the design will be in the design report. The details of the implementation of the design such as the schedule will be in the design work plan. After EPA has approved these documents, they will be made available to the public.

16) A representative of a local commercial property owner asked about traffic flow in and out of their business area during construction and possibilities for input.

> Response: As noted in the response to comment 14, it is EPA's intent to minimize the impact on business to the extent practicable and to establish a dialog with local businesses.

17) A representative of a local commercial property owner asked about Institutional Controls, such as deed notices including the details of the process, having input on the language, what is placed against the deed, the timing of a deed notice, potential damages, compensation, and impacts to the value of the property. Also, the commenter asked about what recourse an owner would have when faced with the prospect of a deed notice.

> Response: Any negative impact to a property is typically due to the presence of contamination on the property that may pose an unacceptable risk to human health and the environment. Such impacts may diminish when the cleanup response activities are completed and large amounts of contaminated soil is removed. On the commercial properties, the parking lots and other paved areas will be restored creating a cap which will prevent contact with and migration of any remaining contaminated materials.
>
> Deed notices are institutional controls that are an element of the selected cleanup response. They are used in New Jersey when contaminated materials are left in place and exceed residential standards. The language of the deed notice follows the New Jersey model document except as modified for site-specific reasons. *See* NJDEP, Site Remediation Program, "Deed Notice," http://www.nj.gov/dep/srp/srra/forms/. The owner of the property records the deed notice after the excavation or engineering control such as capping is complete.
>
> For the concerns about compensation raised in this comment, please refer to the response to overview comment 5.

18) A representative of a local commercial property owner expressed concerns for the tenants operating businesses in the commercial areas. These concerns include impact to ingress, egress, parking, and lost income.

> Response: It is EPA's intent that the cleanup activities have as little an impact as practicable on the operation of any businesses. EPA will work with the property and businesses owners to ensure this outcome, as explained in the response to comment 14. With regard to concerns about potential lost income, please refer to overview comment 5.

19) A representative of a local commercial property owner asked whether the money Sherwin-Williams has set aside for this project will be sufficient for design, planning, construction and impact phases.

Response: After EPA signs the Decision Document for OU2 of the Route 561 Dump Site, the agency will begin negotiating the legal agreement for design and construction of the cleanup activities. As part of the anticipated legal agreement, Sherwin-Williams will be required to provide "financial assurance" to ensure that funds are available to cover the entire cost of the project. This financial assurance is set aside and cannot be used for anything else. It covers the cost of design, construction, and, after the construction is complete, operation and maintenance of the remedy. The amount of financial assurance is based on the estimated cost as described in this Decision Document and costs from other similar projects.

20) A representative of a local commercial property owner expressed concerns about legal requirements to inform current and future tenants about cleanup activities and whether it is necessary to put specific information into lease documents.

Response: EPA will work to keep members of the public informed about all stages of the cleanup response. EPA suggests that the commenter consult a real estate attorney regarding legal requirements for notification of future tenants or wording of lease documents.

21) A representative of a local commercial property owner expressed concerns about liability of the property owner for anything currently or in the future involving this contamination or project.

Response: After this Decision Document is signed, EPA anticipates negotiating a legal agreement with Sherwin-Williams for design, construction, and operation and maintenance of the cleanup response for the Route 561 Dump Site.

At this time, EPA has not issued any notices of potential liability to any current property owners within the Route 561 Dump Site for existing contamination. CERCLA provides both an innocent landowner and bona fide prospective purchaser defense to CERCLA liability as long as current property owners satisfy all the criteria in CERCLA to qualify for either of those defenses. These requirements include, among other things, that the landowner provide cooperation, assistance, and access to Sherwin-Williams in carrying out the cleanup and that the landowner not impede the effectiveness or integrity of any institutional control or engineering control such as a deed notice or cap employed in connection with the cleanup.

22) A representative of a local commercial property owner expressed concerns about reimbursements for hiring an attorney or other professional or for loss of business or any other cost related to the cleanup response.

Response: EPA refers the commenter to the response to overview comment 5.

23) A representative of a local commercial property owner expressed concerns that soil Alternative 6 does not adequately address all contaminants in the soil or protect human health and the environment because the selected alternative permits unknown concentrations of contaminants to remain uncontrolled in the soil at depths greater than two to four feet.

Response: As stated in the responses to overview comments 2 and 3, given the extensive soil sampling which included soil cores from over 200 separate locations with samples taken from the ground surface to depths of 34 feet, EPA is confident that the extent of contamination has been adequately characterized for the purpose of selecting a cleanup response. Further sampling will take place during the design phase.

For the selected alternative, soil Alternative 6, the depth of soil to be removed was estimated based on analysis of the soil cores and varies throughout the Site from two to fourteen feet. Soil Alternative 6 is estimated to remove greater than 90% of the contamination.

In the Vacant Lot Developed Area and the Northern Commercial Area, the buildings and parking lots will act as an impermeable cap. In areas where the remaining unsaturated soils exceed the site-specific impact to groundwater values, an impermeable cap will also be installed. An impermeable cap will greatly minimize infiltration of water and, therefore, minimize movement of the contaminants. All of the soil with contamination above the New Jersey residential direct contact standard will be removed from along White Sand Branch. In the remaining areas, the upper part of the soil column, which is typically the top two to four feet of soil and contains most of the contaminated soil, will be removed and replaced with clean soil and revegetated. This cap of clean soil and vegetation will also prevent erosion and movement of any remaining contamination. EPA has determined this combination of excavation and capping will meet the requirement for a remedy that is protective of human health and the environment.

24) A representative of a local commercial property owner expressed concern that soil Alternative 6 does not provide the greatest degree of long-term effectiveness and permanence in controlling impacts to groundwater. The commenter stated that soil Alternative 6 permits unknown concentrations of contaminants to remain uncontrolled in the soil at depths greater than two to four feet, thereby creating a source to groundwater contamination and exposing humans and other ecological receptors to contaminants in the short- and long-term.

Response: EPA disagrees with this comment and refers the commenter to the response to overview comments 2 and 3, which explains that soil Alternative 6 is protective of human health and the environment and will control remaining contamination. Additionally, long-term effectiveness and permanence is one of the five balancing factors that EPA takes into account in selecting a remedy. EPA also evaluates each alternative's reduction in toxicity, mobility and volume through treatment; short-term effectiveness; implementability; and cost. It is not necessary that an alternative score the highest in all of the balancing factors for EPA to determine that it is the best overall alternative. Rather, EPA balances all five factors to determine which alternative presents the best balance of

tradeoffs. In response to the commenter's concern over impact to groundwater, please refer to response to comment 3.

25) A representative of a local commercial property owner expressed concern that soil Alternative 6 does not reduce toxicity, mobility, or volume through treatment because treatment of the contaminants in the soil is not in any way proposed or contemplated, despite uncontrolled contaminants remaining in the soil below the excavated depth of two to four feet.

Response: It is correct to note that EPA does not propose to reduce the toxicity, mobility or volume through treatment. Instead, EPA is proposing to remove the majority of the contamination by excavating contaminated soil and sediment for off-site disposal. The remaining contamination will be controlled as explained in the response to overview comment 3.

26) A representative of a local commercial property owner expressed concern that soil Alternative 6 does not provide the greatest degree of short-term effectiveness and has implementability issues because it presents potential adverse effects to the community, workers, and the environment. Such potential adverse effects to the community include increased traffic, increased noise, interruptions to local businesses, the presence of contaminated soil, and increased risks to community members and visitors during excavation of contaminated soil. Such potential adverse effects to workers include increased traffic, increased noise, the presence of contaminated soil, and increased risks during excavation of contaminated soil. Such potential adverse effects to the environment include the presence of contaminated soil and the disruption of any natural effects during excavation of contaminated soil.

Response: Short-term effectiveness and implementability are two of the five balancing factors that EPA takes into account in selecting a remedy. As explained in response to specific comment 24, EPA balances all five factors to determine which alternative presents the best balance of tradeoffs. For example, soil Alternative 3 ranked higher than soil Alternative 6 in short-term effectiveness and implementability. However, Alternative 3 provided less long-term effectiveness and permanence than soil Alternative 6 because it would require additional capping and leave saturated soil in place as a potential source of groundwater contamination. However, EPA is aware of concerns about potential adverse effects to the community, workers, and the environment and intends to minimize such disruptions to the extent practicable. As noted in the response to overview comment 4, these issues will be addressed during design of the cleanup response.

27) A representative of a local commercial property owner expressed concern because the Proposed Plan fails to establish a remedial action objective for surface water despite impacts to surface water from contaminants present in the soil and sediment and apparent impacts to surface water from implementation of the Preferred Alternatives.

Response: The Proposed Plan has response action objectives for soil and sediment because an active cleanup response is proposed for those media. No active cleanup response is proposed for surface water, therefore there are no response action objectives for surface water. Instead, as stated in the Proposed Plan, "It is expected that removal of

sediment, combined with soil removal and/or capping will result in a decrease of surface water contaminants to levels below NJSWQS (New Jersey Surface Water Quality Standards)." As an element of the cleanup response, EPA is requiring that the surface water be monitored and, if the contaminant level does not decrease to below the NJSWQS, EPA may require an action in the future.

28) A representative of a local commercial property owner commented that according to the Proposed Plan, soil Alternative 6 will provide an equivalent degree of protection as soil Alternative 7, which proposes to excavate all of the accessible soil containing contaminants at concentrations that exceed the residential cleanup goals, despite soil Alternative 6 permitting uncontrolled contaminants to remain in the soil below the excavated depth of two to four feet.

Response: As stated in the response to overview comment 3, soil Alternatives 3 through 7 are considered to be protective of human health and the environment by preventing contact with and minimizing migration of contaminated soils. Soil Alternative 6 will control remaining contamination through the use of a cap. EPA selected soil Alternative 6 based on an analysis of the nine criteria as described in the Decision Document.

29) A representative of a local commercial property owner expressed concern that removal of anything less than all of the contaminants in the soil, sediment, groundwater, and surface water will result in a significant diminution in the property values and possible perceived "stigma" of any and all properties located in the Vacant Lot Developed Area, the Vacant Lot, the Northern Commercial Area, or the Dump Site Fenced Area.

Response: EPA refers the commenter to the response to overview comment 5. Additionally, as stated in the response to comment 17, any negative impact to a property is typically due to the presence of contamination on the property that may pose a risk to human health and the environment. Any impacts will likely diminish when the cleanup response activities are completed and large amounts of contaminated soil is removed.

EPA also notes that although the selected soil Alternative 6 removes saturated soil acting as a source of groundwater contamination, a cleanup response for groundwater was not addressed in the Proposed Plan. Groundwater will be addressed as the third operable unit (OU3) of the Route 561 Dump Site.

30) A representative of a local commercial property owner expressed concern that the Proposed Plan fails to establish the long-term reliability for Soil Alternative 6 and, specifically, asked how placement of an impermeable cap or clean soil will be inspected, maintained, or replaced, if necessary. The commenter also asked how contaminated materials will be secured and stored after excavation and had some questions on other matters related to design and implementation of the cleanup response.

Response: EPA refers the commenter to the response to overview comment 4 and reiterates that these and other similar issues will be addressed during design of the

cleanup response. Post-construction requirements will be addressed in an Operation and Maintenance plan which will be approved by EPA.

31) A representative of a local commercial property owner noted that under soil Alternative 6, soil in the Vacant Lot Developed Area that exceeds non-residential clean up goals will be excavated and removed to approximately two to four feet in depth, or deeper where utilities are located. The commenter also noted that an undeveloped portion of the 88 S. Lakeview Dr. Associates property in the Vacant Lot Developed Area remains zoned as residential and that its current commercial use was approved through a municipal land use variance. The commenter expressed concerns that the Proposed Plan fails to acknowledge that a portion of the Vacant Lot Developed Area remains zoned residential and has the potential to be developed for residential use and states that all soil in the Vacant Lot Developed Area that exceeds the more stringent residential cleanup goals must be excavated and removed.

Response: The Proposed Plan considered the Site's current zoning including the location of commercial and residential areas. As noted on page 4 of the Proposed Plan, the Vacant Lot Developed Area is zoned commercial while the Vacant Lot is zoned residential. These designations were created for the site investigation to separate the commercial and residential for the purpose of understanding the area. These areas are shown on figure 2. As clarified in the Decision Document, the residential cleanup goals would apply to all residential zoned areas including the portion of 88 S. Lakeview Dr. Associates property in the Vacant Lot Developed Area and referred to as the Vacant Lot in the Remedial Investigation Report and the Feasibility Study. EPA selected the cleanup response based on current or expected future use.

32) A local official expressed concern about the status of the site after completion of the "cleanup" and inquired as to whether it will it be listed in any state, federal, or private database as a Brownfield or otherwise contaminated site.

Response: Although EPA proposed the Route 561 Dump Site to be listed as a Superfund site on the National Priorities List, EPA elected not to finalize the listing as long as work proceeds. EPA does, however, maintain the Site as "proposed" so that it can be placed on the National Priorities List if conditions change.

Although the Site is not currently listed as a Superfund site, EPA does include the Site in its internal database to track its cleanup. Once the cleanup is completed, Sherwin-Williams, with EPA oversight, will be responsible for maintaining capped areas and monitoring the restored areas. Sherwin-Williams will also be required to conduct groundwater and surface water monitoring to assess the recovery of those resources. EPA will conduct a review of the site every five years to ensure the selected remedy remains protective. Thus, EPA will continue to have the Route 561 Dump Site in its database.

33) A local official expressed concern that, if the site remains on a list, the existence of a record of existing contamination will impair local property values and tax revenues for local

governments. The commenter asked how local governments and property owners within a mile or so of the Site will be compensated.

Response: EPA refers the commenter to the response to overview comment 5.

34) A local official expressed concern about how EPA plans for local utilities to deal with the remaining contamination on the commercial sites and in the public rights-of-way when utilities require maintenance or replacement. The commenter noted that, for example, Gibbsboro maintains sewer lines within Lakeview Drive, Marlton Avenue, Milford Road and easements along White Sands Branch as well as service connections.

Response: The selected soil Alternative 6 took potential future utility work into consideration by providing for deeper excavation in commercial areas where utilities are located. These areas will then be backfilled with clean soil. If it becomes necessary to access the areas where contamination remains for utility maintenance or any other reason, the entity performing the work must contact EPA and NJDEP prior to commencing any work. EPA and NJDEP will provide oversight to ensure contaminated areas are accessed in a safe manner and to return the area to an equivalent level of protectiveness. EPA refers the commenter to the response to overview comment 4, for additional information.

35) A local official expressed concern that possible development or redevelopment restrictions will be placed on the remaining contaminated properties. The commenter asked, for example, how demolition and reconstruction would be handled and whether Sherwin-Williams or EPA would conduct additional cleanup activities if a contaminated site is redeveloped.

Response: It is not EPA's intention that the cleanup interfere with current or anticipated future use of any property within the Route 561 Dump Site. Under the selected alternative, institutional controls, such as deed notices, will be required for properties located in commercially zoned areas that have not been cleaned up to residential soil standards. These institutional controls will identify areas with remaining soil contaminants and provide for notification requirements if the area covered by the deed notice needs to be accessed or disturbed. As explained in response to comment 34, EPA and NJDEP must be notified before anyone accesses the areas where contamination remains and so that they can ensure access to the contaminated areas is achieved in a safe manner and the area is returned to an equivalent level of protectiveness.

Although EPA is currently unaware of existing plans for redevelopment, EPA will work with the property owners and Sherwin-Williams to maintain the appropriate levels of protectiveness during and after any redevelopment that may occur in the future.

EPA also refers the commenter to the response to overview comment 4 for additional information.

36) A local official expressed concern that the existence of a contaminated site within a specified distance may disqualify certain projects for federal or state funding and asked if Sherwin-Williams will be required to fund opportunities for which Gibbsboro is denied funding due to the continued existence of a brownfield.

Response: Without more specific information, EPA is unable to respond to the concerns addressed in this comment.

37) A local official expressed concern about legal disclosures that may be required when contaminated properties are sold or leased and asked whether any disclosures are required for nearby properties.

Response: Property owners must comply with all applicable laws regarding disclosures, including New Jersey state law, when selling or leasing property that is part of the Site. A determination regarding what information to disclose to potential future buyers or tenants would need to be made based on property conditions at that future time. EPA suggests that the commenter consult a real estate broker or attorney regarding required disclosures.

38) The Borough of Gibbsboro expressed concern that certain areas of the Site have not been fully investigated including an old wooden pipe, an area along White Sand Branch, and contamination under roadways and buildings.

Response: EPA refers the commenter to overview comment 2.

39) The Borough of Gibbsboro expressed concern that contamination under the roadway and under buildings will not be removed.

Response: EPA refers the commenter to the response to overview comment 4.

40) The Borough of Gibbsboro expressed concerns regarding Clement Lake Dam. The concerns include access to the dam to conduct maintenance and constructing a remedy that could withstand a dam collapse. They also expressed concerns about future use of the area including a desire for a park.

Response: Clement Lake and the dam that forms it are not within the boundaries of the Route 561 Dump Site and will not be directly included in the cleanup response. However, EPA is aware that the dam is close to the Dump Site Fenced Area. EPA will work to ensure the integrity of the dam during the cleanup response work as well as restoration of the area after cleanup response activities have been completed.

Construction of a park is not part of the selected cleanup response. EPA's purpose for cleaning up contaminated sites is to prevent unacceptable risks to human health and the environment from exposure to hazardous substances. However, EPA is open to discussions on future use of the area.

41) The Borough of Gibbsboro expressed a large list of concerns related to the design and implementation of the cleanup response including the soil removal process, on-site and off-site stockpiling of contaminated soils, decontamination of vehicles used to transport contaminated soils, and hours of operation.

Response: EPA will work with the local government to address their concerns during design and implementation of the cleanup response as summarized in overview comment 4. EPA is committed to protecting human health and the environment during

implementation of the response and minimizing the impact to property owners and businesses. The cleanup response will include such elements as securing contaminated soils after they have been removed and prior to offsite transport and complying with applicable requirements such as the Federal Resource Conservation and Recovery Act, and applicable state laws and regulations and local ordinances as appropriate.

EPA is committed to working with the Borough on its list of specific concerns contained in the comment letter with the following exceptions:

Offsite storage of contaminated soils must be in sealed drums or within a volume that is not easily penetrated.

Based on EPA's experience with similar volumes of soil at other remediation sites, it is not feasible to load such large quantities of soil in drums. Once excavated, soils will be staged in areas designed for temporary containment that will meet design specifications for security, dust and erosion controls until the soils are removed from the staging areas.

No material should be stored offsite more than seven days.

When possible, soil and sediment may be direct loaded for shipment off site, however, it is anticipate that the vast majority of soil and sediment will require staging to prepare for and coordinate offsite shipments. Every effort will be made to remove staged soils as quickly as possible, however a seven day limit for staging bulk soil is not feasible given the quantities to be handled and removed from the Site.

Offsite storage should be screened such that it cannot be seen from any residence, business, public building, public recreation area or public street.

As practicable, work areas including storage areas, will receive screening. However, due to the scope of the work and the terrain in which some of the work will take place (such as low lying areas) it may not be possible to completely screen all work areas.

No material should be stored onsite more than 24 hours.

The cleanup response calls for the removal of an estimated 23,000 cubic yards of soil in an eight month period and an estimated 765 cubic yards of sediment in a two and a half month period. As stated above, every effort will be made to remove staged soils as quickly as possible, however a 24-hour limit for staging bulk soil and sediment is not feasible given the quantities to be handled and removed from the site.

The Borough's request that no material be stored onsite for longer than 24 hours would impose limitations without adding protectiveness. As noted above, cleanup response activities will be conducted using appropriate engineering controls to maintain protection of human health and the environment.

42) The Governing Body for the Borough of Gibbsboro passed a resolution concerning the proposed cleanup response for the Route 561 Dump Site, and the Borough included this resolution as part of its comments. The concerns of the resolution are listed below with EPA's responses.

Concern: "1. None of the alternatives considered addressed contaminated soil under Route 561 or existing buildings. The Borough operates sewer lines within these areas and other utilities provide service within the contaminated areas as well."

Response: EPA refers the commenter to the responses to overview comments 2, 3, and 4.

Concern: "2. By US EPA's own calculations Alternative 6 leaves 13,000 more cubic yards of contamination than Alternative 7."

Response: EPA refers the commenter to the response to overview comment 3 and notes that it is estimated that soil Alternative 6 removes greater than 90% of the arsenic and lead contamination.

Concern: "3. Both Alternatives 6 and 7 leave large volumes of contamination under Route 561 and commercial buildings and require perpetual reviews to determine continued efficacy. This is an unacceptable state for US EPA to leave the site in."

Response: EPA refers the commenter to the response to overview comment 3.

Concern: "4. US EPA has failed to investigate the historical stream channel of White Sand Branch from Berlin Road to the United States Avenue Burn Site."

Response: EPA refers the commenter to the response to overview comment 2.

Concern: "5. US EPA has failed to investigate evidence of related industrial activity in and around the Route 561 Dump Site and to assess potential contamination associated with such activity."

Response: EPA refers the commenter to response to overview comment 2.

43) A commenter representing Camden County expressed concerns that dividing the Site into Operable Units is inconsistent with the National Contingency Plan.

Response: EPA's division of the Route 561 Dump Site into operable units is entirely consistent with the NCP, which provides that "[s]ites should generally be remediated in operable units when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the site or complexity of the site, or to expedite the completion of total site cleanup." 40 C.F.R §300.430. At the Route 561 Dump Site, a phased response is appropriate given the complexity of the Site. Additionally, a phased response is likely to expedite the cleanup at the Route 561 Dump Site because aggressively addressing soil and sediment contamination will likely result in the contamination levels in the groundwater falling below the level that presents an unacceptable risk to human health or the environment.

Additionally, EPA refers the commenter to the response to overview comment 1 which summaries EPA's overall approach to the three Sherwin-Williams Sites and includes a discussion of operable units.

44) A commenter representing Camden County expressed concerns that EPA is not designating lead and arsenic as principal threat waste.

Response: Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or would present a significant risk to human health or the environment should exposure occur. Low level threat wastes, on the other hand, are those source materials that generally can be reliably contained and that would present only a low risk in the event of a release. The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP §300.430(a)(1)(iii)(A)).

As stated in the Proposed Plan, "Although lead and arsenic in soil and sediment act as sources to surface water contamination and lead and arsenic in soil contribute to low levels of shallow groundwater contamination, these sources are not highly mobile and are not considered principal threat wastes at this Site". Furthermore, as noted in response to specific comment 25, the Site cleanup consists primarily of excavation and removal with capping. It is correct to note that EPA does not propose to reduce the toxicity, mobility or volume through treatment. Instead, EPA is proposing to remove the majority of the contamination by excavating contaminated soil and sediment for off-site disposal.

Capping is a proven and reliable control for soils containing metals and is one of EPA's presumptive remedies used to address soils contaminated with metals. Also, as noted in the response to overview comment 3, the selected cleanup response will be protective of human health and the environment.

45) A commenter representing Camden County expressed that the chosen cleanup response does not satisfy the CERCLA criteria. The County's comment sets forth seven reasons for its position, which are addressed below.

Response: EPA disagrees with this comment and explains below why the selected remedy satisfies the criteria.

Concern: "1. fails to achieve overall protection of human and health and the environment because residual contamination well above residential standards for arsenic and lead would be left behind, thereby posing a long-term risk to future occupants, including Gibbsboro and Camden County workers. Camden County will not consent to leave such contamination behind on County-owned property, such as Route 561."

Response: EPA refers the commenter to the response to overview comment 3 and the response to specific comments 23 through 26. EPA disagrees with these comments because the selected cleanup response satisfies the Superfund criteria of overall protection of human health and the environment and compliance with ARARs.

Concern: "2. fails [to] comply with Applicable or Relevant and Appropriate Requirements (ARARs) because a deed restriction is a necessary applicable requirement to restrict the future use of County Route 561. The County will not consent to the use of such an institutional control on its property."

Response: EPA disagrees with this comment. The cleanup response calls for the use of institutional controls such as, but not limited to, a deed notice. EPA notes that the County has stated that it will not consent to a deed notice on County property including County Route 561. EPA is willing to discuss the County's concerns about consenting to a deed notice and is hopeful that further discussions between the County, NJDEP, Sherwin-Williams, and EPA will resolve the County's concerns. If, after further discussion, the County continues to refuse to consent to a deed notice, EPA will pursue other types of institutional controls that may be implemented as alternatives to a deed notice to ensure the protectiveness of the cleanup response.

Concern: "3. fails to adequately consider the long-term effectiveness and permanence of leaving elevated concentrations of arsenic and lead in subsurface soils and does not maintain protection of human health and the environment over time, as compared to a complete removal remedy."

Response: EPA refers the commenter to the response to overview comment 3 and the response to specific comments 24 and 26.

Concern: "4. fails to reduce the toxicity, mobility, or volume of principal threat contaminants of arsenic and lead, and contravenes the statutory preference for permanent, treatment-based remedies."

Response: EPA refers the commenter to the response to overview comment 3 and the response to specific comment 25.

Concern: "5. fails to properly consider the short-term effectiveness of complete excavation and removal of arsenic and lead contamination, completion of which would impose insignificant additional time or risk to the community during implementation.

Response: EPA refers the commenter to the response to overview comment 3 and the response to specific comments 24 and 26.

Concern: "6. fails to adequately consider the technical, administrative, and cost feasibility of implementing a complete excavation and removal remedy, which would be only marginally more expensive than the selected remedy.

Response: EPA refers the commenter to the response to overview comment 3.

Concern: "7. fails to satisfy the community, which is demanding a complete excavation and removal of all arsenic and lead contamination above residential standards."

Response: EPA includes community acceptance as one of the criteria in selecting a cleanup response. EPA announced the Proposed Plan to the community and collected oral

comments during the public meeting and written comments during the public comment period. EPA received comments from members of the community and local government. As noted in the description of overview comment 3, some commenters expressed a preference for complete removal of all contaminated materials, even if it would require the temporary shutdown of Route 561 as well as the removal of active businesses and demolition of existing commercial buildings, while others expressed a preference for a remedy that minimized the disruption of local businesses and travel on Route 561. Overall, EPA considered all comments received and determined that the selection of soil Alternative 6 strikes a balance between community concerns relevant to long-term effectiveness and permanence as well as concerns relevant to short-term effectiveness and implementability.

46) A commenter representing Camden County stated that it is "demanding that EPA require Sherwin-Williams to" undertake several activities. The County's demands are listed below with EPA's responses.

Demand: "1. completely remove all arsenic and lead contamination above applicable residential clean-up standards from all areas within Gibbsboro,"

Response: EPA refers the commenter to the responses to overview comments 2, 3, and 4.

Demand: "2. undertake additional investigations of previously missed areas and features,"

Response: EPA refers the commenter to the responses to overview comment 2.

Demand: "3. in designing any remedy fully consider the geotechnical issues related to the Clement Lake dam,"

Response: EPA refers the commenter to the responses to specific comment 40.

Demand: "4. create a park and/or open space on Block 18.07 Lot 9 directly in front of the Clement Lake dam, and"

Response: EPA refers the commenter to the responses to specific comment 40.

Demand: "5. implement stringent work-practices to protect residents during remedial activities."

Response: EPA refers the commenter to the responses to specific comment 41.

II.b Oral Comments from the Public Meeting

Part II.b. Oral Comments

Summaries of the comments and questions found in the June 21, 2016 public meeting transcript and EPA's responses can be found below. The transcript is an attachment to this Responsiveness Summary.

47) A number of commenters had questions about the status of design and plans for remediation of OU1 residential properties.

Response: OU1 residential properties are primarily within the boundaries of the Sherwin-Williams/Hilliards Creek Superfund Site and the United States Avenue Burn Superfund Site. In May 2015, EPA issued Sherwin-Williams a Unilateral Administrative Order (UAO) which requires the company to design the soil remediation on all residential properties identified in the OU1 Record of Decision and to remove contaminated soil on eight of the residential properties. Sherwin-Williams, with EPA oversight, has designed and begun removal of contaminated soil at the first eight residential properties. While contaminated soil is being removed from the first eight residential properties, the assessment and design of soil removal from the remaining residential properties is ongoing.

48) A number of commenters inquired about the Superfund process and the status of the Sherwin-Williams/Hilliards Creek Superfund Site and the United States Avenue Burn Superfund Site.

Response: The second operable unit of the Sherwin-Williams/Hilliards Creek Superfund Site and the United States Avenue Burn Superfund Site are in the remedial investigation stage of the Superfund process. EPA refers the commenter to response to overview comment 1.

49) A commenter asked about the potential effect of the cleanup response on local businesses and asked if local business would be kept informed about the design of the cleanup response.

Response: Potential impacts on local businesses will be minimized to the extent practicable. To achieve this, property and business owners will be contacted early in the design process to identify issues that may adversely impact them. This dialogue will be continued through design and the cleanup response actions to determine how to minimize such impacts and at the same time provide for the completion of the cleanup in a safe and efficient manner.

50) A commenter asked how long it would take to complete the design.

Response: As explained in the response to comment 11, it is estimated that the design will completed approximately two years from the date this Decision Document is issued. After the Decision Document is issued, EPA will begin negotiations on an Administrative Order on Consent (AOC) to conduct the design and cleanup response action. After the AOC is signed, design work will begin.

51) A number of commenters raised concern over the potential effect the cleanup response would have on Route 561 traffic and suggested that closure of Route 561 for eight months would seriously impact the community.

Response: EPA understands the concern about the impact to Route 561 and does not anticipate that the Route 561 lane closure would occur for the entire estimated eight month duration to complete the cleanup. Rather, EPA anticipates that one lane at a time of Route 561 may be closed on an intermittent basis to provide space for equipment during the cleanup response. Any lane closures of Route 561 would be designed and coordinated with the input of local traffic control authorities to maintain public safety and minimize impact to traffic flow.

52) A commenter expressed concern that the estimated eight month duration of the cleanup response may result in business closures along Route 561 and in particular for those businesses who have parking lots where cleanup response activities will take place.

Response: The estimated eight month timeframe for the cleanup response covers all components of the cleanup of the Dump Site on multiple properties. EPA does not anticipate that cleanup response activities will take place in any one business parking lot for the full eight months. Details of where and when soil removal and capping are to take place will be addressed, with property owner and business owner input, during design.

53) A commenter expressed disappointment that none of the alternatives in the Proposed Plan considered the removal of every last molecule of contamination, and that multiple properties should be purchased to achieve that goal.

Response: CERCLA requires EPA to address contamination that poses an unacceptable risk to human health and/or the environment. CERCLA requires that a remedy is protective of human health and the environment, but it does not require the complete removal of contamination.

In order to do address unacceptable risk, EPA develops cleanup goals based on concentration levels of contaminants that are determined to be protective of human health and the environment. The human health cleanup goals are generally at the conservative (or most protective) portion of EPA's acceptable risk range.

The cleanup goal identified by the commenter would be unnecessarily lower than cleanup thresholds that are protective of human health and the environment.

In response to the commenter's suggestion that properties should be purchased, EPA notes its policy to address risks posed by contamination by using well-designed methods of cleanup which allow people to remain safely in their homes and businesses whenever possible.

For additional information about the selected cleanup response and why it is protective of human health and the environment, EPA refers the commenter to response to overview comment 3.

54) A commenter asked about negotiations between EPA and Sherwin-Williams for the performance of the design and cleanup, how long negotiations are expected to take and what happens if the negotiation process gets drawn out over an unreasonable period of time.

Response: After the Decision Document is signed, EPA will begin negotiating a legal document with Sherwin-Williams to design and perform the cleanup response action. There is no specific time limit for this negotiation, however similar negotiations at other sites have generally taken six months to a year to complete. Should negotiations prove to be unproductive, EPA can pursue other options such as issuing an order compelling Sherwin-Williams to conduct the work.

55) A commenter expressed concern about possible effects of the Route 561 cleanup response on Clement Lake.

Response: Because Clement Lake is not part of the Site and the Dump Site Fenced Area is located downgradient from Clement Lake, EPA does not expect that the cleanup response for the Site would affect Clement Lake. However, engineering studies will be conducted on the Clement Lake dam during the design of the cleanup response to ensure proper measures are taken to protect the structural integrity of the dam.

56) A commenter asked if groundwater from the Dump Site would affect Clement Lake.

The groundwater beneath the Dump Site Fenced Area flows away from Clement Lake and therefore would not have an effect on Clement Lake.

57) A commenter asked if it will be necessary to remove the mature trees in the Dump Site Fenced Area.

Response: Trees, including some mature trees, and other vegetation will be removed where soil excavation and capping is to take place within the Dump Site Fenced Area. Additional areas within the Dump Site Fenced Area, and outside the soil excavation and capping areas, may also have trees and other vegetation removed to allow for the staging of equipment. The cleanup calls for revegetation of the capped areas after construction is completed, but this would most likely be limited to non-woody perennial vegetation such as grasses in order to protect the capped areas. Areas where capping is not required may be replanted with trees.

58) A commenter requested a copy of EPA's presentation that was provided during the public meeting.

Response: EPA's presentation at the public meeting has been made available to the public. The presentation may be accessed on the EPA Route 561 Dump Site webpage: https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0203909 .

59) A commenter asked about the roles of the local municipalities in the design and cleanup response and whether Sherwin-Williams will have to go through the municipal approval process for cleanup of the commercial properties.

Response: As stated in the response to comment 12, EPA is taking a cleanup response action under the Superfund law and is exempt from obtaining permits that may be required by local, county and state governments for on-site cleanup response activities. However, all activities will comply with the substantive requirements applicable to the cleanup response activities. For off-site activities such as disposal of contaminated materials, permits are required.

Borough officials will be contacted early in the design process and will be kept informed of plans for the cleanup response at the Dump Site.

Attachment A: Proposed Plan

Superfund Proposed Plan

U.S. Environmental Protection Agency, Region II

Route 561 Dump Site
Operable Unit 2
Gibbsboro, New Jersey

June 2016

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the Preferred Alternative to address contaminated soil, sediment and surface water at the Route 561 Dump Site portion of the Sherwin-Williams Site. The Route 561 Dump Site is located in Gibbsboro, New Jersey. The contamination is associated with the former Sherwin-Williams paint and varnish manufacturing plant located in Gibbsboro, New Jersey.

The Preferred Alternative calls for the excavation and capping, as necessary, of soil and sediment. Excavated material will be disposed of off-site. Surface water will be monitored. Institutional controls will be implemented as needed. Groundwater contamination will be evaluated as a separate Operable Unit (OU3) and addressed in a future Proposed Plan.

A comprehensive Remedial Investigation (RI) took place under a 1999 Administrative Order on Consent (AOC) with the Sherwin-Williams Company (Sherwin-Williams). The RI activities were conducted by Sherwin-Williams and were overseen by the U.S. Environmental Protection Agency (EPA). The RI included sampling of soil, sediment, surface water and groundwater throughout the Route 561 Dump Site in Gibbsboro, New Jersey. The results of this investigation identified areas within the Route 561 Dump Site where remedial action is required.

This Proposed Plan contains descriptions and evaluations of the cleanup alternatives considered for the Route 561 Dump Site. This Proposed Plan was developed by EPA, the lead agency, in consultation with the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final remedy for contaminated soil, sediment and surface water after reviewing and considering all information submitted

393183

MARK YOUR CALENDARS

PUBLIC COMMENT PERIOD
June 13 – July 12, 2016
EPA will accept written comments on the Proposed Plan during the public comment period.

PUBLIC MEETING
June 21, 2016 at 7:00 P.M.
EPA will hold a public meeting to explain the Proposed Plan and alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held at the Gibbsboro Senior Center, 250 Haddonfield-Berlin Road, Gibbsboro, New Jersey 08026

For more information, see the Administrative Record at the following locations:

EPA Records Center, Region 2
290 Broadway, 18th Floor
New York, New York 10007-1866
(212) 637-4308
Hours: Monday-Friday – 9 A.M. to 5 P.M. by appointment

Gibbsboro Borough Hall/Library
49 Kirkwood Road
Gibbsboro, New Jersey 08026
For Library Hours:
http://www.gibbsborotownhall.com/index.php/library

M. Allan Vogelson Regional Branch Library – Voorhees
203 Laurel Road
Voorhees, New Jersey 08043
For Library Hours:
http://www.camdencountylibrary.org/voorhees-branch

Send comments on the Proposed Plan to:

Renee Gelblat, Remedial Project Manger
U.S. EPA, Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866
Telephone: 212-637-4414
Email: gelblat.renee@epa.gov

EPA's website for the Route 561 Dump Site is:
www.epa.gov/superfund/route-561-dump

during the 30-day public comment period. EPA, in consultation with NJDEP, may modify the Preferred Alternative or select another response action presented in this Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on the alternatives presented in this Proposed Plan.

EPA is issuing this Proposed Plan as part of its community relations program under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, or Superfund) 42 U.S.C. 9617(a), and Section 300.435(c)(2)(ii) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). This Proposed Plan summarizes information that can be found in greater detail in the Route 561 Dump Site Remedial Investigation and Route 561 Dump Site Feasibility Study (FS) reports as well as other related documents contained in the Administrative Record. The location of the Administrative Record is provided on the previous page. EPA and NJDEP encourage the public to review these documents to gain a more comprehensive understanding of the site-related Superfund activities performed by Sherwin-Williams, under EPA and NJDEP oversight.

SITE DESCRIPTION

Three sites collectively make up what is commonly referred to as the "Sherwin-Williams Sites," which are located in areas of Gibbsboro and Voorhees, New Jersey. These sites are the *Sherwin-Williams/Hilliard's Creek Superfund Site* located in both Gibbsboro and Voorhees, the *Route 561 Dump Site* in Gibbsboro and the *United States Avenue Burn Superfund Site* (the "Burn Site") in Gibbsboro (Figure 1). The sites represent source areas from which contaminated soil and sediment have migrated, predominately through natural processes, to downgradient areas within Gibbsboro and Voorhees.

Sherwin-Williams/Hilliards Creek Superfund Site: The Sherwin-Williams/Hilliards Creek Superfund Site includes the Former Manufacturing Plant area, Hilliards Creek and Kirkwood Lake. The Former Manufacturing Plant area of the Sherwin-Williams/Hilliards Creek Superfund Site is approximately 20 acres in size and is comprised of commercial structures, undeveloped land and the southern portion of Silver Lake. The Former Manufacturing Plant area extends from the south shore of Silver Lake in Gibbsboro, New Jersey, and straddles the headwaters of Hilliards Creek. Hilliards Creek is formed by the outflow from Silver Lake. The outflow enters a culvert beneath a parking lot at the Former Manufacturing Plant and resurfaces on the south side of Foster Avenue, Gibbsboro. From this point, Hilliards Creek flows in a southerly direction through the Former Manufacturing Plant area and continues downstream through residential and undeveloped areas. At approximately one mile from its origin, Hilliards Creek empties into Kirkwood Lake. Kirkwood Lake is approximately 25 acres, located in Voorhees, New Jersey with residential properties lining its northern shore.

Route 561 Dump Site: The Route 561 Dump Site is located approximately 700 feet to the southeast of the Former Manufacturing Plant area. It includes retail businesses, a portion of a residential area, wooded vacant lots and a small creek. A fenced portion of the Route 561 Dump Site is located at the base of an earthen dam that forms Clement Lake. White Sand Branch is a small creek which originates at the dam and flows in a southwest direction for approximately 1,650 feet where it enters the fenced portion of the Burn Site. (Figure 2)

Burn Site: The fenced portion of the Burn Site and its associated contamination is approximately thirteen acres in size and encloses the remaining 400 feet of White Sand Branch. A 500-foot portion of a small creek, Honey Run, enters the Burn Site where it joins White Sand Branch before it passes beneath United States Avenue and enters Bridgewood Lake in Gibbsboro. The six-acre Bridgewood Lake empties through a culvert beneath Clementon Road and forms a 400-foot long tributary that joins Hilliards Creek at a point approximately 1,000 feet downstream from the Former Manufacturing Plant area.

SITE HISTORY

The former paint and varnish manufacturing plant property in Gibbsboro, New Jersey, was developed in the early 1800s as a saw mill, and later as a grain mill. In 1851, John Lucas & Co., Inc. (Lucas), purchased the property and converted the grain mill into a paint and varnish manufacturing facility that produced oil-based paints, varnishes and lacquers. Sherwin-Williams purchased Lucas in the early 1930s and expanded operations at the facility. Historic features at the Former Manufacturing Plant included wastewater lagoons, above-ground storage tanks, a railroad line and spur,

drum storage areas, and numerous production and warehouse buildings. The facility was closed in 1977 and was sold to a developer in 1981.

In 1978, after plant operations closed, NJDEP directed Sherwin-Williams to excavate and properly dispose of the waste material remaining in the lagoons. During the 1980s, NJDEP entered into several administrative orders with Sherwin-Williams to oversee the characterization of contaminated groundwater and a petroleum-like seep in the Former Manufacturing Plant area. During the 1990s, NJDEP discovered two additional source areas, the Route 561 Dump Site and the Burn Site. Contamination in both areas are attributable to historic dumping activities associated with the Former Manufacturing Plant.

In the mid-1990s, enforcement responsibilities for the Dump Site and the Burn Site were transferred from NJDEP to EPA. Under an AOC with EPA, Sherwin-Williams was directed to further characterize and delineate the extent of contamination associated with these areas and to fence them off to minimize the potential for human exposure. EPA proposed the Dump Site to the National Priorities List (NPL) in 1998[1]. The Burn Site was added to the NPL in 1999.

In 1998, EPA sampled the upper portions of Hilliards Creek and several residential properties. Contaminants (mainly lead and arsenic) were detected in these soil and sediment samples. The contaminants were similar to those detected at the Route 561 Dump Site and the Burn Site. As a result, a portion of Hilliards Creek was fenced off as portions of the Route 561 Dump Site and the Burn Site had been. EPA then entered into two additional AOCs with Sherwin-Williams in 1999. Under the first AOC, Sherwin-Williams conducted additional sampling of Hilliards Creek and Kirkwood Lake to further characterize the extent of contamination. This sampling, which concluded in 2003, included residential properties along Hilliards Creek and Kirkwood Lake. The second AOC, signed in September 1999, required Sherwin-Williams to conduct a Remedial Investigation/Feasibility Study (RI/FS) for the Route 561 Dump Site, the Burn Site and Hilliards Creek. The Sherwin-Williams/Hilliards Creek Site, which includes the FMP area, Hilliards Creek and Kirkwood Lake, was added to the NPL in 2008.

Due to the complexity of multiple sites and varying land uses, EPA is addressing the cleanup of the Sherwin-Williams sites in several phases called operable units. Operable Unit 1 (OU1) consists of the Residential Properties that are to be remediated in accordance with the Record of Decision which was signed in September 2015.

This Proposed Plan addresses Operable Unit 2 (OU2) soil, sediments and surface water of the Route 561 Dump Site. Operable Unit 3 (OU3) will address the groundwater beneath the Route 561 Dump Site. EPA expects that a remedy for OU3 will be selected after implementation of a remedy for OU2.

SITE CHARACTERISTICS OF THE ROUTE 561 DUMP SITE

The Route 561 Dump Site is composed of commercial, residential and undeveloped properties, wetlands and a small creek. It has been subdivided into areas based on the current use and zoning. These subdivisions are described below and shown on Figure 3.

Dump Site Fenced Area: This is an approximately 2.9-acre fenced area located along the east side of Route 561 (South Lakeview Drive) near the intersection with Kresson Road. The northern portion is characterized by a steep slope and the southern portion contains a wetland area. Under a 1997 removal order, Sherwin-Williams consolidated and capped waste in the northern portion of the Dump Site Fenced Area. The fenced area is inspected at least monthly and maintenance of the fence takes place as needed.

There are two residential properties located adjacent to the Dump Site Fenced Area. A portion of one residential property is located within the Dump Site Fenced Area.

[1] The *National Priorities List* (NPL) is the list of national priorities among the known releases or threatened releases of hazardous substances, pollutants, or contaminants throughout the United States and its territories. The NPL is intended primarily to guide EPA in determining which sites warrant further investigation. At some sites proposed for the NPL, EPA has entered into an enforcement agreement with a private party prior final placement on the NPL, whereby the private party agrees to proceed with Superfund investigations or cleanup at the site. In certain circumstances (including at the Dump Site), EPA has elected not to finalize the NPL listing as long as Superfund work proceeds in accordance with the enforcement agreement, but EPA maintains the site as "proposed" so that it can be quickly placed on the NPL if conditions change.

Northern Commercial Area: This area abuts the north side of the Dump Site Fenced Area. There is one building in the Northern Commercial Area that houses a number of retail businesses. A paved parking lot surrounds much of the building, and grassy areas form a buffer between Route 561 and the Northern Commercial Area.

Vacant Lot and Vacant Lot Developed Area: These areas are on the west side of Route 561 across from the Northern Commercial Area and the Dump Site Fenced Area. There is an office complex and commercial buildings in the northeast portion of the Vacant Lot Developed Area, near the corner of Route 561 and Marlton Avenue. The Vacant Lot Developed Area is zoned commercial. In contrast, the Vacant Lot is undeveloped and is characterized by grassy and wooded areas and is zoned residential.

White Sand Branch: White Sand Branch originates at the base of the Clement Lake dam and flows southwest. White Sand Branch and its flood plain from Clement Lake to the fence line of the United States Avenue Burn Site are part of the Route 561 Dump Site.

Summary of Route 561 Dump Site Investigations

Pre-Remedial Investigation Activities

The investigations at the Route 561 Dump Site were conducted in phases. The first sampling of soil, sediment, surface water and groundwater was conducted by NJDEP in 1994. The samples were analyzed for: metals, cyanide, volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs) including polycyclic aromatic hydrocarbons (PAHs), pesticides, and polychlorinated biphenyls (PCBs). Subsequent sampling by EPA took place in 1997.

In November 1997, Sherwin-Williams entered into an AOC with EPA to conduct a Removal Action. Under the Removal Action, areas of highly contaminated soil within the Dump Site Fenced Area were consolidated into three areas which were covered with impermeable material and revegetated. In addition, a silt fenced and a new perimeter fence were installed.

In 1999, Sherwin-Williams and EPA signed another AOC to conduct a remedial investigation and feasibility study throughout the entire Sherwin-Williams/Hilliard's Creek Site, including the Route 561 Dump Site.

Summary of the Remedial Investigation

The full results of the Remedial Investigation can be found in the Route 561 Dump Site Remedial Investigation Report (May 2015) which is part of the Administrative Record.

Remedial investigation sampling of soil, sediment and surface water by Sherwin-Williams, under EPA oversight, began in 2005 and continued to 2010. Additional groundwater sampling was conducted in 2013 and supplemental sampling for the Baseline Ecological Risk Assessment took place in 2014.

The results of sample analyses were screened to determine if the levels of contamination posed a potential harm to human health and/or the environment. This was done by comparing the measured values of contaminants to the following standards that are protective of human health or ecological receptors.

The soil sample analytical results were compared to NJDEP's Residential Direct Contact Soil Remediation Standards (RDCSRS) referred to hereafter as residential cleanup goals, and the Non-residential Direct Contact Soil Remediation Standards (NRDCSRS), referred to hereafter as non-residential cleanup goals, depending on the zoning and land use. The sediment sample analytical results were compared to the lowest effect levels for ecological receptors and surface water results were compared to the New Jersey Surface Water Quality Standards (NJSWQS) for Fresh Water. In addition, a human health risk assessment and an ecological risk assessment were conducted to determine if levels of contaminants exceeded EPA's acceptable risk range. Explanations of the results of the human health and ecological risk assessments are explained in separate sections later in this document.

The results of the RI showed that lead and arsenic are the major contaminants of concern in all media tested throughout the Route 561 Dump Site. Other contaminants were also found and they were generally co-located with lead and arsenic.

Soil:

Soil samples were taken from over 200 sample locations from the ground surface to depths of approximately 34 feet.

Lead and arsenic were found most frequently and at the greatest concentrations above the NJDEP residential direct contact soil remediation standards. Other constituents that were found in the soil above the standard include antimony, thallium, cadmium, PAHs and PCBs. These other constituents were found less frequently and are co-located with lead and arsenic. Based on the sampling results and comparison of that data to the NJDEP residential direct contact soil remediation standards, lead and arsenic were identified as the main contaminants of concern in the soil.

The most highly contaminated soil was found in the southern portion of the Northern Commercial Area adjacent to the Dump Site Fenced Area, throughout the Dump Site Fenced Area and in the portions of Vacant Lot Developed Area nearest to Route 561. It is likely that there is contamination under Route 561 since soil contamination was found in samples on both sides of Route 561 between the Northern Commercial Area and the Developed Vacant Lot. Lead and arsenic exceedances were also found in the soil adjoining White Sand Branch outside the Dump Site Fenced Area.

Contamination in soil is relatively shallow, generally found less than 5 feet deep. The concentration of lead in soils range from less than the residential standard of 400 milligrams/kilogram (mg/kg) to over 80,000 mg/kg in the Northern Commercial Area and over 200,000 mg/kg in the Dump Site Fenced Area. The concentration of arsenic in soil ranges from less than the residential standard of 19 mg/kg to more than 14,000 mg/kg in Dump Site Fenced Area.

Sediment:

Sediment samples were taken from more than 20 locations in White Sand Branch from its source at the base of Clement Lake through the Dump Site Fenced Area to the fence that marks the boundary of the Burn Site.

Lead and arsenic were found most frequently and at the greatest concentrations above the NJDEP lowest effect levels for ecological receptors of 31 mg/kg for lead and 6 mg/kg for arsenic. Contaminants in sediment that exceed the lowest effect level criteria generally require further evaluation. Other constituents found above this criterion were cadmium, chromium, copper, cyanide, mercury and zinc, PAHs, pesticides and PCBs. These other constituents were found less frequently and are co-located with lead and arsenic.

WHAT ARE THE "CONTAMINANTS OF CONCERN" (COCs)?

EPA has identified two metals as the primary contaminants of concern at the Route 561 Dump Site that pose the greatest potential risk to human health and the environment.
The primary contaminants of concern at the Route 561 Dump Site are lead and arsenic.

Lead: Lead was historically used as a pigment in paint. As a pigment, lead II chromate "chrome yellow" and lead II carbonate "white lead" being the most common. Lead is hazardous. At high levels of exposure lead can cause nervous system damage, stunted growth, kidney damage, and delayed development. Lead is considered a possible carcinogen.

Arsenic: Arsenic compounds began to be used in agriculture as ingredients in insecticides, rodenticides, herbicides, wood preservers and pigments in paints. Long-term exposure to high levels of inorganic arsenic (e.g. through drinking-water and food) are usually observed in the skin, and include pigmentation changes and skin lesions. Often, prolong exposure can lead to skin cancer. In addition to skin cancer, long-term exposure may lead to cancers of the bladder and lungs.

Lead and arsenic exceedances were found in sediment throughout the Dump Site Fenced Area and White Sand Branch. The concentration of lead varies from below the lowest effect level for ecological receptors to over 41,000 mg/kg. The arsenic levels varied from below the lowest effects level for ecological receptors to 6,000 mg/kg. For both metals, the highest values were found in the Dump Site Fenced Area.

Surface Water:

Surface water samples were collected from eleven locations in the Dump Site Fenced Area and in White Sand Branch from the southern portion of the Vacant Lot to the fence boundary with the United States Avenue Burn Site. Analyses of the surface water showed exceedances of the NJSWQS for Fresh Water for aluminum, iron, cyanide, arsenic, lead, cadmium, mercury and nickel. As with the other media, lead and arsenic are the main contaminants of concern.

The concentrations of metals in surface water were compared to the NJSWQS for Fresh Water of 5.4 microgram/Liter (µg/L) for lead and 150 µg/L for arsenic. The total lead and total arsenic values varied from below the NJSWQS for Fresh Water to over 100,000 µg/L for total lead and over 20,000 µg/L for total arsenic. The highest concentrations in surface water were found in the section of White Sand Branch located in the Dump Site Fenced Area.

WHAT IS A "PRINCIPAL THREAT"?

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (NCP Section 300.430(a)(1)(iii)(A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants or contaminants that act as a reservoir for migration of contamination to ground water, surface water or air, or acts as a source for direct exposure. Contaminated ground water generally is not considered to be a source material; however, Non-Aqueous Phase Liquids (NAPLs) in ground water may be viewed as source material. Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained, or would present a significant risk to human health or the environment should exposure occur. The decision to treat these wastes is made on a site-specific basis through a detailed analysis of the alternatives using the nine remedy selection criteria This analysis provides a basis for making a statutory finding that the remedy employs treatment as a principal element.

PRINCIPAL THREATS

Although lead and arsenic in soil and sediment act as sources to surface water contamination and lead and arsenic in soil contribute to low levels of shallow groundwater contamination, these sources are not highly mobile and are not considered principal threat wastes at this Site.

SUMMARY OF SITE RISKS

As part of the RI/FS, a baseline risk assessment consisting of a human health risk assessment (HHRA) and a baseline ecological risk assessment (BERA) were conducted to estimate current and future effects of contaminants on human health and the environment. A baseline risk assessment is an analysis of the potential adverse human health and ecological effects caused by hazardous substance exposure in the absence of any actions to control or mitigate these exposures under current and future site uses.

WHAT IS RISK AND HOW IS IT CALCULATED?

A Superfund baseline human health risk assessment is an analysis of the potential adverse health effects caused by hazardous substance releases from a Site in the absence of any actions to control or mitigate these under current and future-land uses. A four-step process is utilized for assessing site-related human health risks for reasonable maximum exposure scenarios.

Hazard Identification: In this step, the contaminants of concern (COCs) at the Site in various media (*i.e.*, soil, groundwater, surface water, and air) are identified based on such factors as toxicity, frequency of occurrence, and fate and transport of the contaminants in the environment, concentrations of the contaminants in specific media, mobility, persistence, and bioaccumulation.

Exposure Assessment: In this step, the different exposure pathways through which people might be exposed to the contaminants identified in the previous step are evaluated. Examples of exposure pathways include incidental ingestion of and dermal contact with contaminated soil and ingestion of and dermal contact with contaminated groundwater. Factors relating to the exposure assessment include, but are not limited to, the concentrations in specific media that people might be exposed to and the frequency and duration of that exposure. Using these factors, a "reasonable maximum exposure" scenario, which portrays the highest level of human exposure that could reasonably be expected to occur, is calculated.

Toxicity Assessment: In this step, the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure and severity of adverse effects are determined. Potential health effects are chemical-specific and may include the risk of developing cancer over a lifetime or other non-cancer health hazards, such as changes in the normal functions of organs within the body (*e.g.*, changes in the effectiveness of the immune system). Some chemicals are capable of causing both cancer and non-cancer health hazards.

Risk Characterization: This step summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of Site risks for all COCs. Exposures are evaluated based on the potential risk of developing cancer and the potential for non-cancer health hazards. The likelihood of an individual developing cancer is expressed as a probability. For example, a 10^{-4} cancer risk means a "one in ten thousand excess cancer risk;" or one additional cancer may be seen in a population of 10,000 people as a result of exposure to Site contaminants under the conditions identified in the Exposure Assessment. Current Superfund regulations for exposures identify the range for determining whether remedial action is necessary as an individual excess lifetime cancer risk of 10^{-4} to 10^{-6}, corresponding to a one in ten thousand to a one in a million excess cancer risk.

For non-cancer health effects, a "hazard index" (HI) is calculated. The key concept for a non-cancer HI is that a "threshold" (measured as an HI of less than or equal to 1) exists below which non-cancer health hazards are not expected to occur. The goal of protection is 10^{-6} for cancer risk and an HI of 1 for a non-cancer health hazard. Chemicals that exceed a 10^{-4} cancer risk or an HI of 1 are typically those that will require remedial action at the Site.

In the HHRA, cancer risk and noncancer health hazard estimates are based on current reasonable maximum exposure scenarios. They were developed by taking into account various health protective estimates about the concentrations, frequency and duration of an individual's exposure to chemicals selected as contaminants of concern (COCs), as well as the toxicity of these contaminants.

For the ecological risk assessment, representative ecological receptors were identified for each exposure area. Measurement and assessment endpoints were developed during the BERA to identify those receptors and areas where unacceptable risks are present.

For the human health risk assessments, the Route 561 Dump Site was divided into 7 exposure areas as shown on Figure 3. These exposure areas include the Dump Site Fenced Area (DFA), Eastern Dump Site Area Northern Commercial Area, Western Commercial Area, Vacant Lot, White Sand Branch-East and White Sand Branch-West.

For the baseline ecological risk assessment, the Route 561 Dump Site was evaluated based upon three defined ecological exposure areas: East Dump Site Exposure Area (Dump Site Fenced Area and Eastern Dump Site Area), West Dump Site Exposure Area (undeveloped portion of the Vacant Lot and upland areas of White Sand Branch-West) and White Sand Branch (White Sand Branch itself and associated aquatic areas, from its origin in the Dump Site Fenced Area to its western boundary with the Vacant Lot).

Human Health Risk Assessment

A four-step human health risk assessment process was used for assessing site-related cancer risks and noncancer health hazards. The four-step process is comprised of: Hazard Identification, Exposure Assessment, Toxicity Assessment, and Risk Characterization (see adjoining box "What is Risk and How is it Calculated" for more details on the risk assessment process).

COCs were selected by comparing the maximum detected concentration of each analyte with available medium-specific state and federal risk-based screening values. Screening of each COC was conducted separately for each media and exposure area.

Based on current zoning and land use assumptions in each exposure area, the current and future land use scenarios included the following exposure pathways and populations:

- Construction worker and utility worker in the Dump Site Fenced Area, Eastern Dump Sites Area, Northern Commercial Area, Western Commercial Area and Vacant Lot: incidental ingestion, dermal contact and inhalation of surface and subsurface soil and dermal contact with shallow groundwater for adults.

- Outdoor worker in the Dump Site Fenced Area, Northern Commercial Area, Western Commercial Area and Vacant Lot: incidental ingestion, dermal contact and inhalation of surface soil by adults.

- Recreator in the Vacant Lot and White Sand Branch-West: incidental ingestion, dermal contact and inhalation of surface soil, incidental ingestion and dermal contact with sediment as well as dermal contact to surface water by adolescents and adults.

The future land-use scenarios included the following exposure pathways and populations:

- Resident in the Eastern Dump Site, Vacant Lot/White Sand Branch-East and White Sand Branch-West: incidental ingestion, dermal contact and inhalation of surface soil, ingestion, dermal contact and inhalation of vapors potentially emitted from site wide groundwater, incidental ingestion and dermal contact with sediment and dermal contact with surface water by a child and adult.

- Recreator in the Dump Site Fenced Area and Eastern Dump Sites Area: incidental ingestion, dermal contact and inhalation of surface soil, incidental ingestion and dermal contact with sediment as well as dermal contact to surface water by adolescents and adults.

For contaminants other than lead, two types of toxic health effects were evaluated in the risk assessment: cancer risk and noncancer hazard. Calculated cancer risk estimates for each receptor were compared to EPA's target risk of $1x10^{-6}$ (one-in-one million) to 1×10^{-4} (one-in-ten thousand). The calculated noncancer hazard index (HI) estimates were compared to EPA's target threshold value of 1. Exposure to lead was evaluated using appropriate blood lead modeling. Results of the modeling was compared to EPA's risk reduction goal to limit the probability of a child's (or that of a group of similarly exposed individual's) blood lead concentration exceeding 10µg/dL to 5% or less.

Summary of the Human Health Risk Assessment

This section provides an overview of the human health risks from the major COCs. A complete discussion of all risks from the Route 561 Dump Site can be found in the Human Health Risk Assessment which is contained in the Administrative Record.

The results of the HHRA for the Route 561 Dump Site identified lead, arsenic, and cyanide as COCs based on cancer and/or noncancer risk estimates.

Arsenic was shown to be a COC in soil, sediment and surface water throughout the Route 561 Dump Site. The risk assessment found arsenic was the major risk driving chemical for the cancer and/or noncancer risk estimates. Although arsenic was determined to be a risk driver to several receptor groups evaluated in the HHRA, the exact receptor group exceeding EPA's threshold criteria varied with exposure area and media. Below, summarized by media, are the receptor groups in each exposure area in which arsenic was identified as a COC.

- Soil: Arsenic in surface and subsurface soil drove the majority of the risk to the construction worker in the Dump Site Fenced Area, Northern Commercial Area, Western Commercial Area and the Vacant Lot. In addition, exposure to arsenic in surface soil drove the majority of the risk to: the outdoor worker on the Dump Site Fenced Area and Vacant Lot; resident on the Eastern Dump Site, Vacant Lot and the Western portion of White Sand Branch; adolescent recreator on the Dump Site Fenced area; and an adult recreator on the Dump Site fenced area and Vacant Lot exposure areas.

- Sediment: Exposure to arsenic in sediment drove the majority of the risk posed to the adolescent and adult recreators in the Dump Site Fenced Area and to a future child resident in the Vacant Lot.

- Surface Water: Arsenic in surface water drove the majority of the risk to the adolescent recreator in the Dump Site Fenced Area.

Lead was identified as a risk-driving chemical throughout the site except for the Western Commercial Area. Specifically, the HHRA showed that lead exposure exceeds EPA's risk level for construction workers, outdoor workers, and an adult recreator in the Dump Site Fenced Area, a construction worker in the Northern Construction Area, and a future child resident in the Eastern Dump Site Area, Vacant Lot, and the Western portion of White Sand Branch.

Cyanide was identified as a COC in the soil of the Dump Site Fenced Area and Vacant Lot exposure areas for the adolescent recreator and construction worker.

Table 1 shows a summary of the quantitative estimates of total cancer risk and noncancer hazard for each receptor evaluated in the HHRA.

Based on the result of the HHRA, remedial actions are necessary to protect human health from actual or potential releases of hazardous substances.

Ecological Risk Assessment

A baseline ecological risk assessment was conducted to evaluate the potential for ecological risks from the presence of contaminants in surface soil, sediment, surface water and groundwater. Media concentrations were compared to ecological screening values as an indicator of the potential for adverse effects to ecological receptors by habitat type.

Exposure to both terrestrial wildlife in the upland exposure areas (East Dump Site Exposure Area and West Dump Site Exposure Area) through ingestion of contaminated soil and biota, and exposure of aquatic wildlife to contaminants in the White Sand Branch Exposure Area through ingestion of contaminated sediment, surface water and biota were evaluated. Biological data were collected (benthic invertebrates, fish and soil invertebrates) to assist in understanding site-specific bioaccumulation rates and subsequent exposure to upper trophic level receptors. In addition, COC concentrations and biological responses (sediment toxicity and benthic community diversity) were evaluated to understand potential community level impacts associated with sediment COCs. The drivers of ecological risk were lead, arsenic, chromium and cyanide.

A complete summary of all exposure scenarios and ecological receptor groups may be found in the baseline ecological risk assessment (BERA) which is part of the Administrative Record.

Summary of the Baseline Ecological Risk Area

The BERA provided evidence that COCs, primarily arsenic, lead and copper, in both aquatic and terrestrial environments within several portions of the Route 561 Dump Site potentially pose unacceptable ecological risk to wildlife receptors. Overall, wildlife risks are driven by elevated concentrations detected in localized portions of the three exposure areas, primarily in soil and sediment in the central portion of the Dump Site Fenced Area and in White Sand Branch and its immediate vicinity. Insectivorous wildlife (the American Robin and Short-Tailed Shrew) were identified as the wildlife receptors with the highest predicted exposures and hazard quotients in the terrestrial area of the Dump Site. Similarly, the Spotted Sandpiper was identified as the receptor with the highest exposure and hazard quotient associated with the aquatic community in White Sand Branch.

Based on the results of the ecological risk assessment a remedial action is necessary to protect the environment from actual or threatened releases of hazardous substances.

Based on the full risk assessment, it is EPA's current judgment that the Preferred Alternatives identified in this Proposed Plan are necessary to protect public health or the environment from actual or threatened releases of hazardous substances into the environment.

REMEDIAL ACTION OBJECTIVES

The following remedial action objectives (RAOs) for contaminated media address the human health and ecological risks at the Route 561 Dump Site:

Soil

- Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of soil contaminants by plants, ingestion of contaminated soils and food items by humans and ecological receptors, and direct contact with contaminated soils.

- Minimize migration of site-related contaminants in the soil to sediment, surface water and groundwater.

Sediment

- Prevent potential current and future unacceptable risks to human and ecological receptors resulting from uptake of sediment contaminants by plants, ingestion of contaminated sediments by humans and ecological receptors and direct contact with contaminated sediments.

- Minimize migration of site-related contaminants from the sediment to surface water.

RAOs were not developed for surface water. By addressing the soil and sediment, EPA expects that the risks posed by dermal contact to surface water will be addressed.

To achieve RAOs, EPA has selected soil and sediment cleanup goals for the major COCs. The soil cleanup goals for the COCs are consistent with New Jersey human health direct contact standards or ecological risk-based goals.

The Route 561 Dump Site consists of active commercial properties, as well as undeveloped commercial and residential zoned properties which contain ecological habitat. To meet the RAOs, specific soil cleanup goals listed below apply to different areas or land uses of the Site.

Soil ecological cleanup goals are based on the most sensitive terrestrial wildlife receptors and apply to the top foot of soil at all properties in the Route 561 Dump Site that contain ecological habitat. Specifically, the ecological cleanup goals would apply to the top foot of soil on all properties except the Vacant Lot Developed Area and the Northern Commercial Area.

For undeveloped commercially zoned properties that contain ecological habitat, ecological cleanup goals would also apply to the top foot of soil and non-residential cleanup goals, apply through the remaining soil depth.

Residential zoned properties contain ecological habitat. As a result, the ecological cleanup goals apply to the top foot of soil and residential cleanup goals apply through the remaining soil depth.

The more stringent of the human health risk-based cleanup goals and the ecological cleanup goals apply to the sediment in White Sands Branch.

The sediment cleanup goal for arsenic is the human health direct contact cleanup goal of 19 mg/kg since this value is lower than the ecological cleanup goal of 21 mg/kg.

Site-specific impact to groundwater levels for unsaturated soil will be determined during remedial design. Saturated soil that contains arsenic at levels exceeding 100 mg/kg are considered source areas to groundwater contamination.

The soil cleanup goals for lead vary based on the land use of each property. The sediment cleanup goal for lead is the ecological cleanup goal that is based on the most sensitive wildlife receptor.

The cleanup goals for the Route 561 Dump Site are as follows:

Soil:

Arsenic:

- Non-residential cleanup goal: 19 mg/kg
- Residential cleanup goal: 19 mg/kg
- Ecological cleanup goal: 19 mg/kg

Lead:

- Non-residential cleanup goal: 800 mg/kg
- Residential cleanup goal: 400 mg/kg
- Ecological cleanup goal: 213 mg/kg

Sediment:

Arsenic:	19 mg/kg
Lead:	235 mg/kg

SUMMARY OF REMEDIAL ALTERNATIVES

CERCLA requires that each selected remedy 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 alternatives to the maximum extent practical. In addition, the statue includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

Potential technologies applicable to soil or sediment remediation were identified and screened by effectiveness, implementability, and cost criteria, with emphasis on effectiveness. Those technologies that passed the initial screening were then assembled into remedial alternatives.

For the soil and sediment alternatives, the proposed depths of excavation are based on the soil boring data taken during the Remedial Investigation. These depths were used to estimate the quantity of soil to be removed and the associated costs. The actual depths and quantity of soil to be removed will be finalized during design and implementation of the selected remedy. Full descriptions of each proposed remedy can be found in the Feasibility Study which is part of the Administrative Record.

The time frames below are for construction and do not include the time to negotiate with the responsible parties, design a remedy or the time to procure necessary contracts. Five-year reviews will be conducted as a component of the alternatives that would leave contamination in place above levels that allow for unlimited use and unrestricted exposure.

For all soil and sediment alternatives, the Present Worth Cost includes the periodic present worth cost of five-year reviews.

Soil Alternatives:

Note: Soil alternatives 4 and 5 are in the Feasibility Study but were not carried forward by EPA into this Proposed Plan.

Alternative 1 - No Action

Capital Cost:	*$0*
Annual O&M Cost:	*$0*
Present Worth Cost:	*$0*
Timeframe:	*0 years*

The NCP requires that a “No Action” alternative be evaluated to establish a baseline for comparison with other remedial alternatives. Under this alternative, no action would be taken to remediate the contaminated soil at the Route 561 Dump Site.

Alternative 2 – Institutional Controls and Monitoring

Capital Cost:	*$268,402*
Annual O&M Cost:	*$4,960*
Present Worth Cost:	*$458,908*
Time Frame including O&M:	*30 years*

This alternative would use Institutional Controls, such as deed notices, to prevent exposure to site contaminants and monitoring to assess any change in contaminant conditions over time. The existing fence around the Dump Site Fenced Area would be maintained, but no other physical barriers would be installed. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Alternative 3 –Capping and Institutional Controls

Capital Cost:	*$6,390,196*
Annual O&M Cost:	*$39,600*
Present Worth Cost:	*$6,982,546*
Construction Time Frame:	*5 months*

This alternative would use soil or asphalt covers as the primary method to prevent exposure to contaminants in site soils. In the parking lots of the commercial properties, asphalt would be maintained as an engineering control to prevent contact with underlying soil where contamination levels exceed the non-residential cleanup goals.

In all other areas of the Site, two feet of soil would be excavated to allow the installation of a two foot thick soil cap to prevent contact with soils that exceed the soil cleanup goals.

Approximately, 12,000 cubic yards of soil would be excavated to accommodate a cap. The excavated soil would be transported to an appropriate disposal facility.

Institutional controls, such as a deed notice, would be required on all properties where residential soil standards are not met. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Alternative 6 – Excavation, Capping and Institutional Controls

Capital Cost:	*$11,551,458*
Annual O&M Cost:	*$28,600*
Present Worth Cost:	*$12,016,239*
Construction Timeframe:	*8 months*

In this alternative, soil in the Northern Commercial Area and Vacant Lot Developed Area that exceed the non-residential cleanup goals, would be removed to approximately two to four feet, or deeper where utilities are located. Soil below the excavated depth that exceed the cleanup goals would be capped with either an impermeable cap or clean soil. Remaining unsaturated soil that exceed site-specific impact-to-groundwater values would receive an impermeable cap. The impermeable cap would be expected to minimize surface water percolation through the soil thereby reducing the impact on groundwater. An area of saturated soil located beneath the Northern Commercial Area adjoining Route 561 that is a source of groundwater contamination would be removed. Soil removal in this portion of the Northern Commercial Area is estimated to extend to 14 feet. Removal of saturated soil that acts as a source of groundwater contamination would also result in areas of deep excavation, between four to twelve feet, in the northern and central portions of the Dump Site Fenced Area

Parking lots of the commercial areas where soil contamination remaining at depth exceeds the non-residential cleanup goals, would be capped with asphalt. The unpaved areas would receive a soil cap. The pavement of Route 561 will function as a cap.

Institutional controls, such as a deed notice, would be required for all commercial properties and Route 561 where residential standards are not met. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

On residential properties adjoining White Sands Branch, the first foot of soil would be excavated to meet the ecological cleanup goals and soil exceeding the residential cleanup goals would be removed to depth. Since it is anticipated that no soil exceeding the

residential cleanup goals would remain on residential properties, no institutional controls would be required.

Approximately 23,000 cubic yards of soil would be removed under this alternative.

Alternative 7 -- Excavation and Institutional Controls

Capital Cost:	*$17,485,771*
Annual O&M:	*$0*
Present Worth Cost:	*$17,618,871*
Construction Timeframe:	*10 months*

At commercial properties, this alternative would result in the excavation of all accessible soil containing contaminants at concentrations that exceed the residential cleanup goals, specifically the Northern Commercial Area, Vacant Lot Developed Area, Vacant Lot and the commercial portion of the Dump Site Fenced Area. Contaminated soil beneath Route 561 and the commercial buildings would not be removed.

For residential properties within the White Sand Branch flood plain, all soils exceeding the residential cleanup goals would be removed. Any remaining soil that exceed ecological cleanup goals in the top foot of soil outside the footprint of the residential soil cleanup goal excavation would also be removed.

Approximately 37,000 cubic yards of soil would be removed under this alternative.

Since all the accessible contaminated soils would be removed from excavated areas, no capping would be necessary in the excavated areas. Route 561, and the commercial buildings would function as a cap.

Institutional controls, such as a deed notice, would be required on all properties where residential standards are not met. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Common Elements: Surface Water

Surface water monitoring is included as part of each remedial alternative. Monitoring would be conducted on a quarterly basis to assess any changes in contaminant conditions over time. It is expected that removal of sediment, combined with soil removal, and/or capping will result in a decrease of surface water contaminants to levels below NJSWQS. If monitoring indicates that contamination levels have not decreased to below the NJSWQS, EPA may require an action in the future.

Sediment Alternatives:

Note: Alternative 4 contains elements of Alternative 5 as described in the Feasibility Study.

Alternative 1 – No Action

Capital Cost:	*$0*
Annual O&M Cost:	*$0*
Present Worth Cost:	*$0*
Timeframe:	*0 years*

The NCP requires that a "No Action" alternative be evaluated to establish a baseline for comparison with other remedial alternatives. Under this alternative, no action would be taken to remediate the contaminated sediment at the Route 561 Dump Site.

Alternative 2 – Institutional Controls and Monitored Natural Recovery

Capital Cost:	*$70,323*
Annual O&M Cost:	*$46,200*
Present Worth Cost:	*$739,215*
Timeframe including O&M:	*30 years*

Under this alternative, no removal or capping of sediment would be conducted and exposure to contaminants would not be prevented. Periodic monitoring would be performed to determine if contaminant concentrations in surface sediment were declining to a level that is protective of ecological receptors. Institutional controls, such as a deed notice, would be required since contaminants remain above unrestricted levels. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Alternative 3 – Excavation and Capping

Capital Cost:	*$2,023,809*
Annual O&M Cost:	*$26,400*
Present Worth Cost:	*$2,470,841*
Construction Timeframe:	*2 months*

Under this Alternative, up to one foot of sediment containing contaminants at concentrations exceeding the ecological cleanup goals would be removed from the small streams and White Sand Branch within the Dump Site Fenced Area to the fence at the Burn Site located west of Berlin-Haddonfield Road. In areas where one foot of sediment is removed to meet the ecological cleanup goals, natural sedimentation would be allowed to restore the stream to its previous elevation. A cap would be installed on areas of the stream where levels of contaminants exceeding the cleanup goals remain after excavation. The cap would consist of six inches of sand, covered by three inches of stone that would act as an armoring layer. Natural sedimentation would then fill in above the armoring layer and reestablish the previous elevation of the stream. Approximately 448 cubic yards of sediment would be removed under this alternative.

A minimum of five years of sampling would take place to confirm that restoration was successful and that contaminant levels remain below the cleanup goals.

Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Alternative 4 – Excavation

Capital Cost:	*$1,927,968*
Annual O&M Cost:	*$46,200*
Present Worth Cost:	*$2,006,034*
Construction Timeframe:	*2.5 months*

This alternative consists of removal of all sediment with site-related contaminants exceeding ecological cleanup goals from the small streams within the Dump Site Fenced Area and the 1,050-foot section of White Sand Branch extending from the Dump Site Fenced Area to Berlin Haddonfield Road. No capping of sediments would be necessary since all sediment exceeding the cleanup goals would be removed. Areas where sediment is removed would be backfilled with clean material and the area restored.

Levels of contaminants in surface water exceeded the NJSWQS in White Sand Branch between Berlin Haddonfield Road and the Burn Site fence, however only one deep sediment sample exceeded the sediment cleanup goal in this section of the creek. Sediment in this 650-foot section of White Sand Branch would undergo additional sampling during design to determine if sediment removal is needed in this section of White Sand Branch.

It is estimated that 765 cubic yards of sediment would be removed under this alternative. A minimum of five years of monitoring would be conducted to ensure that the concentration of contaminants in the sediments remain below the cleanup goals. Because no

THE NINE SUPERFUND EVALUATION CRITERIA

1. Overall Protectiveness of Human Health and the Environment evaluates whether and how an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

2. Compliance with Applicable or Relevant and Appropriate Requirements (ARARs) evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that pertain to the site, or whether a waiver is justified.

3. Long-term Effectiveness and Permanence considers the ability of an alternative to maintain protection of human health and the environment over time.

4. Reduction of Toxicity, Mobility, or Volume (TMV) of Contaminants through Treatment evaluates an alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the amount of contamination present.

5. Short-term Effectiveness considers the length of time needed to implement an alternative and the risks the alternative poses to workers, the community, and the environment during implementation.

6. Implementability considers the technical and administrative feasibility of implementing the alternative, including factors such as the relative availability of goods and services.

7. Cost includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.

8. State/Support Agency Acceptance considers whether the State agrees with the EPA's analyses and recommendations, as described in the RI/FS and Proposed Plan.

***9.* Community Acceptance** considers whether the local community agrees with EPA's analyses and preferred alternative. Comments received on the Proposed Plan are an important indicator of community acceptance.

contamination would remain above unrestricted levels, five-year reviews would not be required.

EVALUATION OF ALTERNATIVES

EPA uses nine criteria to evaluate the remedial alternatives individually and against each other to select a remedy. This section of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The seven of the nine evaluation criteria are discussed below. The final two criteria, "State Acceptance" and "Community Acceptance" are discussed at the end of the document. A detailed analysis of each of the alternatives is in the FS report.

Evaluation of Soil Alternatives

1. Overall Protection of Human Health and the Environment

Alternative 1, No Action, would not be protective of human health or the environment since it does not include measures to prevent exposure to contaminated soil.

Alternative 2 would protect human health by restricting access to the contaminated soil through use of institutional controls, but such controls would not be protective of ecological receptors. It also would not address the source of groundwater contamination or prevent migration of soil contaminants to the surface water.

Alternatives 3, 6 and 7, provide an increasing progression of control of contaminated soil through a combination of excavation and capping. However, alternative 3 would not completely control migration of soil contaminants at depth to groundwater since only shallow soil would be removed.

Alternative 6 and 7 would be more protective of human health and the environment than Alternative 3 because sources of groundwater contamination in deep saturated soil would be removed from the Northern Commercial Area and the Dump Site Fenced Area. A combination of removal and capping of soil under Alternatives 6 and 7, combined with institutional controls, would prevent exposure to contaminants. Although Alternative 7 removes more soil than Alternative 6, it does not remove all contaminated soil to allow for unrestricted use and as previously mentioned, institutional controls would be required.

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

Actions taken at any Superfund site must meet all applicable or relevant and appropriate requirements under federal and state laws or provide grounds for invoking a waiver of those requirements.

Alternative 1 and Alternative 2 would not meet chemical-specific ARARs.

Alternatives 6 and 7 would be in compliance with chemical-specific ARARs by removing contaminated soil both in the shallow and deep zones and through capping.

Action-specific ARARs would be met by Alternatives 3 through 7 during the construction phase by proper design and implementation of the action including disposal of excavated soil at the appropriate disposal facility.

3. Long-Term Effectiveness and Permanence

Alternatives 1 and 2 would not provide long-term effectiveness or permanent protection to ecological receptors, groundwater or surface water because the soil contaminants would remain uncontrolled.

Alternative 3 does not provide as great a degree of long-term effectiveness and permanence in controlling sources of groundwater contamination when compared to Alternatives 6 and 7 because deep saturated soil contamination that acts as a source to groundwater contamination will not be removed from the Northern Commercial Area or the Dump Site Fenced Area and some contamination would be left in subsurface soil adjoining White Sand Branch.

By removing contaminants exceeding the cleanup goals from the White Sand Branch flood plain, and removing contaminated soil to a deeper depth beneath the commercial properties, Alternative 6 would achieve a greater degree of long-term protectiveness and permanence than Alternative 3. In addition, Alternative 6 would require capping on portions of the Dump Site Fenced Area and parking lots of commercial properties.

Alternative 7 offers the greatest degree of long-term

permanence by removing almost all contaminants and relying the least on capping.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

All of the soil alternatives involve removal and/or capping of soil. There is no treatment of the contaminants in any of the alternatives and therefore, no reduction in toxicity. Removal of the contaminated soil would decrease the volume of contaminants at the site and capping would decrease contaminant mobility. The excavated material would be transferred to a landfill without treatment and therefore the overall reduction of toxicity mobility or volume through treatment would not be achieved.

Alternatives 1 and 2 would not reduce the toxicity, mobility or volume of soil contaminants since no material will be removed or capped.

The amount of contamination removed or capped increases progressively from Alternatives 3 to 7. Alternative 7 would leave the least amount of contamination on the site, but would not reduce the toxicity mobility or volume of contaminants any more than the other alternatives.

5. Short-Term Effectiveness

Short-term effectiveness considers the effects the implementation of an alternative will have on the community, workers and the environment and the amount of time until an alternative effectively protects human health and the environment.

Alternatives 1 and 2 do not present any short-term risks to site workers or the environment because they do not include any active remediation work.

Under Alternatives 3 through 7, potential adverse short-term effects to the community include increased traffic, noise, road closures and, at times, limited access to businesses.

Risks to site workers, the community and the environment include potential short-term exposure to contaminants during excavation of soil. Potential exposures and environmental impacts associated with dust and runoff would be minimized with proper installation and implementation of dust and erosion control measures and monitoring. Portions of the site, such as the Dump Site Fenced Area and White Sand Branch, consist of large areas of wetlands. Under Alternatives 3 through 7, it would be necessary to remove trees and vegetation as well as disrupt the small streams and associated wildlife.

Alternatives in which the largest quantity of soil is removed would have the greatest area of impact, would require the longest period of time to complete, and would have the highest potential for short–term adverse effects. Alternatives 3, 6 and 7 would take 5, 8, and 10 months respectively to complete. Among Alternatives 3 through 7, Alternative 3 would take the shortest time to achieve protection of human health and the environment and would, therefore, have the lowest potential for short-term adverse effects.

6. Implementability

Because Alternatives 1 and 2 would not entail any construction, they would be easily implemented.

Alternatives 3 through 7 have common implementability issues related to the removal of contaminated soil and installation of the caps. These include short-term traffic disruption on Route 561 and to local businesses. The amount of disruption depends on the location of the contaminated soil, the amount of soil removed and the amount of time it takes for removal.

The increased volume of soil removal associated with Alternative 6 increases the implementation difficulties compared to Alternative 3.

In Alternative 6, deep excavations to remove groundwater source areas in the Northern Commercial Area and Dump Site Fenced Area present implementability challenges, while shallow excavations on other areas of commercial properties i.e. to a depth of approximately two to four feet for soil, would be relatively less challenging. Soil removal from the commercial areas could be implemented in a phased manner to reduce disruption of businesses.

Alternative 7 presents the greatest challenges to implement because it requires removing the deepest areas of contamination. In the Northern Commercial Area excavation would extend over 20 feet in depth. In the Vacant Lot Developed Area removal of contamination would require excavation adjacent to a building to a depth 10 feet.

In general, the amount of soil to be removed and area to be capped increases from Alternatives 3 to 7. Therefore, alternative 3 is the easiest to implement and alternatives 6 and 7 would be more difficult to implement.

7. Cost

The total estimated present worth costs increase with the amount of material removed. The estimated cost are $459,000 for Alternative 2, $6,982,000 for Alternative 3, $12,016,000 for Alternative 6, and $17,619,000 for Alternative 7. Alternative 1 has no cost.

Evaluation of Sediment Alternatives

1. Overall Protection of Human Health and the Environment

Alternative 1 is not protective of human health or the environment because no action would be taken to address sediment contamination.

Alternative 2 would use institutional controls to protect human health by restricting access to the contaminated sediment during the time it takes for natural recovery. However, institutional controls would not be protective of ecological receptors because they do not control access by wildlife. In addition, the amount of time to achieve natural recovery would be unacceptably long.

Alternative 3 would be protective because one foot of contaminated sediment would be removed and the remaining contaminated sediment would be capped.

Alternative 4 would be protective because sediment contamination above the cleanup goals would be removed.

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

Sediment cleanup goals are risk-based and, therefore, there are no chemical-specific ARARs. Alternatives 3 and 4 which require remedial action would comply with action and location specific ARARs that apply to remediation and filling in floodplains, work in wetland areas, waste management, and storm water management.

3. Long-Term Effectiveness and Permanence

Alternatives 1 and 2 would allow existing contamination, and ecological exposures and risks to continue while natural recovery occurs. Natural recovery alone will not reduce surface sediment concentrations to levels that are protective of ecological receptors.

The cap associated with Alternative 3 would be installed in the small streams within the Dump Site Fenced Area and White Sand Branch between Clement Lake and Berlin-Haddonfield Road. This alternative would be effective in maintaining protection of human health and the environment in the capped section of the water body. Such protectiveness would be permanent as long as the cap remains in place.

Alternative 4 would remove all sediment contamination from the small streams within the Dump Site Fenced Area and White Sand Branch between Clement Lake and the Berlin-Haddonfield Road. Alternative 4 would be more effective and have a higher degree of permanence than Alternative 3 since all contaminated sediment would be removed under Alternative 4.

4. Reduction of Toxicity, Mobility, or Volume through Treatment

The major contamination in sediment at the Site is due to the presence of metals. All the alternatives involve removal and/or capping of the sediment. There is no treatment of the contaminants and, therefore, no reduction of toxicity. Removal of the contaminated sediment would decrease the volume and capping would decrease the mobility of any contamination at the site. The excavated sediment would be transferred to a landfill without treatment.

Alternatives 1 and 2 would not reduce the toxicity mobility or volume of sediment contaminants. Between the two alternatives that involve sediment excavation, Alternative 3 would remove the least amount of sediment and would include sediment capping. Alternative 4 addresses the same stretch of White Sands Branch as Alternative 3, however more volume of sediment would be removed under Alternative 4 through deeper excavation.

5. Short-Term Effectiveness

Alternatives 1 and 2 do not present any short-term risks to the community, site workers or the environment because these alternatives do not include any active remediation work.

Alternatives 3 and 4 involve excavation and thus have potential for short-term adverse effects. Potential risks posed to site workers, the community and the environment during implementation of each of the sediment alternatives could be due to wind-blown or surface water transport of contaminants. Any potential impacts associated with dust and runoff would be minimized through proper installation and implementation of dust and erosion control measures. The areas would be monitored throughout the construction.

The potential risk of sediment releases could increase over the current conditions, due to removal of existing vegetation that currently minimizes sediment movement. There is little difference in the implementation time from the shortest (two months) to the longest (two and a half months three months). Therefore, Alternatives 3 and 4 are equal in terms of short-term effectiveness.

6. Implementability

Sediment Alternatives 1 and 2 would not include any construction, and therefore they would be easily implemented.

Alternatives 3 and 4 require sediment removal and face similar implementability challenges. Such challenges include access to low lying saturated areas, control of surface water flow, controlling intrusion of groundwater into excavation areas, streambed stabilization and wetland restoration.

The implementability challenges increase with the length of White Sand Branch to be remediated and volume of sediment to be removed. Alternative 3 calls for the least amount of sediment removal and therefore presents the least amount of implementability challenges among the alternatives. In contrast, Alternative 4 poses the greatest implementability challenges since it requires the largest remediation area and involves deeper removal of sediment.

7. Cost

The total estimated present worth costs of Alternatives 2, 3, and 4 are $739,000, $2,268,000 and $2,006,000. Alternative 1 has no cost.

PREFERRED ALTERNATIVE

The preferred soil alternative for cleanup of the Route 561 Dump Site is Alternative 6, Excavation, Capping and Institutional Controls. For the sediment, the preferred alternative is Alternative 4, Excavation. As discussed above, the surface water will be monitored to determine the effectiveness of the implemented soil and sediment remedies. Together, these three elements comprise EPA's Preferred Alternative.

Soil:
The Preferred Soil Alternative 6 (Figure 4) involves excavation, capping, and off-site disposal of soil. The major components of the Preferred Soil Alternative include:

- Excavation, transportation and disposal of 23,000 cubic yards of contaminated soil;
- Installation of engineering controls (asphalt caps in parking lots, vegetated soil covers in the Dump Site Fenced Area;
- Restoration and revegetation of White Sand Branch flood plain; and
- Institutional controls, such as a deed notice, to prevent exposure to residual soil that exceed levels that allow for unrestricted use.

Soil in the Northern Commercial Area and Vacant Lot Developed Area that exceed the non-residential cleanup goals, would be removed to approximately two to four feet, or deeper where utilities are located. Soil below the excavated depth, that exceed the cleanup goals, would be capped with either an impermeable cap or clean soil. Areas of unsaturated soil that exceed site specific impact to groundwater values, would receive an impermeable cap. Saturated soil at depth that are a source of groundwater contamination would be removed. Soil removal in the Northern Commercial Area is estimated to extend to 14 feet in a small area on the southern portion of the property.

Parking lots of the commercial areas where soil contamination exceeds the non-residential cleanup goals at depth would be capped with asphalt while other

unpaved areas would receive a soil cap. Excavation of soil in the Dump Site Fenced Area would range from two feet, to allow for cap installation, to 12 feet in depth to achieve soil source control to groundwater.

On residential properties adjoining White Sands Branch, the first foot of soil would be excavated to meet the ecological cleanup goals and soil exceeding the residential cleanup goals would be removed to depth. Since it is anticipated that no soil exceeding the residential cleanup goals would remain on residential properties, no institutional controls would be required.

Soil Alternative 6 was chosen because it has fewer uncertainties in addressing the source areas compared to Alternative 3 and will provide an equivalent degree of protection as Soil Alternative 7.

The Preferred Soil Alternative was selected over other alternatives because it is expected to achieve substantial and long-term risk reduction through off-site disposal, and is expected to allow the site to be used for its reasonably anticipated future land use, which is commercial/residential. The Preferred Soil Alternative reduces the risk within a reasonable time frame, and at a cost comparable to other alternatives and provides for long-term reliability of the remedy.

The Preferred Soil Alternative would achieve cleanup goals that are protective for residential use on floodplain soils adjoining White Sand Branch but would not achieve levels that would allow for unrestricted use on commercial properties and therefore, institutional controls, such as a deed notice would be required on commercial properties. Five-year reviews would be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

Sediment:
The Preferred Sediment Alternative 4 (Figure 5) includes excavation of sediment with contaminant levels greater than the cleanup goals from small streams within the Dump Site Fenced Area and the headwaters of White Sand Branch to Berlin-Haddonfield Road. The major components of the Preferred Sediment Alternative include:

- Construction of a stream diversion system to allow access to sediments;
- Excavation, transportation and disposal of 765 cubic yards of contaminated sediment;
- Dewatering and processing of excavated sediment;
- Stream bank and revegetation and restoration.

Approximately two feet of sediment would be removed from the northern, central and southern portions of the small streams within the Dump Site Fenced Area and White Sand Branch extending to the Burn Site fence. One sediment sample exceeded the sediment cleanup goal for lead in the deep sediment downstream of Berlin-Haddonfield Road and immediately upstream of the Burn Site fence. In addition, there are also exceedances of lead in sediment of White Sand Branch within the Burn Site near the fence bordering the Route 561 Dumps Site. Under Sediment Alternative 4, additional sampling during design would determine the extent of sediment excavation in this furthest downstream reach of White Sand Branch.
After remediation of sediment, the stream banks, riparian zone and wetlands would be monitored for a period of five years to assure successful restoration of these areas.

The Preferred Sediment Alternative was selected over other alternatives because it is expected to achieve substantial and long-term risk reduction through off-site disposal of sediment by reducing contaminant levels in White Sand Branch. The Preferred Sediment Alternative 4 reduces risk within a reasonable timeframe, at a cost comparable to the other alternatives and provides for long-term reliability of the remedy.

Surface Water:
Surface water monitoring would be conducted on a quarterly basis to assess any changes in contaminant conditions over time. It is expected that removal of contaminated sediment, combined with soil removal, and/or capping will result in a decrease of surface water contaminants to levels below NJSWQS. If monitoring indicates that contamination levels have not decreased to below the NJSWQS, EPA may require an action in the future.

The Preferred Alternatives are believed to provide the best balance of tradeoffs among the alternatives based on the information available to EPA at this time. EPA believes the Preferred Alternatives would be protective of human health and the environment, would comply with ARARs, would be cost-effective and would utilize

permanent solutions. The selected alternatives may change in response to public comment or new information.

Consistent with EPA Region 2's Clean and Green policy, EPA will evaluate the use of sustainable technologies and practices with respect to implementation of a selected remedy.

State Acceptance

The state of New Jersey concurs with the preferred alternatives of sediment and soil removal including off-site soil disposal. However the state cannot concur with the capping and institutional control component of the preferred soil alternative unless property owners provide their consent to the placement of a cap and a deed notice.

Community Acceptance

Community acceptance of the Preferred Alternatives will be evaluated after the public comment period ends and will be described in the Decision Document. Based on public comment, the Preferred Alternatives could be modified from the version presented in this proposed plan. The Decision Document formalizes the selection of the remedy for a site that has not been listed on the National Priorities List.

COMMUNITY PARTICIPATION

EPA provided information regarding the cleanup of the Route 561 Dump Site through meetings, the Administrative Record file for the Route 561 Dump Site and announcements published in the local newspaper. EPA encourages the public to gain a more comprehensive understanding of the site and the remedial investigation activities that have been conducted at them.

The dates for the public comment period; the date, the location and time of the public meeting; and the locations of the Administrative Record file are provided on the front page of this Proposed Plan.

For further information on EPA's Preferred Alternative for the Route 561 Dump Site contact:

Renee Gelblat
Remedial Project Manager
(212) 637-4414

Pat Seppi
Community Relations
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U.S. EPA
290 Broadway 19th Floor
New York, New York 10007-1866

On the Web at:

www.epa.gov/superfund/route-561-dump

Table 1: Summary of Total Cancer Risks and Noncancer Hazard by Exposure Area

Exposure Area	Utility Worker		Construction Worker		Outdoor Worker		Resident		Adolescent Recreator		Adult Recreator	
	Cancer Risk	Noncancer Hazard Index	Cancer Risk	Noncancer Hazard Index	Cancer Risk	Noncancer Hazard Index	Cancer Risk	Noncancer Hazard Index	Cancer Risk	Noncancer Hazard Index	Cancer Risk	Noncancer Hazard Index
Dump Site Fenced Area (DFA)	6.E-05	0.5	6.E-05	**13**	**7.E-04**	**6**	**1.E-03**	**44**	**6.E-04**	**12**	**1.E-03**	**8**
Eastern Dump Site (EDS)	2.E-06	0.02	2.E-06	0.4					9.E-06	0.3	1.E-05	0.2
Northern Commercial Area (NCA)	4.E-05	0.3	4.E-05	**8**	2.E-05	0.2						
Western Commercial Area (WCA)	2.E-05	0.1	2.E-05	**3**	1.E-04	0.9						
Vacant Lot* (VL)	1.E-05	0.09	1.E-05	**2**	**2.E-04**	2	**2.E-03**	**71**	1.E-04	2	**2.E-04**	1.4
Western White Sands Branch (WSB-W)							**1.E-03**	**47**	2.E-05	0.4	2.E-05	0.2

Notes:

Bold and shaded in gray- Cancer risk estimates exceeded 1×10^{-4} or Hazard Index of 1 (when seprated by targer organ/effect)

Blank Entries- Receptor not evaluated in this exposure area

* Risks and hazards from sediment and surface water in the Eastern portion of White Sands Branch (WSB-E) were quantitatively evaluated as part of the VL exposure area.

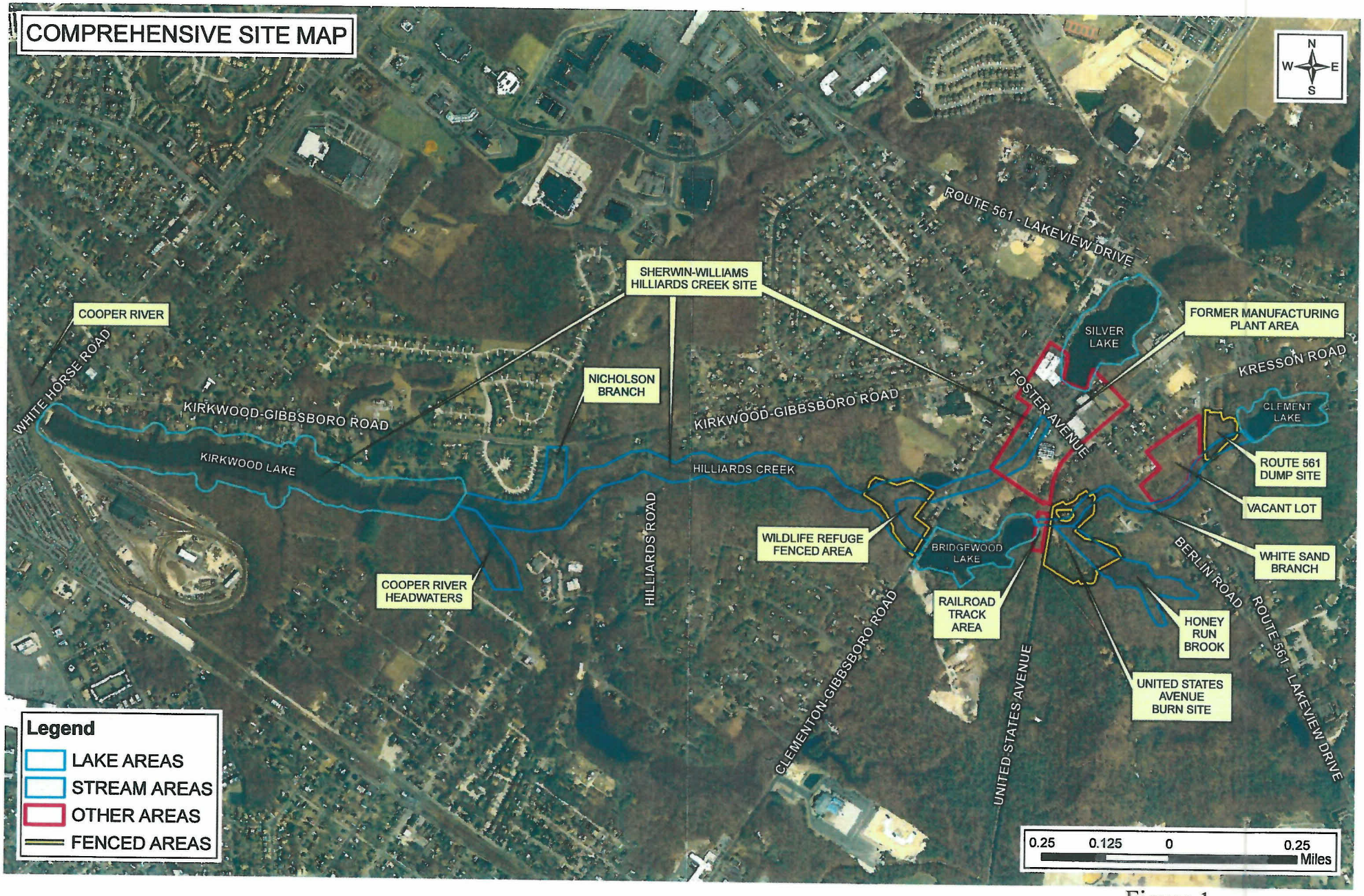
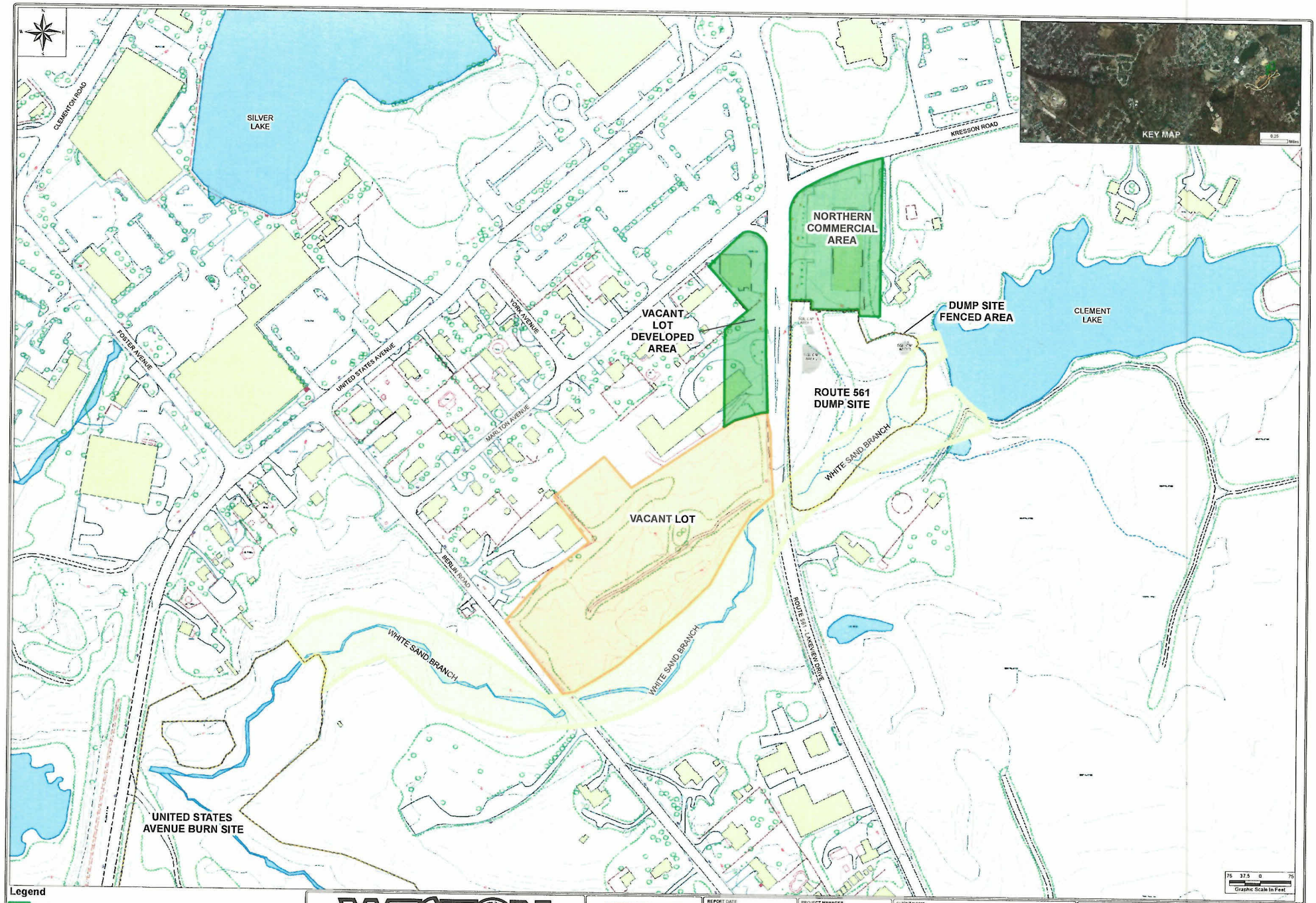

COMPREHENSIVE SITE MAP
N
W
E
S
ROUTE 561 - LAKEVIEW DRIVE
SHERWIN-WILLIAMS HILLIARDS CREEK SITE
COOPER RIVER
FORMER MANUFACTURING PLANT AREA
SILVER LAKE
KRESSON ROAD
WHITE HORSE ROAD
NICHOLSON BRANCH
KIRKWOOD-GIBBSBORO ROAD
KIRKWOOD-GIBBSBORO ROAD
FOSTER AVENUE
CLEMENT LAKE
KIRKWOOD LAKE
HILLIARDS CREEK
ROUTE 561 DUMP SITE
VACANT LOT
WILDLIFE REFUGE FENCED AREA
BRIDGEWOOD LAKE
WHITE SAND BRANCH
BERLIN ROAD
COOPER RIVER HEADWATERS
HILLIARDS ROAD
RAILROAD TRACK AREA
HONEY RUN BROOK
CLEMENTON-GIBBSBORO ROAD
UNITED STATES AVENUE
UNITED STATES AVENUE BURN SITE
ROUTE 561 - LAKEVIEW DRIVE
Legend
LAKE AREAS
STREAM AREAS
OTHER AREAS
FENCED AREAS
0.25 0.125 0 0.25
Miles

Figure 1



Legend

- Northern Commercial Area
- Vacant Lot Developed Area
- Vacant Lot
- White Sand Branch
- Fence Boundary
- 15-Inch Diameter Culvert From Parking Lot
- Soil Cap Area
- Perennial Stream Channel
- Intermittent Stream Channel

Note
The Dump Site fence boundary on the base map was updated on June 30, 2011.

WESTON SOLUTIONS SM

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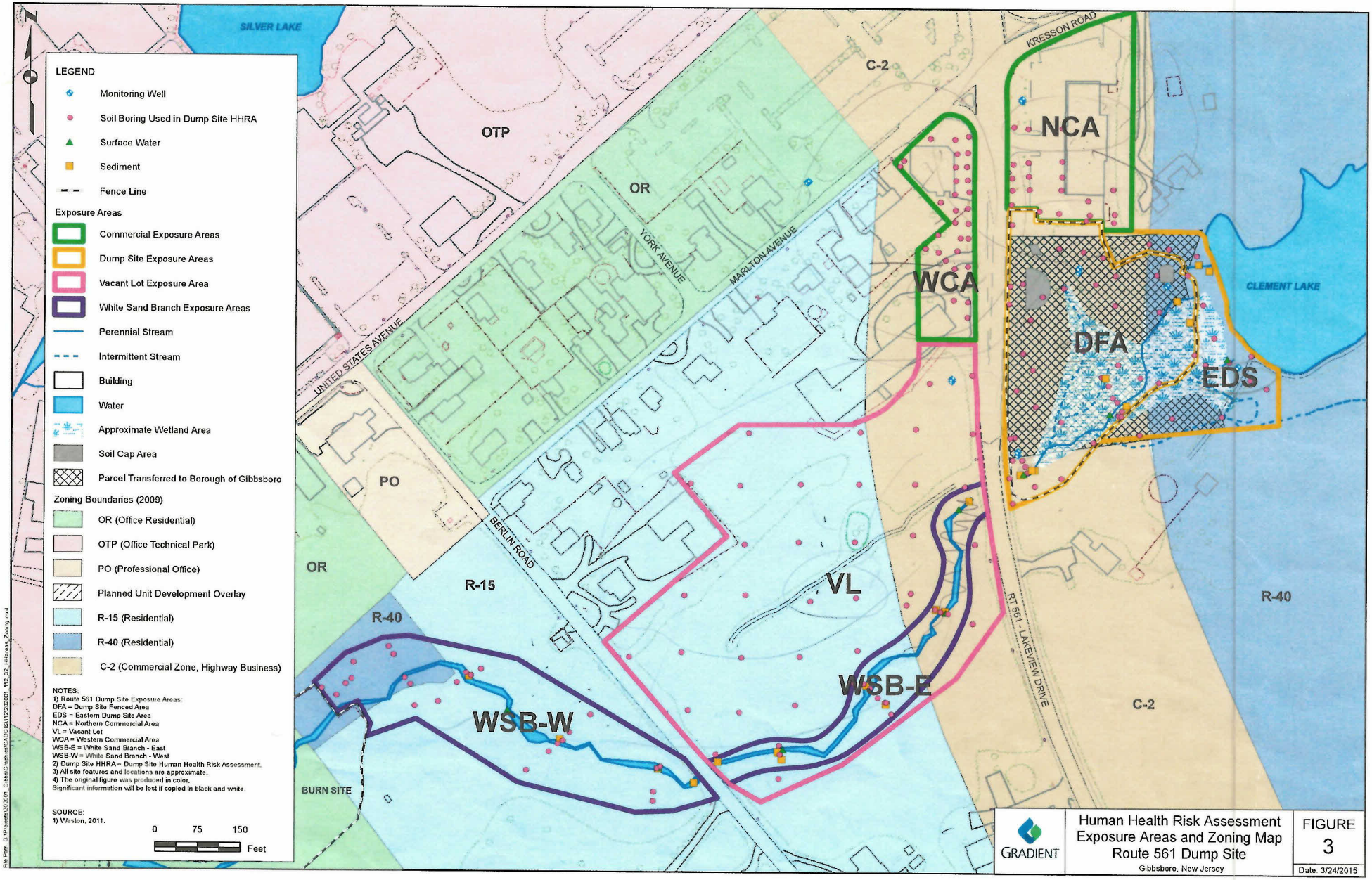
http://www.westonsolutions.com

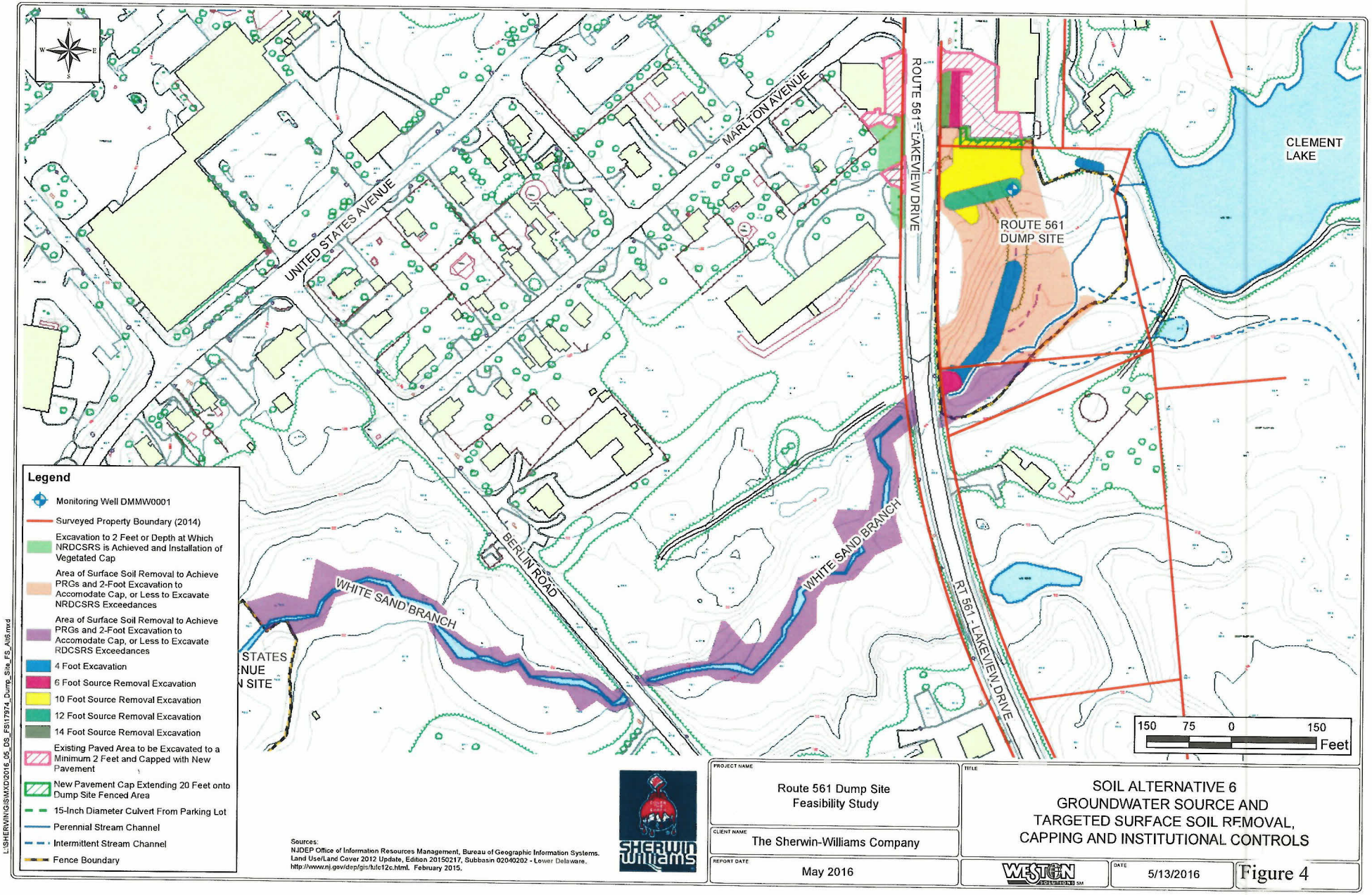
SHERWIN WILLIAMS

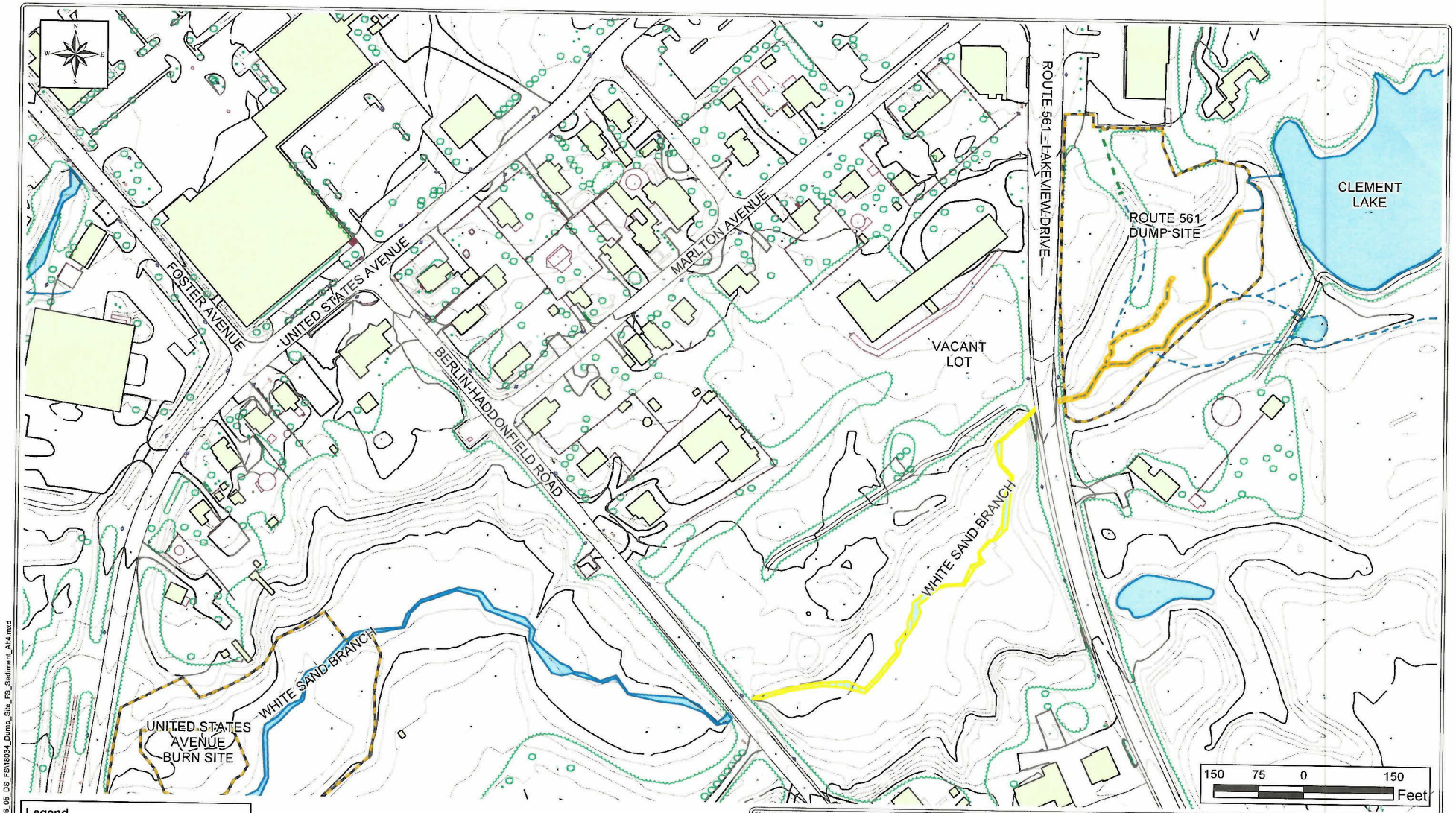
REPORT DATE: May 2016	PROJECT MANAGER: S. Jones	CLIENT NAME: The Sherwin-Williams Company
DRAWING PATH: 17952_DS_VI_WSB_Key_Map.mxd L:\SHERWIN\GIS\MXD\2016_04_DS_FS	CHECKED BY: A. Fischer	
REVISION No.: 0	CONTRACT No. / DELIVERY ORDER NO.:	PROJECT NAME: Route 561 Dump Site Feasibility Study
WORK ORDER No.: 20076.022.083.0008	DRAWN/MODIFIED BY: K. Heulitt; DATE CREATED: 5/2/2016	

DRAWING TITLE: ROUTE 561 DUMP SITE KEY MAP

FIGURE	SCALE	DATE
2	1 " = 75 '	5/13/2016


LEGEND
Monitoring Well
Soil Boring Used in Dump Site HHRA
Surface Water
Sediment
Fence Line
Exposure Areas
Commercial Exposure Areas
Dump Site Exposure Areas
Vacant Lot Exposure Area
White Sand Branch Exposure Areas
Perennial Stream
Intermittent Stream
Building
Water
Approximate Wetland Area
Soil Cap Area
Parcel Transferred to Borough of Gibbsboro
Zoning Boundaries (2009)
OR (Office Residential)
OTP (Office Technical Park)
PO (Professional Office)
Planned Unit Development Overlay
R-15 (Residential)
R-40 (Residential)
C-2 (Commercial Zone, Highway Business)
NOTES:
1) Route 561 Dump Site Exposure Areas:
DFA = Dump Site Fenced Area
EDS = Eastern Dump Site Area
NCA = Northern Commercial Area
VL = Vacant Lot
WCA = Western Commercial Area
WSB-E = White Sand Branch - East
WSB-W = White Sand Branch - West
2) Dump Site HHRA = Dump Site Human Health Risk Assessment.
3) All site features and locations are approximate.
4) The original figure was produced in color.
Significant information will be lost if copied in black and white.
SOURCE:
1) Weston, 2011.
0
75
150
Feet
SILVER LAKE
OTP
OR
C-2
KRESSON ROAD
NCA
WCA
DFA
EDS
CLEMENT LAKE
YORK AVENUE
MARLTON AVENUE
UNITED STATES AVENUE
PO
BERLIN ROAD
OR
R-15
R-40
VL
WSB-E
WSB-W
RT 561 - LAKEVIEW DRIVE
R-40
C-2
BURN SITE
GRADIENT
Human Health Risk Assessment
Exposure Areas and Zoning Map
Route 561 Dump Site
Gibbsboro, New Jersey
FIGURE
3
Date: 3/24/2015


UNITED STATES AVENUE
MARLTON AVENUE
ROUTE 561 - LAKEVIEW DRIVE
CLEMENT LAKE
ROUTE 561 DUMP SITE
BERLIN ROAD
WHITE SAND BRANCH
WHITE SAND BRANCH
RT 561 - LAKEVIEW DRIVE
STATES
NUE
N SITE
150 75 0 150
Feet
Legend
Monitoring Well DMMW0001
Surveyed Property Boundary (2014)
Excavation to 2 Feet or Depth at Which NRDCSRS is Achieved and Installation of Vegetated Cap
Area of Surface Soil Removal to Achieve PRGs and 2-Foot Excavation to Accomodate Cap, or Less to Excavate NRDCSRS Exceedances
Area of Surface Soil Removal to Achieve PRGs and 2-Foot Excavation to Accomodate Cap, or Less to Excavate RDCSRS Exceedances
4 Foot Excavation
6 Foot Source Removal Excavation
10 Foot Source Removal Excavation
12 Foot Source Removal Excavation
14 Foot Source Removal Excavation
Existing Paved Area to be Excavated to a Minimum 2 Feet and Capped with New Pavement
New Pavement Cap Extending 20 Feet onto Dump Site Fenced Area
15-Inch Diameter Culvert From Parking Lot
Perennial Stream Channel
Intermittent Stream Channel
Fence Boundary
Sources:
NJDEP Office of Information Resources Management, Bureau of Geographic Information Systems. Land Use/Land Cover 2012 Update, Edition 20150217, Subbasin 02040202 - Lower Delaware. http://www.nj.gov/dep/gis/lulc12c.html. February 2015.
SHERWIN WILLIAMS
PROJECT NAME
Route 561 Dump Site Feasibility Study
CLIENT NAME
The Sherwin-Williams Company
REPORT DATE
May 2016
TITLE
SOIL ALTERNATIVE 6 GROUNDWATER SOURCE AND TARGETED SURFACE SOIL REMOVAL, CAPPING AND INSTITUTIONAL CONTROLS
WESTON SOLUTIONS SM
DATE
5/13/2016
Figure 4
L:\SHERWIN\GIS\MXD\2016_05_DS_FS\17974_Dump_Site_FS_Alt6.mxd


FOSTER AVENUE
UNITED STATES AVENUE
BERLIN-HADDONFIELD ROAD
MARLTON AVENUE
ROUTE 561 - LAKEVIEW DRIVE
VACANT LOT
ROUTE 561 DUMP-SITE
CLEMENT LAKE
WHITE SAND BRANCH
WHITE SAND BRANCH
UNITED STATES AVENUE BURN SITE
150 75 0 150
Feet
Legend
2 Foot Excavation Depth
2.5 Foot Excavation Depth
15-Inch Diameter Culvert From Parking Lot
Perennial Stream Channel
Intermittent Stream Channel
Fence Boundary
Sources:
NJDEP Office of Information Resources Management, Bureau of Geographic Information Systems. Land Use/Land Cover 2012 Update, Edition 20150217, Subbasin 02040202 - Lower Delaware. http://www.nj.gov/dep/gis/lulc12c.html. February 2015.
SHERWIN WILLIAMS
PROJECT NAME
Route 561 Dump Site
Feasibility Study
CLIENT NAME
The Sherwin-Williams Company
REPORT DATE
May 2016
TITLE
SEDIMENT ALTERNATIVE 4
REMOVAL OF ALL SEDIMENT WITH
CONTAMINANTS GREATER THAN PRGs
WESTON SOLUTIONS SM
DATE
5/13/2016
Figure 5
L:\SHERWIN\GIS\MXD\2016_05_DS_FS\180304_Dump_Site_FS_Sediment_Alt4.mxd

Attachment B: Public Notice

Nightclub

Continued from Page 1A

Undeterred, he re-entered the club.

Inside, those on the dance floor weren't sure if what they heard was just part of the DJ's set.

"Everyone was getting on the floor. ... I thought it was just part of the music, until I saw fire coming out of his gun," patron Rose Feba explained to the Orlando Sentinel.

Mina Justice was sound asleep when she received the first text from her son, Eddie Justice, who was in the club.

"Mommy I love you," the first message said. It was 2:06 a.m.

"In club they shooting."

It was around this time that Alamo wandered back into the main room.

"He was holding a big weapon," Alamo said. "He had a white shirt and he was holding the weapon ... you ever seen how Marine guys hold big weapons, shooting from left to right? That's how he was shooting at people."

Alamo dashed toward the back of one of the smaller dance rooms, and said people then rushed to an area where two bouncers had knocked down a wooden fence to create an escape route.

"My first thought was, 'Oh my God, I'm going to die," Alamo said, his voice very quiet. "I was praying to God that I would live to see another day. I couldn't believe this was happening."

At 2:09 a.m., Pulse posted a chilling, hurried message on its Facebook page: "Everyone get out of pulse and keep running."

Brand White and his cousin were on the dance floor in the main room when White's cousin yelled to him, "B, it's a guy with a bomb!" Before he knew it, White was hit in the shoulder.

"All of a sudden it just started like a rolling thunder, loud and everything went black," White wrote in a Facebook message to an Associated Press reporter from his hospital room Sunday. "I think I was trampled."

He didn't recall leaving the club, but he remembered the state he was in: "Covered head to toe in blood."

"I remember screaming and mass chaos," he wrote. "There were hundreds of people there."

He made it to the hospital, where he got a blood transfusion. As Sunday wore on, his cousin remained missing.

Brett Rigas and his partner also were dancing in the main room when they heard the crack of gunfire. "About 70 bullets," Rigas described in a terse Facebook message.

He was shot in the arm and a man next to him was struck in the leg before police entered the room.

"I was behind the bar with four other people under the well. They called out to us and had us run out," he said.

Rigas saw dead bodies as he barreled out of the club. In the rush to escape, he became separated from his partner, who remained unaccounted for.

Three patrons, including a performer, ran to the nearby home of club regular David "Brock" Cornelius. Cornelius had gone to a different bar Saturday night and wasn't yet home, but he texted them his garage code and they hid in his house.

Police said a dozen or so other patrons took cover in a restroom.

At 2:39 a.m., Eddie Justice texted his mother from the bathroom, pleading for her to call police:

"Call them mommy

JOE BURBANK/ORLANDO SENTINEL VIA AP

Ray Rivera, left, a DJ at Pulse Orlando nightclub, is consoled by a friend, outside of the Orlando Police Department following Sunday's mass shooting at the nightclub.

AP

Terry DeCarlo, executive director of the LGBT Center of Central Florida, left, Kelvin Cobaris, pastor of The Impact Church, center, and Orlando City Commissioner Patty Sheehan console each other after the shooting.

AP

An Orange County Sheriff's Department SWAT member arrives at at Pulse Orlando nightclub Sunday.

Now."

He's coming

I'm gonna die."

Justice asked her son if anyone was hurt and which bathroom he was in.

"Lots. Yes," he responded at 2:42 a.m.

The last text she received from Eddie was at 2:50 a.m. She still hasn't heard from her son.

"All I heard was gunfire after gunfire," Brandon Wolf, who was in a restroom hiding, told the Sentinel. "Eventually, I thought you were supposed to run out of ammunition. But it just kept going and going," he said.

What happened in the three hours after the shooting broke out and the gunman was killed was not immediately clear.

As people lay dying in the club, the shooting developed "into a hostage situation," Orlando Police Chief John Mina said.

Orlando Mayor Buddy Dyer said that officers initially mistakenly thought the gunman had strapped explosives to some of his victims after a bomb robot sent back images of a battery part next to a body.

That held paramedics up from entering the club until it was determined the part had fallen out of an exit sign or smoke detector, the mayor said.

The robot was sent in after SWAT team members used explosive charges and an armored vehicle to knock down a wall down in an effort to access the club.

About 5 a.m., a decision was made to rescue the remaining club-goers, who authorities said likely were in one of the smaller dance rooms, the Adonis Room. Law enforcement officers used two explosive devices to try to distract the killer and then 11 officers stormed the club and exchanged gunfire with Mateen.

The explosives jolted some Pulse neighbors awake, including Dorian Ackerman, 28, who noted that it was just after 5 a.m.

"I heard a woman screaming," he said.

"It was really terrifying."

The gunman started firing, hitting an officer who was saved by protective armor.

"That's when we took him down," the mayor said.

South Jersey reaction to Orlando shooting

STAFF REPORTS

Here's how local and state politicians are reacting to the Orlando massacre:

Senate President Steve Sweeney, D-Gloucester:

"As the deadliest mass shooting in U.S. history, it is a terrible tragedy that touches all Americans. As an apparent act of terror, it is an attack that reminds us that our security is always at risk and how indebted we are to the men and women in law enforcement and national security. If the targets were selected because they are members of the LGBT community, it is a demonstration of the extreme consequences of bias and hatred.

"There is more to learn about the details and motivations of this brutal act of violence. Right now, the victims, their families, loved ones and the people of Orlando should know that our thoughts and our prayers are with them as we absorb the shock of these killings and mourn the loss of life."

U.S. Rep. Donald Norcross, D-1:

"America is mourning yet another mass shooting – the worst in United States history. As we pray for the victims and their families of the massacre at Pulse Orlando … this latest eruption of violence should serve as a wakeup call to all in United States Congress about the urgent need for common sense gun control. How many more times does something like this need to happen before meaningful action is taken?"

U.S. Rep. Frank LoBiondo, R-2:

"Tina and I send our prayers to the victims and their families in Orlando. South Jersey stands with law enforcement and our intelligence community to seek the truth and bring justice for this senseless attack."

Gov. Chris Christie:

"Outraged by senseless murders in Orlando. Our prayers go out to the families. Law enforcement needs answers so we can protect our country."

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY INVITES PUBLIC COMMENT ON THE PROPOSED PLAN FOR THE ROUTE 561 DUMP SITE GIBBSBORO, NEW JERSEY

The U.S. Environmental Protection Agency (EPA) announces the opening of a 30-day comment period on the preferred plan to address contaminated soil, sediment and surface water related to the Rt. 561 Dump Site, located in Gibbsboro, Camden County, New Jersey. The preferred remedy and other alternatives are identified in the Proposed Plan.

The comment period begins on June 13, 2016 and ends on July 12, 2016. As part of the public comment period, EPA will hold a public meeting on June 21, 2016 at 7PM at the Gibbsboro Senior Center, 250 Haddonfield-Berlin Road, Gibbsboro, NJ.

The Proposed Plan is available electronically at the following address:

https://semspub.epa.gov/src/document/02/395831

Written comments on the Proposed Plan, postmarked no later than close of business July 12, 2016, may be emailed to Gelblat.renee@epa.gov or mailed to Renee Gelblat, US EPA, 290 Broadway, 19th Floor, New York, NY 10007-1866.

The Administrative Record files are available for public review at the following information repositories:

Gibbsboro Borough Hall/Library, 49 Kirkwood Rd., Gibbsboro, NJ, 08026 or at the USEPA – Region 2, Superfund Records Center, 290 Broadway, 19th Floor, New York, NY 10007-1866.

For more information, please contact Pat Seppi, EPA's Community Liaison, at 646.369.0068 or seppi.pat@epa.gov

Boxing champ, others honored in Camden

CAROL COMEGNO
@CAROLCOMEGNO

CAMDEN - City officials, tiring of the negative narratives of a city still struggling with drugs, crime and other issues, decided this week to change the conversation.

City Council took time during Tuesday's meeting to accentuate the positives and focus on the achievements of its residents.

Council invited more than a dozen people to the meeting, devoting more than an hour to recognize, praise and publicize them. A boxer, a philanthropist, a veteran, a businessman, all earned the city's respect for their contributions and service as role models locally and beyond.

"Who says Camden doesn't have talent? That nothing good comes out of Camden?" City Council President Frank Moran asked.

Honored first was boxer Jason Sosa, who became the World Boxing Association's super featherweight champion June 24 when he bested undefeated Javier Fortuna of the Dominican Republic in Beijing, China, with a TKO in the 11th round. He accepted a key to the city from Moran, who said Sosa has brought more recognition to the city.

Moran said it is appropriate for council to honor those who overcome adversity, shine bright and serve as positive role models and inspiration for Camden's youth and other residents.

After a suggestion from Moran about a future fight in Camden, Sosa and his promoter, Russell Paltz, said they would like to schedule the next fight for the riverfront baseball park so Sosa can defend his title in front of a South Jersey audience.

"I am grateful to the city for this honor today and it would be a dream to have a fight in my hometown," said the 28-year-old Sosa, a Sterling High School graduate who was born and raised mostly in Camden, now lives in Williamstown and trains at the Victory Boxing gym in Cherry Hill.

Paltz later said the city would have to help support and promote such a boxing event.

Sosa joins a legacy of other champion boxers from Camden — the late heavyweight champion Jersey Joe Walcott and Dwight Mohammed Qawi (born Dwight Braxton), the 1981 light heavyweight boxing champion who also was honored at Tuesday's council meeting.

These honors prompted this verbal advice from the council president to city youth: "Put down the gun and pick up the glove, and you, too, could be a world champion."

In other recognitions, council renamed Concord Avenue between North 27th and 28th streets Charles W. Foulke Jr. Avenue after the successful automotive dealer and philanthropist who was raised on that block in Cramer Hill.

Foulke, who owns several car dealerships in Cherry Hill and Mount Ephraim and lives in Cherry Hill now, told council he was proud to have grown up "poor" in Camden.

"Thank you from the bottom of my heart," he said.

Another honoree was George Norcross III, chairman of the board of trustees of Cooper Health System and Cooper University Hospital in Camden and head of a large insurance firm. Though he did not speak, Moran praised Norcross for never giving up on the city and spurring the current building boom of medical and higher educational construction. "Camden is rising and this rebirth of the city would not have happened without his passion and dedication," said Moran.

Students enrolled in training programs at the North Camden Community Center also were brought to the speakers' podium.

Disabled Marine veteran Emilio Roman, a Gulf War-era veteran, received a proclamation for establishing Veteran Ambassadors, a program that assists veterans and connects them with various help programs. Roman was fitness director under former Philadelphia Mayor John F. Street and holds a degree in health and exercise science.

The award also acknowledged Roman's new self-published book, "101 Ways to thank a Veteran." It educates the public on how little acts of kindness help veterans feel better about themselves and can improve their personal and professional lives.

"It is a great honor to be recognized for my work and I am happy to call myself a Camdenite," Roman said.

"I have long sought to be a voice for our nation's disabled and homeless veteran population and it means a lot to every vet in Camden that the city takes this issue seriously," he added.

"It may take a village to educate a child, but it takes a whole nation to take care of its veterans."

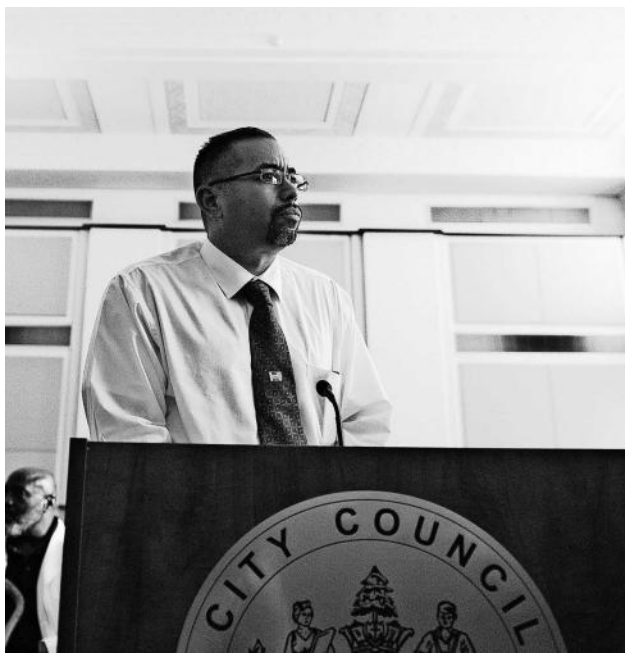
Carol Comegno: (856) 486-2473; ccomegno@gannettnj.com

LINTAO ZHANG/GETTY IMAGES

Camden's Jason Sosa celebrates his victory over Javier Fortuna of the Dominican Republic during their WBA super featherweight championship boxing match on June 24 in Beijing. Sosa was honored Tuesday in Camden with a key to the city.

JOE LAMBERTI/STAFF PHOTOGRAPHER

Charles W. Foulke Jr. is honored with a street sign at a City Council meeting Tuesday in Camden.



JOE LAMBERTI/STAFF PHOTOGRAPHER

Marine veteran Emilio Roman is recognized for establishing Veteran Ambassadors.

Escape Room Challenge opens in Marlton

MATT FLOWERS
@CP_MFLOWERS

MARLTON - Once the door shuts behind you, the clock starts ticking.

Inside the Special Agent Room, you and a group of friends acting as elite special agents, are given the task of infiltrating an enemy data center to retrieve vital information.

You have 60 minutes to use the clues, codes and puzzles to make your escape before a devious trap puts an end to your brain-teasing mission.

Will you get out?

The Special Agent Room is the first of three adventure-themed games to debut at the new Escape Room Challenge on Route 70 in Marlton, South Jersey's latest escape room venture. The business opened July 1.

Escape games like the Special Agent Room are an alternative entertainment option especially popular with millennials, but also fun for big groups of friends of all ages, birthday parties and corporate team-building adventures.

This is the first escape room business for owner and Chicago native Mike Turano. Formerly a successful vice president in the direct mail industry, Turano wanted a new challenge in his life. His wife informed him that she and her co-workers were participating in an escape room event for a corporate team-building exercise. His interest piqued.

"I tried it and loved it," Turano recalled. "Usually people do bowling, or something like that, and this offers a fresh, exciting thing for co-workers and friends to bond over."

After escaping a few challenges himself, he decided his new path in life would involve using his creativity to keep people trapped in a room guessing and scrambling to find the next big clue. As "Gamemaster," Turano watches from a control room, monitoring participants' every move. Participants can ask for up to three clues that are given to them on a computer screen.

JOSE F. MORENO/STAFF PHOTOGRAPHER

Owner Mike Turano stands in one of his escape rooms in Marlton.

"I don't let them bring their phones in or electronic devices. There's no looking on Google here," he joked. "I like for them to use their heads like we used to back in the day."

In its first week in business, 42 minutes stands as the current record time.

Although the Escape Room trend is new, it continues to grow at a fast speed, taking over the East Coast. Hardcore fans aren't afraid to travel for a new challenge.

"We had a few challenge junkies show up the first day. You could tell on their faces how much fun they were having," Turano said.

The trend grew out of popular online escape games. About eight years ago, physical escape games popped up in Asia, before spreading through Europe and to California and the West Coast. Now, they are starting to take over the East Coast.

South Jersey's first escape room business, Escape Room South Jersey, opened its doors in April. Another escape company, Amazing Escape Room, has announced plans to open a complex in Cherry Hill as part of a national chain. Other escape game experiences are offered in North Jersey, Jersey Shore and Philadelphia.

Turano expects two new escape games to open by the end of the year. A heist-themed game will open by the end of August and he is nearing a decision on a theme for a third room to open by the end of September.

Guests can expect the third room to either be a Bermuda Triangle or Submarine themed-room.

Matt Flowers: (856) 486-2913; mflowers@gannettnj.com

IF YOU GO

Escape Room Challenge: 448 Route 70 West, Marlton, call (856) 334-5693 or visit www.escaperoommarlton.com for reservations

U.S. ENVIRONMENTAL PROTECTION AGENCY EXTENDS PUBLIC COMMENT PERIOD ON PROPOSED CLEANUP PLAN FOR RT. 561 DUMP SITE IN GIBSBBORO, N.J.

The U.S. Environmental Protection Agency has extended the public comment period for its proposed plan to address contaminated soil at the Route 561 Dump site in Gibbsboro, New Jersey to August 11, 2016. The site is an area near a former paint manufacturing plant and was previously used as a paint waste dump. The Route 561 Dump site includes businesses, a vacant lot, a small creek called White Sand Branch and wetlands. The soil at the Route 561 Dump site is contaminated with lead and arsenic.

The EPA plan includes removing and disposing of contaminated soil from portions of the site and backfilling the area with clean soil. The soil would be dug up and properly disposed of at facilities licensed to handle the waste. In total, approximately 23,000 cubic yards of contaminated soil will be removed. A cap, consisting of soil cover in vegetated areas or asphalt on portions of commercial properties, will also be installed in parts of the site. The original public comment period was scheduled to end July 12, but the EPA is extending the comment period in response to a request.

Written comments may be mailed or emailed to:
Renee Gelblat, Remedial Project Manager
U.S. Environmental Protection Agency
290 Broadway
New York, New York 10007
(212) 637-4414
gelblat.renee@epa.gov

To view the proposed plan, visit:
https://semspub.epa.gov/src/document/02/395831

For more information on the Route 561 Dump site, go to:
https://www.epa.gov/superfund/route-561-dump

Attachment C: Public Meeting Transcript

ENVIRONMENTAL PROTECTION AGENCY

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IN RE: EPA PROPOSED LEAD AND ARSENIC CLEANUP AT ROUTE 561 DUMPSITE IN GIBBSBORO, NJ

* * * * * * * * *

PUBLIC HEARING

* * * * * * * * *

BEFORE: PAT SEPPI, Community Liaison, Chair
RENEE GELBLAT, Project Manager
RICH PUVOGEL, Branch Chief
RAY KLIMCSAK, Project Manager
ELIAS RODRIGUEZ, Press
ULA FILIPOWICZ, Rick Assessor
LYNN VOGEL, NJ DEP

HEARING: Tuesday, June 21, 2016
7:00 p.m.

LOCATION: Gibbsboro Senior Center
250 Haddonfield/Berlin Road
Gibbsboro, NJ 08026

SPEAKERS: Mayor Edward Campbell, Jack Sattin, Jerry Bonsall, Anthony Zparti, Bill Johnson, Valerie Holwell, Louis Mueller, Ed Kallaher, Lola Wood, Mr. Wu, Alice Johnston, Alyssa Holmes, Tracey Hanes

Reporter: Stacey Jacovinich

I N D E X

P R O C E E D I N G S

MS. SEPPI: If other people come in, we can certainly catch up. I see other people coming now. I wanted to thank you for coming tonight. We really appreciate you taking your time out to come to this meeting. I'd like to introduce myself. I'm Pat Seppi. I'm with EPA and I'm the community liaison for the site. And we have some other people here. I can ask them to introduce themselves.

MS. GELBLAT: Renee Gelblat. I'm the project manager for this portion of the hearing.

MR. KLIMCSAK: My name is Ray Klimcsak. I'm project manager for the other portions of the Sherwin Williams sites.

MR. PUVOGEL: I'm Rich Puvogel. I'm the section chief at the Jersey section where Renee and Ray work.

MS. FILIPOWICZ: I'm Ula Filipowicz and I'm the risk assessor for the Sherwin Williams site.

MS. RODRIGUEZ: I'm Elias Rodriguez, public information officer for our superfund sites.

MS. VOGEL: I'm Lynn Vogel, New Jersey DEP.

MS. SEPPI: Thank you very much. So the

reason that we're here tonight is to present EPA's proposed plan to clean up the lead and arsenic at the Route 561 Dump Site. You may have seen the proposed plan. It's online on our webpage and there were a couple links of information that were sent out to people. If you don't have --- haven't read it and you would like a hard copy, there are copies over here on the table. Please feel free to take one.

Now, the important thing about tonight, this is a little bit different when we do a public meeting. First of all, you'll notice we have a stenographer, Stacey, and she will be, you know, transcribing this afterwards so we'll have a good record of the meeting.

The most important thing that we ask Stacey to do is when we've finished our presentation and you come up with your questions or comments, we would ask if you would please state your name or spell it if it's a difficult name. Because when we're all done and we issue our decision document which is our final legally binding document of what we're going to do at the site, all your comments and questions will be in that document. So you know, we want to make sure that you'll be able to see that when this decision document comes out, and we're hoping by the end of

September; right? That's our goal right now.

So we're in this comment period right now. It's a 30-day comment period. As I said, we're in it now and it ends on July 12th. So if you leave here tonight or you have any friends that may have a comment or a question, they can certainly still send that information in to Renee. They can either e-mail it or they can regular mail it until --- the closing date is July 12th. Those comments will be accepted.

I do want to ask one favor, and I know it's sometimes difficult. We do have a presentation, and as I said, you know, we're here to talk about the Route 561 Dump Site. If you could hold your questions until the end, it's really not a very long presentation and they do a really good job of, you know, typing it up. So if you could wait until the end, we would appreciate that. Because sometimes what happens is, you know, you jump in and you have a question but maybe a little bit further in, you know, Renee will be answering that question.

Okay. I think if there's nothing else, I'm going to ask Renee --- oh, I'm sorry, I almost forgot the most important, Mayor Campbell. Mayor Campbell is going to say a few words. Thank you.

MAYOR CAMPBELL: I don't have a lot to

say. But I would like to welcome you all to the Gibbsboro Senior Center. If you haven't figured it out before you leave tonight, the safest way to go out if you're heading for Camden, you can go out at the light, go through the little entrance here in the adjacent parking lot and it will take you right out at the light and you can make a left at that light, so ---.

I want to thank everybody. It's good to see a nice crowd here and I hope that if you have questions or comments, please make them at the end.

MS. SEPPI: Thank you, Mayor. There is a sign-in sheet over by the door. If you wouldn't mind signing it, we would appreciate that also. Okay. Renee?

MS. GELBLAT: Welcome, everybody. This is the second of a series of proposed plans you will see over the next couple of years for the Sherwin Williams complex of sites. I'm going to follow the standard format. I'll do a little overview of the process. I'll go through the site history, tell you what we found during our investigation. Then we'll talk about the remedies we looked at and the one that we're proposing to be the one that we're asking you to comment on tonight and until July 12th.

So let's start with orienting ourselves.

This is the full Sherwin Williams complex of sites. This is Hilliard's Creek, Kirkwood Lake, Silver Lake, Clement Lake. So now we're where the Route 561 Dump Site is. This is Clement Lake. This is Route 561 itself. It's these little orange areas plus that part of White Sands Branch that goes from the base of Clement Lake to the burn site fenced area. And here's a blowup of the site itself, Silver Lake again, Clement Lake, Route 561. These are the commercial areas up here. This is the dump site fenced area. This is the heavily wooded area. This is a vacant lot. And this is White Sand Branch from Clement Lake to where it meets the fence line of the burn site.

Now, let's go quickly through the Superfund process. This site was discovered and there was an assessment of it. It was proposed to the National Priorities List. Then we began a remedial investigation. The remedial investigation does two things. It defines the site conditions which is, is there any contamination? If so, what is it, how much is there and is it moving anywhere? And then if the levels of measured contamination are above what we call the screening level, then it goes to the next step where we determine if it's a risk to humans. An ecological risk is a risk to wildlife.

So once we determine that there is a problem, and what contaminants are a problem and to who they're a problem, then we look at a feasibility study where we look at all the --- everything out there that could possibly work to clean up the site. So I'll go through later how we evaluate that. There are nine criteria, and we'll talk about that in a little bit.

So this is the part we're at. We've done the site investigation. We've looked at all the alteratives and we're ready to propose something to you tonight to comment on.

So we are going to go through that today. It's in the proposed plan. It's on the website. There are copies on the table over there. And we're in the middle of our public comment period. Then we select a remedy. It'll be, as Pat said, in a legally-binding decision document. And then we move on to a legal agreement with Sherwin Williams to actually do the remedy.

So first, we design a remedy. We'll go out and take some more samples. And then they'll design the remedy for our approval or comments. And then we begin the action.

Okay. Now, here's a brief overview of the site history. From 1851 to the 1970s, Lucas and later

Sherwin Williams operated just down the road the --- operated a paint plant and a varnish manufacturing facility. Now it's known as the former manufacturing plant. From '78 to the '90s, New Jersey DEP started working with Sherwin Williams to remove some of the waste and characterize the rest of the waste. In the 1990s is when DEP discovered the Route 561 Dump Site and that there had been materials dumped there and got Sherwin Williams to start taking samples.

In the mid-1990s, enforcement responsibility shifted from DEP to the Federal Environmental Protection Agency. In '97, Sherwin Williams removed the highly contaminated soils from the dump site fenced area which is next to that small shopping center mall that has the wall in it. And they covered over three areas with impermeable materials so that it wouldn't get rained on. And in 1999, EPA entered into an agreement with Sherwin Williams to look at this site and a bunch of the other sites.

So here are the results. From 2005 to 2014, we took samples of the soil, the sediment, the surface water and the groundwater. Soil is what you'd normally think of as dirt, and sediment is what you'd find in the riverbed. The surface water is the river

itself and the groundwater is the water that's underneath the surface.

So if you dug a hole and you hit water, that's the groundwater. So we did find that there was contamination above our screening numbers, and so we did a human health and equalized risk assessment and they showed that we have two main contaminants of concern, lead and arsenic. They're found in all the media and they're found throughout the entire dumpsite. And here are some maps that show you where we found the contamination. The red dots show where there was contamination found of anything we tested for above the screening levels.

So here you can see there's a lot in the dumpsite fenced area. There's some in the parking lot for the WaWa and across the street, too. And here's the other half. The soil, this is White Sand Branch. We found it in the flood plain of White Sand Branch.

Now look at the sediment. We took samples from inside White Sand Branch, and we found contamination all the way throughout White Sand branch. And then we took surface water samples also. So we found some contamination in the surface water and also throughout White Sand Branch. So then we determined

what our remedial action objectives are going to be, what's the plan here? What are we going to do?

So for the soil, for the soil and sediment we have the same objectives. It's supposed to prevent current and future unacceptable risks, so we're going to get rid of material above levels that would cause problems to human beings or to the wildlife. And we're going to minimize migration of what's in the soil to the groundwater, to the surface water and to the sediment. And then same thing for the sediment. We're going to prevent risk to human beings and to wildlife and prevent it from moving from one material to another.

So here are our potential remedies. Now, you see there's a lot of commonality because even though we looked at many technologies because of the size of the area and where the contamination is, excavation is going to be the best option. Alternative one is no action. That's always what we do so we can compare it to what happens if we don't do anything. The second alternative is institutional controls which are legal documents such as deed restrictions. And then we would be monitoring. Contaminated soil would be removed. And then we looked at --- three is all various options of different amounts of soil removal.

For three we would take out just enough soil to put a cap on it. Four and five showed increasing amounts of soil removal deeper in the surface soil, some of the soils that are very deep and could be contaminating the groundwater. But the ones we looked at most closely were alternatives six and seven in the proposed plan, which is groundwater source removal which is soils that are down in the water underneath the dry dirt, and surface soil excavation so we can put in caps in some areas and we'll put in some institutional controls. Number seven was extensive excavation, and I'll explain a little bit why we didn't think that was really feasible.

And for sediment, these are similar options. Number one, again, is no action, it's the comparison alternative. Number two, institutional controls and monitored natural recovery. No removal of the sediment. Three was some excavation and capping. And four was full excavation and we put it part of alternative five, which is some downstream sampling. No matter what options we choose for the soil and sediment, we will always be monitoring the surface water and all the options, and there'll be institutional controls such as deed notices as needed. A deed notice depends on how much of the contamination

we can get out. If you have to leave some in place there'll be deed notices.

So here's the nine criteria I was talking about. If you've been to other public meetings like this you've seen these before. This is standard EPA, what EPA uses to compare and contrast the options. The first two are the threshold criteria. All alternatives that we choose have to meet these two criteria. It has to be protective of human health and the environment and has to be in compliance with all state and federal regulations. Then comes the balancing criteria, and this is where we really compare and contrast the alternatives against each other.

The first is long-term effectiveness and permanence. The next one is reduction of toxicity, mobility or volume through its treatment. This one is short-term effectiveness, and that's what kind of a mess will it make in the short term. Because sometimes when you dig stuff up, it makes so much of a mess that you're actually better capping things in some cases. Six is how easy it is to implement and seven is the cost. And then we have the modifying criteria. Does the State of New Jersey agree with us and what does it accumulatively have to say?

So I want to go to the balancing criteria

for a moment and talk about --- there are some things that are common for all our alternatives because they're all digging up the contamination and putting it in a safe landfill.

So long-term effectiveness, it'll be effective when we take it away. It will be permanent in those areas where it's taken away but in other places the cap will be part of the permanent protection. There's no treatment so we won't be reducing the toxicity, the mobility or the volume through treatment because we're taking it away. Short-term effectiveness, there will be short-term problems. There'll be heavy machinery around. We'll be digging things up. If you know what the dumpsite fenced area looks like with those trees and all the plants there, we're going to have to take those out, dig up everything and put them back so it will be probably a little bit of a barren area for a couple years until everything grows back. Implementability depends on how much we've taking away. The less we take away, the easier it is to implement, but we won't be taking that much away. The more that we take away, it'll take longer to do. And of course, the cost goes up with the amount that you take away.

So what are we proposing? We're proposing

alternative six from the proposed plan which is extensive excavation, some capping and institutional controls. We'd be excavating the majority of the soil. We'll be capping where the cleanup goals will not be met. There'll be institutional controls in some areas. The estimated cost is $12 million and the estimated time is eight months. So here is a map that shows what we're going to do. And I know it's a little confusing because there's a lot of colors here, but I'll go through it slowly.

So when we do the feasibility study and we try to figure out what the costs are, you have to do some estimating. And the way we do it is we took the data from the remedial investigation. We saw where the contamination is. We saw how deep it is. And then we estimated how much soil would have to be removed.

So this is the commercial area. There will be deep removal here but less so because we're up against the building here. This is Route 561 so we don't want to remove too much stuff there. But those areas will be capped because there will be asphalt and roadway on top of it. This is the dumpsite fenced area. The different colors denote how deep we're going to go and that's based on the RI study.

AUDIENCE MEMBER: Where's the fenced part

on United States Avenue? I don't know where it is on that map.

MS. GELBLAT: It's the burn center that's over here. The burn site is over here. The burn site is down at the end of the White Sand Branch.

AUDIENCE MEMBER: And is that going to be part of the ---?

MS. GELBLAT: That'll be the next --- the separate site.

MS. SEPPI: I know you came in a little bit late, so we're talking about the Route 561 dumpsite and the burn site we'll be looking at down the road a little bit. You know, there's no information about that here tonight.

MS. GELBLAT: These two areas, the dumpsite fenced area and White Sand Branch, we're cleaning up the ecological risk numbers because those are the heavily wooded areas. And here we'll be cleaning up to nonresidential numbers because that's where the businesses are. In ecological risk areas, we use the ecological risk numbers for the first foot or so, and then we're going to use the residential numbers below that.

So here's our proposed remedy for the sediment. We'll use the full excavation of the

contaminated sediment and those will be some ecological risk numbers because that's inside White Sands Branch itself. There will be additional sampling of sediment between Haddonfield Road and the burn site. This cost of just this portion is $2 million, and it's estimated to take two and a half months.

And here's a map that shows that. This area we're estimating to take out two and a half feet of sediment, and here it's estimated we're going to take out two feet of sediment. And here we're going to do some additional sampling. And if there's a problem, we'll look at what the alternatives are which can include more excavation. And then for the surface water, after all of the excavations are completed we'll start monitoring the surface water. We expect that the surface water contaminations will go down because we're removing the sources, which are the soil and the sediment.

So what's the benefits? We will achieve the overall protection of human health and environment. We're going to do this by removing the majority of the contaminated soil and all the contaminated sediment. And this will remove the source of contamination to the surface water and the groundwater.

Of course, there's always some challenges.

We'll be working in the marshy area of the dumpsite fenced area and White Sands Branch, so it may be a little difficult to get heavy equipment in there. We're going to have to find an area to stage the equipment. It can be a challenge to remove deep soils because depending how deep they are, you may have to put in sheet pilings to keep the sides from collapsing in. And we're going to try our best to limit the disruption to traffic on Route 561 and to the local businesses because we will be in their parking lots.

So the immediate next steps is we're in the public comment period, and we're going to collect comments from the public until the close of business on July 12th. Then we write the decision document. And as soon as the decision document is signed, we're going to begin negotiations for a legal agreement so we can start work on the remedy.

And here's the contact info that's on the website. It's in your hand --- if you took one of our handouts. You have until July 12th. There's a copy of the administrative record in the Gibbsboro Library. That's our website. And if you have --- if you want information, you can contact me or you can contact Pat Seppi.

And now I'm going to give it back to Pat

so we can open this for questions.

MS. SEPPI: Thank you, Renee. Just a couple more things. I just wanted to thank the Mayor's office and especially Maria for getting us this facility tonight. This really works well to have a meeting, so you know, we appreciate that. And also Maria and the Mayor's office were kind enough to bring a case of water. It's in the back. We didn't know how warm it was going to be in here so we figured just in case --- so Maria, thank you for that also. That's in the back.

And we have posters up here. We'll put these up right after the questions are finished so you can come and kind of take a closer look. One is of the overall site and one is of the alternative, so if you want to come up and take a look at that.

Oh, and the proposed plan over there has the website on there. It has, you know, the same kind of information that Renee showed up here in case you still want to get another comment to Renee before July 12th. I think that's it. So are there any questions? I want to remind you, too, for Stacey, please state your name before you ask your question or make your comment so we'll have that for the record. So if anybody has a question please feel free to stand up and

we'll answer the best that we can. Yes, sir, in the back.

MR. SATTIN: Jack Sattin. How do we address our individual concerns for property?

MS. SEPPI: How do we address our individual concerns for property?

MR. SATTIN: The shopping center, how do we talk to you about that?

MS. GELBLAT: You can send those --- for the public comment period, you can tell us anything you want us to know about your concerns and we will give answers to all of them. I don't know if you're talking about during comments on what we're proposing or if you're one of the property owners, if you want us to be in contact with you when we do the design, which?

MR. SATTIN: Both.

MS. GELBLAT: Both? Okay.

MS. SEPPI: Did you sign in, sir? I didn't hear your name. Could you say it again?

MR. SATTIN: Jack Sattin, S-A-T-T-I-N.

MS. SEPPI: I'll make sure to make a note on the sign-in sheet.

MS. GELBLAT: Yeah. We'll keep you informed as the process continues.

MR. PUVOGEL: Yeah. As we go through and

finish this public comment period and put together a decision document, the document, the decision to clean up the sites --- we'll be talking with you as we proceed to design with all the commercial property owners in the township, as we move to design so that we get your concerns through the whole process.

MS. GELBLAT: We can work with you on scheduling if there's a better time of the year or --- we'll definitely work with you.

MS. SEPPI: It takes a while to do the design, also. You know, once we have the remedy, it takes a while to come up with the actual design so there's plenty of time.

MR. SATTIN: About how long ---?

MS. SEPPI: I knew you were going to say that. Rich or Renee, do you want to answer that?

MR. PUVOGEL: The design?

MS. SEPPI: Yeah, about how long for the design?

MR. PUVOGEL: First, we're looking to sit down and negotiate with Sherwin Williams and negotiate an order to do the work, which includes the design and the cleanup. And then we move into the design after we complete those negotiations. That process takes approximately about two years to complete, get us

through the negotiations and complete the design. And then we're in a position to have Sherwin Williams implement the remedy after two years.

MS. SEPPI: Mayor, you had a question?

MAYOR CAMPBELL: I just want to make a comment. I don't know that you really appreciate what this has done to Gibbsboro. In my mind, to not even realize the possibility of buying up a handful of properties and removing every molecule of contamination. If this is what Superfund does for our people, I'm just disappointed that that wasn't one of the alternatives. It doesn't bode well for what we're going to see downstream at the burn site, Hilliard's Creek.

MS. SEPPI: I understand that. Yes, sir?

MR. BONSALL: Jerry Bonsall, I'm the president of Borough Council in Gibbsboro. To continue on with what the Mayor had stated, at the corner of Foster Avenue and Clementon Road there's currently a giant concrete slab that can never be used. Apparently you're not going to have them remove the concrete, clean the soil up and make that property viable. It's costing the borough and the taxpayers an awful lot of money. And through no fault of theirs. It's Sherwin Williams who caused it. Why aren't you making them

clean it up?

MR. PUVOGEL: That was actually part of the eco-process that we were considering. We thought that it was understood that the focus was on residential so we stopped dedicating resources to the concrete slab.

MR. KLIMCSAK: That area is part of the former manufacturing plant that's going to be addressed in future actions. It's not going to be left there.

MS. SEPPI: Yes, sir?

MR. ZPARTI (phonetic): Anthony Zparti. When will that be addressed? What time frame are we talking about, two years out for the dumpsite and then another two years or three years from now for the burn site?

MR. PUVOGEL: Yeah. So what we said is that the EPA would get a rod a year for the site. So last year we did residential properties. This year we're doing the dumpsite. Next year we'll have the burn site. The following year we'll have the FMP soils. So I'm not sure exactly if you're interested in just the six --- concrete slab or other portions, but these soils would be the entire paint works. So I mean, there is typically another legal process that we have to go through at the completion of the RI that we

have to move into remedial design. That's just what we have to do. And then there is always additional sampling when we have the remedial design and then we'll have remedial action.

MR. ZPARTI: Well, back on the dumpsite I had some concerns about --- well, the timing, eight months is a long time. That's going to kill those businesses out there, and more importantly, the traffic patterns on 561, that's our livelihood if you live in this area. Truly. I mean, in order to get to 295 or to Cherry Hill/Camden or to Philadelphia, you only have three routes, the White Horse Pike, Route 73, which is taking us in the wrong direction, and 561. And 561 --- you're going to be out there --- out there eight months tying up traffic out there. That's going to be a nightmare for Gibbsboro as well as the surrounding areas of the Voorhees Monroe areas. And WaWa will die --- in that parking lot.

MS. GELBLAT: Well, let me say something. That eight months is for everything so we won't be in the WaWa parking lot for eighth months.

MR. ZPARTI: It's just not that. How are you going to clean up the dumpsite if you have to get on it from 561 fenced area?

MS. GELBLAT: Well, that's part of what

we're going to figure out in the design, is how to do it without being in that parking lot.

MR. PUVOGEL: And that's some of the short-term effectiveness issues that Renee identified in her criteria, that we weigh each alternative. You know, there are pluses and minuses to each alternative. The more aggressive you get and the more material you take out of this, the longer the time frames, and you're going to make an impact such as a one-lane closure to 561.

MR. ZPARTI: Traffic will be backed up to Winslow.

MR. PUVOGEL: We'd have to figure out a way to manage that with the town. I mean, we'll have to think through that in the design process and work through it. We don't have all at answers of how we're going to do it today. We're just saying what it encompasses. Then we can identify and work with the township and the local folks on how to implement this.

MS. SEPPI: Sir, in the back?

MR. JOHNSON: Yes, Bill Johnson. You say you're going to have negotiations with Sherwin Williams. They're already held responsible for the contamination. How long and what type of negotiations are we talking about with Sherwin Williams?

MR. PUVOGEL: Well, once a remedy is identified by us in this decision document that Renee talked about, that triggers the negotiation process. The negotiation is to accomplish or get Sherwin Williams onboard to design a remedy and to implement it. That process can run anywhere from six months to a year, it really depends on how ---.

AUDIENCE MEMBER: At their discretion or ---?

MR. PUVOGEL: Depends on us and Sherwin Williams working together as best we can, how quickly we can work it out. There are differences, no doubt. We have to work them out and work through it. I can't speak for exactly how long it's going to take.

MR. JOHNSON:

Well, how long can Sherwin Williams actually drag out the negotiations? Is there a time limit that they have to respond to something that they've already been found ---?

MR. PUVOGEL: During the negotiation process, there's not specific time limits laid out for accomplishing specific tasks in the negotiation. But what the negotiations establish is a statement of work that's agreed to by both parties that puts forth documents to be delivered by EPA within a certain time

period. And the schedule for proceeding with design and implementing the remedy is usually in either the statement of work to the order that's negotiated or in the work plans that follow that statement of work. So that's the process for how it works for negotiating.

MS. HOLWELL: Valerie Holwell. How is this going to affect Clement Lake, the wildlife and the water in the lake when you're doing all this digging up and it rains and that all washes into the water? How do you prevent that?

MS. GELBLAT: Well, we're on the downstream side of Clement Lake so nothing would go back uphill into the lake itself.

MS. HOLWELL: What about the groundwater, you know?

MS. GELBLAT: It's coming from the lake outward. We have been --- I attended a meeting a couple months ago with the township engineer because we know the dam at the end of Clement Lake is not in good condition. So we're aware of that, and we'll be working with the township to make sure that that dam, you know, stays solid as we can, and if we need to, you know, do some stuff in front of it to shore it up, we'd be looking at that, too. But everything is moving away from lake, it won't be moving toward the lake.

MR. PUVOGEL: And to protect water bodies downstream from the work that's to be done in the feasibility study or --- I don't know if it's in the proposed plan or not, but in the feasibility study which is just a link in the proposed plan that shows you where these documents are the background of the supporting documents for this plan. And the feasibility studies discuss that migration studies would be done on --- for implementing a remedy in the dumpsite to ensure that the safety of the dam is not compromised.

MS. SEPPI: Yes, sir?

MR. MUELLER: Louis Mueller. Is there a reason why the process for the various areas can't happen concurrently as opposed to consecutively to accelerate it. Since Sherwin Williams is going to be paying for all the different cleanups anyway, isn't it in their interest to have it all done as quickly as possible?

MR. PUVOGEL: Yeah. I think it is in the best interest for everybody to have it done as quickly as possible. Work is being done on the definite sites at the same time. We're just not at the same stage in each site at this moment. For the residential properties, a decision document or a record of decision

has been signed. That's in negotiations and design right now. This site, we're coming to the point of decision. We're entering negotiations at the burn site and remedial investigation that Renee discussed earlier. That's being conducted and the feasibility study is being --- starting to be prepared for that site. So each site is being worked on --- but they're not just at the same exact point.

I don't think they want to arrive at a construction start for all the sites at once. That's also an incredible burden, to have that much material or that much action or remediation for such a wide area on such a large scope at the same time. I think it's best to phase it. I mean, you heard the comment about the road closures and such on 561. You don't want to close a lot of roads in the whole town to do all the remediation at the same time. You want to feather in the work as you go on.

MR. MUELLER: Is it contemplated that there would be road closures?

MR. PUVOGEL: For 561, we anticipate there would be one lane closed for a period of time to load trucks from the dump site and get them out of town, so --- but we don't know exactly how long that's going to be. We have work on design and work with the town on

how that's going to work out. There are traffic safety issues. We don't want to ignore that. We have to pay attention to that as well.

MS. SEPPI: Does anybody else have a question or a comment? Yes, sir?

MR. KELLAHER: Ed Kellaher. My question has do with the residential cleanup. Last I knew, work was supposed to today start this summer. It's June 21st. It's now summer. What exactly is the status of the residential cleanup phase?

MR. KLIMCSAK: Yeah. Ed, the EPA issued Sherwin Williams an unilateral order for at residential properties. I believe there was 54 properties in total. There are eight in Gibbsboro that are outside of the flood plain, and we are --- Sherwin Williams has already completed remedial design sampling on those eight, and we've begun to move into the permitting process. And I still believe that there will be remedial action on those eight properties this summer, remedial design sampling will then begin on the remainder of the 56 properties shortly thereafter, you know, for remedial action processes.

So the eight that we said that we would do this summer, that seems to be on track.

MR. KELLAHER: Are you going to continue

downstream? I mean, I'm about four properties from the dam. Am I likely to see that in my lifetime?

MR. KLIMCSAK: To see your property cleaned up?

MR. KELLAHER: Yeah.

MR. KLIMCSAK: Certainly, Ed.

MR. KELLAHER: Any guesstimate?

MR. KLIMCSAK: No. I know from experience to give a time estimate is not good, so let's --- I'd like to say that we will be out hopefully in the next couple months to do the remedial designs, Ed, on your property because that's still a step that's necessary. Sir?

AUDIENCE MEMBER: You mentioned that DEP and Sherwin Williams and EPA had to reach a unilateral agreement?

MR. KLIMCSAK: A unilateral order.

AUDIENCE MEMBER: So what does that mean? Does that mean that Sherwin Williams didn't agree and the DEP had to order it?

MR. KLIMCSAK: No. There was --- so the order that we had to do the actual RIFS was only for that actual process. So when you get into a remedial design, there are several options. There's another administrative order that can be issued or a unilateral

order. Being that there was also going to be an element of remedial design as well as remedial action processes for those eight properties, a unilateral order was an easier route to go because once we complete the remedial at the eight properties, we'll be issuing a consent decree for the remedial action of those 56 properties.

AUDIENCE MEMBER: So what's the difference between a consent decree and a unilateral order?

MR. KLIMCSAK: You might have to help me out a little bit, Rich. Does it have to go to DOJ?

MR. PUVOGEL: Right. The Department of Justice, I believe you would have to go through for a consent decree, and that's something that would take extra time to complete.

A consent decree is something that is a judicial instrument. It gets lodged in a court and entered, and goes through a public comment period once it's placed in the court. I think it's usually 30 days before the consent decree is signed by the judge and made into a document.

An administrative order on consent is another instrument that we use to bring row responsible parties to the table to negotiate over. In that situation, we negotiate with the responsible parties.

They have input on how we establish the work plans and then we come to an agreement through negotiations how best to proceed. And then the order is signed by both parties. That is an administrative order on consent.

A third instrument that we use to bring responsible parties to the table is a unilateral order where EPA issues the order directly to the respondents or the responsible parties. And in that case, we sometimes have cooperation with the parties to issue a unilateral order. It moves the process along quickly. It's not an instrument we like to use, in this case, we were a little bit --- running a little bit behind in the process on EPA's court, and so we approached Sherwin Williams, and they were receptive to cooperating and receiving a unilateral order to get the first eight properties or eight residential properties fast tracked and remedial design started.

So those are the three instruments we use and we issued a UAO with Sherwin Williams' acknowledgment that that would be a cooperative way to adjust these first eight properties. It surrenders some of Sherwin Williams' rights that they get with an administrative order on consent. So it's something that responsible parties are often willing to enter into with us.

MS. SEPPI: Before we move on to other areas of cleanup, does anybody have any more questions about the Route 561 proposed plan? Yes, ma'am?

MS. WOOD: Lola Wood. And my concern is are they going to have to knock down all those beautiful big trees in the fenced-in area, inside the fenced area?

MS. GELBLAT: Yeah. We're going to have to take it all out but they will be putting --- they will be restoring it as best they can, and over the coming years it'll grow back. There's no other way to remove the soil without taking the trees out. It's a unfortunate side effect of doing cleanup, but yeah.

MS. SEPPI: Yes, sir?

MR. WU: I understand you are the department manager for 561. Can I get a dump truck reservation?

MS. GELBLAT: I'm sure it'll go on the website. Yeah. It's not on the website right now. We'll put the PowerPoint presentation up on the web tomorrow.

MS. SEPPI: Yeah. As soon as I can get the final copy to Renee, I'll post it to on our website.

MR. WU: Okay.

MS. SEPPI: Okay. So give it a day or two and then it should be there.

MR. WU: Are you going to be also handling the burn site?

MR. PUVAGEL: No. I'm handling ---.

MS. GELBLAT: Rich is going to handle the burn site.

MR. WU: Do you expect a significant difference between the two proposed plans?

MR. KLIMCSAK: EPA has just completed a review and comment of the draft remedial investigation report, so we haven't seen the feasibility study. The feasibility study is the document that presents all the different alternatives in terms of a remedy. I will say, you know, that the contamination within the burn site --- there is lead and arsenic. There is some different contaminants there, and there's also a larger component of the groundwater that's contaminated, you know, that wasn't so much a component of the dump site. So it's a little early to tell what exactly the remedy will be for the burn site.

MR. WU: But there's going to be a plan that is similar like?

MR. KLIMCSAK: It could very well be, yeah.

MR. WU: Similar layout. But the question is, you know, if they are similar from one standpoint, it would be a lot easier, you know, to have one project manager on hand and will try to save time, you know, because study --- you know, extension of the contamination. So the proposed plans are similar, so it's a lot easier for one guy to take care of both sites. And also I think for all the people here. It just take so slow. And we cannot wait for our lifetime. Let's think about, you know, common sense and speed it up.

MR. PUVOGEL: If you had one project manager doing it, that way we wouldn't be here tonight because it's just --- the workload is just too much. That's why we brought in Renee to help out at the burn site while Ray continues to work on the burn site.

MR. WU: That's a good point. Workload is too much. This is very --- I mean, I can sympathize with you. You have very limited resources. For this type of scope of work, you can at least double down on resource. Let's get the people. You know, they can sell their house, you know, save our environment. That's more important, you know. You have money. Okay. Let's ask the manager, triple the resource, so speed up the process. I think you know the others, the

traffic, whatever. The public, we can work together to minimize. But that's my comment. I think the whole people here --- it's just so frustrating. And the process is just way too slow. Okay. Thank you.

MS. SEPPI: Thank you. Yes, ma'am, in the back.

MS. JOHNSTON: Hi. I'm Alice Johnston, and my property is one of the properties that has to be remediated. And I personally have not received anything regarding this since we were here last year at the public meeting. And so obviously, I'm not on the list for being taken care of this summer.

But my question is that when this remediation plan is done, are the residents included in this? Is it reviewed with residents before the work is planned and before the work is done? Because I have to tell you, I mean, no offense, but you seem to have no problem with just ripping down the trees that are a hundred years old and oh, well, they'll grow back. I have a $200,000 back yard that --- I really don't want Sherwin Williams coming in and ripping out my trees and shrubs and everything else and saying, oh, well, they'll grow back.

I have a lot of money put into my property. I don't want to walk away from that house

losing half of what I put in. Never mind what it actually should be selling for on the market today. But because I live on a Superfund site, and because now I'm mandated by the government to have someone come in and rip up my $200,000 back yard --- I have a ton of money put into that property. I live on a Superfund site. And now you want to come in and destroy what I have left. Please explain to me what this process is. I'm really upset about this. And I know all the other residents who live on the lake and are in a similar situation are also very frustrated and very upset about this.

Not to mention the fact that we're 30-some years into this and we're now just talking about cleaning up. And as a side note, if my property gets cleaned up, how is that going to help me when the lake is so full of contamination and it overflows regularly onto my property --- I'm just going to have the contamination right back again on my lawn. What is the point of doing the remediation on residential properties when the lake is not cleaned out, and we're just going to have recontamination again?

And I have several other neighbors who are in the same boat, who get flooded regularly with normal rains, not talking about a storm event, a normal rain.

So I don't know who had.

MR. KLIMCSAK: Yeah. Alice, you covered a lot of the topics, so let me ---. The trees and the vegetation in your back yard, you will absolutely be consulted and asked what, you know, you would like to have remain. But there is also the balance that there is a lot --- potential contamination in spots that will potentially have to be removed, that you feel comfortable that the job is done.

But absolutely, if there are areas --- because I can tell you just from looking at some of the early plans that Sherwin Williams has for the eight properties, that they've consulted residents as to vegetation that would like to remain.

In terms of why you have not been approached yet in terms of sampling, Rich and I explained that. The EPA just issued the unilateral order for Sherwin Williams to put residential --- for the remedial design for the remedial action processes. And I want to be clear. The remedial action is for --- the remedial design and the remedial action are for the eight properties. There will be a remedial design for the remaining 56 properties that were presented in the 2015 record of decision for residential properties.

So that was just issued by EPA. We're

going to work with Sherwin Williams to have a work plan to come out and do the remedial design sampling on your property.

MS. JOHNSTON: So now I need more sampling? And is it sampling for ---?

MR. KLIMCSAK: Absolutely. Absolutely. Look, I mean --- Alice, there were some properties on Kirkwood Lake that had never been sampled before. I know that your home has been sampled several times. But there were some that either the resident didn't grant access to the EPA or Sherwin Williams during the processes.

That initial sampling that would have taken place in 2000 --- I believe, 11, on Kirkwood Lake residential properties may have been sampled for the first time. That sampling had only identified whether they were going to be remediated or not. The sampling that I'm describing now is to say, well, how much needs to be taken out and where? So that's the difference between the sampling done to date and the sampling that needs to be done. The sampling that will take place in the future will tell us exactly how much needs to be taken out at every property.

MS. JOHNSTON:

So you're saying --- when you sampled in

1999 you went down two foot. And what you're saying to me now is that you want to go deeper? Is that what I'm hearing?

MR. KLIMCSAK: I wasn't involved in 1999, but I can tell you that what was maybe analyzed for could have just been lead. Maybe it was lead and arsenic.

MS. JOHNSTON: Oh, no. I have all sorts --- I have a plethora of chemicals that --- you guys had sent me results?

MR. KLIMCSAK: But that may not have been done on every property, and that's what I'm trying to say. I don't know what the purpose was in 1999. I don't know if we were attempting to see how far down the ---.

MS. JOHNSTON: Well, you came back in 2007 and a few other times as well. But put that aside for a moment. So the remaining 56 properties are all going to be in one lump sum? And then you're going to do testing on all of those 56, and then the remedial design for all those 56? Or are we doing eight properties a year?

MR. KLIMCSAK: No. It would be for the 56 that we would sample. And not to get into numbers, but there was 30 homes identified in that 2015 rod that had

--- those properties either had not been sampled or not sampled enough to even tell the homeowner whether an action was necessary or not.

MS. JOHNSTON: So what are we looking at time wise? I mean, how long is the sampling going to take? Because Weston has been out sampling for --- since 1999. So how much longer is there going to be for sampling, and then when is there really going to be remediation?

MR. KLIMCSAK: I'd like to tell you that, you know ---.

MS. JOHNSTON: Ballpark range, just ballpark? Everybody has a time --- every business has to have --- I don't care who you are. If you have a job, you have to be able to project what you're going to get done, when you're going to get it done and you have timelines. Everybody has timelines. Just give me an idea of what we're talking about here. I mean, I don't mean to put you on the spot, but I do mean to put you on the spot.

MR. KLIMCSAK: I get it.

MS. JOHNSTON: It's not fair to us. It's not really fair to the public to not give us the answers that we're asking for. They're reasonable questions.

MR. PUVOGEL: They are reasonable questions. And some of the reasonable questions don't have reasonable answers. When we have to enter negotiations with the responsible parties to do these cleanups, we can't tell you how long that they're going go take.

What we can say is within about two years would be a reasonable expectation, to have these samplings done on the 56 properties completed. It puts us in a position, if we're not there already, to start the cleanups on the remainder of the properties at this first date.

MS. JOHNSTON: So we're looking at at least three years before any remediation is done on the rest of the 56 properties?

MR. PUVOGEL: Is done and completed?

MS. JOHNSTON: No, before it begins.

MR. PUVOGEL: Oh, begins?

MS. JOHNSTON: Well, if you've got two years of, you know, consulting and negotiating and yada, yada, yada, then you got to do your plan.

MR. PUVOGEL: Right.

MS. JOHNSTON: I'm thinking the minimum is three years before you start on the other 56; is that right?

MR. KLIMCSAK: I don't think that's right. I think we can possibly do it shorter. But I wish I could give you a schedule today. I don't have one until we negotiate this out with Sherwin Williams. And I don't have that to answer the question.

MS. JOHNSTON: Can you answer my question about the pollution in the lake recontaminating the soils of the people who live along the way? Like how does that all make sense, because I'm really --- I'm unclear about how that makes any sense to clean properties and then have them recontaminated.

MR. KLIMCSAK: Well, one of the things, too, you've got to ---.

MS. JOHNSTON: You don't want to clean the lake because you don't want to go back in and clean it again because it will be recontaminated:

MR. KLIMCSAK: Yes. I mean, the thing to keep in mind, too, Alice, is that the plant operated and discharged routinely --- routinely discharged from 1850 up until 1977. So I think the bulk of what was being released and actually getting onto, you know, downstream areas occurred during like operational time, not in the years following the closure of the plant.

MS. JOHNSTON: Well, since contamination is still flowing downstream and since the lake has lost

all of its depth and all those chemicals are being released into the water, I think there's a really good chance that we're going to have recontamination. Behind me, the water is now six inches deep. The ducks and the geese stand in the water. So I would say we have a problem, Houston. That's all.

I mean, there's a lot of frustration here. And my house right now is not worth anywheres near what it should be worth because of where it is and because of what is happening. And somewhere along the line I need to be compensated for that and so does every other own homeowner who is dealing with this problem.

AUDIENCE MEMBER: They don't want to buy your house.

MS. JOHNSTON: Yeah, would you buy my house, Ray, Rich? Seriously.

AUDIENCE MEMBER: No, but I bet you if they lived on the lake, they would have it done.

MR. KELLAHER: I've heard nomenclature tonight for the first time. Unilaterally. On a fast track. Where you don't have a potentially responsible party --- we have a responsible party. They need to be compelled. Any time we go into these hearings, the back and forth --- that's been Sherwin Williams' strategy from day one, obstruction, obfuscation, delay.

They don't want to spend any more any sooner than they have to, and that has been the biggest contributor to how this thing has been protracted. It's about time somebody steps up, cares and does the right thing.

MR. WU: Look at the frustration when you talk about it, and you --- doesn't talk about the process. It seem to me it's open ended. That's very open ended, so that's how people are trusted, you know? They don't know when it's the time. And that maybe is just not a good answer. It's acceptable that just me --- from my personal comment, it's just not acceptable, though open ended negotiation is not the way to go.

MS. HOLMES: Alyssa Holmes. I just moved there two years, so where would I go to find any information on my home?

MR. KLIMCSAK: You could contact me and I would have the records. Are there any other questions?

MS. HANES: Tracey Hanes, and I live out at Silver Lake. I was just wondering, are there any other methods to --- like what scared me a little bit was Sherwin Williams is going to design the remedy. Yes?

MR. PUVOGEL: Yes. EPA conducts oversight of Sherwin Williams' work as they complete a statement of design and submit it to the EPA in the State of New

Jersey. They review those designs and they make sure they comply with all the rules and regulations and the laws that we have. And we either accept that design or send it back to Sherwin Williams to adjust it to conform with the regulations. And that's a process that goes on.

MS. HANES: I understand that. My concern would be like dumbing it down I guess for myself, but basically they can like screw around. If you want to do something and you screw it over, like fight it out for a long time, like kind of --- you know, say, okay, we're going to do this in X amount of time and we're going to --- you guys have that all ---.

MR. KLIMCSAK: Sure. I mean, that's part of --- like the remedial design will have a schedule as to the work plans that are due, you know, and all the other elements.

MS. HANES: So there is something to hold their feet to the fire.

MR. KLIMCSAK: Yeah. And the state, the state of New Jersey, Lynn Vogel is part of. I mean, the EPA and DEP are very involved with Sherwin Williams and the process.

MS. HANES: And what about Gibbsboro and Voorhees? Do they have any --- you know, are they a

party to this, too, or are we ---?

MR. KLIMCSAK: I mean, we conduct briefings periodically, either when requested or we'll kind of offer our availability. Mayor, I know for the residential process, you have the tag grant.

MS. GELBLAT: Task.

MR. KLIMCSAK: Or task. So maybe that's a possibility for portions of the oversight. We can discuss that with the Mayor.

MR. PUVOGEL: They provide us everything, but generally, we don't get advance copies until they became public.

MR. MUELLER: So does the DEP or Sherwin Williams, do they have to go through a municipal approval process for commercial sites?

MR. PUVOGEL: Yes. The municipalities are part of the process and the design.

MR. MUELLER: But will it be an approval process that plans will be ---?

MR. PUVOGEL: Yes. They'd have to comply with the ordinances of the local townships.

MR. MUELLER: And is that true with the residential properties on the lake as well?

MR. PUVOGEL: Yeah. If there were building codes, they'd have to be adhered to --- any

kind of work that Sherwin Williams does must adhere to those codes. Then if they're getting electrical, they have to get electrical permits.

MR. KELLAHER: Generally through construction.

MS. SEPPI: Any other questions?

MR. KLIMCSAK: So I don't know if there's any other questions. We did print an enlarged picture that shows the soil plan alternatives. They have been --- it might be easier to see on the large board.

MS. SEPPI: And this is the whole site if you want to kind of see where everything is located. Okay.

* * * * * * * * *

HEARING CONCLUDED AT 8:03 P.M.

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STATE OF NEW JERSEY)

CERTIFICATE

I, Stacey Jacovinich, a Notary Public in and for the State of New Jersey, do hereby certify:

That the witness whose testimony appears in the foregoing deposition, was duly sworn by me on said date, and that the transcribed deposition of said witness is a true record of the testimony given by said witness;

That the proceeding is herein recorded fully and accurately;

That I am neither attorney nor counsel for, nor related to any of the parties to the action in which these deposition were taken, and further that I am not a relative to any attorney or counsel employed by the parties here to, or financially interested in this action.

Commission Expires:
June 8, 2021

Attachment D: Written Comments

These comments were submitted by Edward Campbell, the Mayor of Gibbsboro. It was submitted as part of a larger e-mail on June 22, 2016.

A couple questions:

If the Dump Site is addressed as planned, can you tell me what the status of the site becomes at completion?
Is it still a Superfund site, a Brownfield, or something else?

Will there be there any fund set aside for utilities to deal with the remaining contamination on site and in the
Street when utilities require maintenance or replacement? (Note the municipal sewer line is in the street.)

What (re)development restrictions are placed on the property?

What legal disclosures will be required when properties are sold or leased?

Ed

From:	Jack Sattin
To:	Gelblat, Renee
Cc:	Mary Lou Capichioni; Elaine Richardson (richardson@vitanuova.net); "Basara Joe"
Subject:	Route 561 Dump Site - Continental Plaza
Date:	Thursday, June 23, 2016 4:35:05 PM

Good Morning

I am the property manager for the owner of Continental Plaza located at the dump site along Route 561. I have been told that I need to direct the questions we have about the project to you. If this is not correct please inform me of who the correct person is so that we get our comments and questions into the correct entity. While we understand you are doing this under the banner for the public good, we both know that there is a cost and impact on those who had nothing to do with this contamination that needs to be addressed.

After the meeting of Tuesday June 21, 2016 we have the following questions for starters. I know there will be many more as the process unfolds.

1) You spoke a great deal about testing and retesting. Will you be retesting our site anytime in the future? If so when do you think this will be done?
2) You have fenced off a portion of our property for testing for a number of years. This was at the time thought to be short term. What compensation does the Owner get for this easement for all these years?
3) You discussed that the next step would be working out the deal with Sherwin Williams followed by the design phase. You also mentioned this process would take two years. You should understand the planning we need to do, so timing is critical for the Landlord and Tenants. How good is this estimate and could it be shorter or longer by more than two months? If so when would you know the change in the timing? When we would be informed of this?
4) What input do we have in regard to the design phase? If we do not accept any part of the design, what recourse do we have?
5) What impact on the building structure will this design have?
6) What is the design phase approval process?
7) Once the design has been approved, what local, county, state or federal approvals are needed? How long will this take?
8) Do you also need to file for permits and what is the timing for this phase?
9) You also discussed staging once you start construction. You implied using the shopping center parking lot. Please understand that the parking lot is maxed out for the current uses. This will severely impact the commercial uses. We need to have a serious discussion about this prior to your starting.
10) What would be an accurate timing for the construction, not just on our site, but around the property?
11) What allowances are you making for traffic flow in and out of the center? Will we

have any input on this as well?

12) When will you be putting on the "Institutional Controls, such as deed notices" on the property deed? Will we have any input on the language or what is placed against the deed? When this is done you have damaged and impacted the value of the property. What recourse does the Owner have and how would he be compensated? What is the process for this and how long will it take to resolve and complete?
13) Next is the impact on the Tenants. The list of impact issues are long here. For example, you will be impacting ingress, egress, parking, and lost income. What will you be doing for the Tenants? How will they be compensated? What if this project puts them out of business.
14) If the Tenants have the income reduction that this project will surely bring, how does the Landlord collect rent they do not have? How will you be addressing if they go out of business and the Landlord is impacted further because he has lost his income stream and cannot pay his mortgage, real estate taxes, etc.
15) You said that Sherwin has set aside money for this project. How much have they set aside and do you think it will be enough to cover the design, planning, construction and impact phases, for example?
16) At what point am I required by law to tell the current tenants and all future tenants what is going on. In reality, we are not currently sure of what is going on.
17) In the future, do we have to legally place anything in the lease documents and lease renewals with the Tenants regarding the project or future notifications?
18) Is there any liability to the owner for anything currently or into the future involving this contamination or project?
19) Once we get further into this we will be hiring an attorney to make sure the documents and such are proper. Do we get reimbursed for this as well? Do you pay for this as we get billed?
20) If we need any other professionals regarding the project, does the owner get reimbursed?

I would appreciate hearing back from you and starting the dialogue when you are ready.

Thanks

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BY APPOINTMENT ONLY

July 8, 2016

VIA FEDERAL EXPRESS & ELECTRONIC MAIL

Renee Gelblat
Remedial Project Manager
United States Environmental Protection Agency
Region 2
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Gelblat.renee@epa.gov

RE: 88 S. Lakeview Drive Associates, LLC's Comments to U.S. Environmental Protection Agency's Proposed Plan for Route 561 Dump Site, Operable Unit 2 in Gibbsboro, NJ

Dear Ms. Gelblat:

Please be advised this law firm represents 88 S. Lakeview Drive Associates, LLC (hereinafter, "88 S. Lakeview Dr. Associates"), owner of the real property located at 88 South Lakeview Drive (Block 14.01, Lots 1.01 and 1.05) in the Borough of Gibbsboro, Camden County, New Jersey (hereinafter, the "88 S. Lakeview Dr. Associates property"), located within what is deemed the "Vacant Lot Developed Area." Please accept this letter as 88 S. Lakeview Dr. Associates' comments to the United States Environmental Protection Agency's ("EPA") June 2016 Proposed Plan to address contaminated soil, sediment, and surface water at the Route 561 Dump Site portion of the Sherwin-Williams Sites located in Gibbsboro and Voorhees, New Jersey.

I. Background

The 88 S. Lakeview Dr. Associates property is located within the Vacant Lot Developed Area on the immediate west side of Route 561 – Lakeview Drive across from the Route 561 Dump Site. The property is improved by three commercial units and an asphalt parking lot. It is bordered to the south by the Vacant Lot and to the north and west by residential properties and undeveloped land.

According to EPA's Proposed Plan, the 561 Dump Site is one of the Sherwin-Williams Sites that represents a source area from which contaminated soil and sediment have migrated, predominately through natural processes, to downgradient areas in Gibbsboro and Voorhees.

Contamination at the Route 561 Dump Site is attributable to historic dumping activities associated with the Former Manufacturing Plant, approximately 700 feet to the northwest.

Remedial investigations at the Route 561 Dump Site show that lead and arsenic are the major contaminants of concern in all media tested. According to EPA's Proposed Plan, some of the most highly contaminated soil was found in portions of the Vacant Lot Developed Area nearest Route 561, as well as in the southern portion of the Northern Commercial Area and throughout the Dump Site Fenced Area. Soil contamination is considered relatively shallow, found at less than 5 feet in depth and includes concentrations of lead and arsenic over 80,000 mg/kg and 200,000 mg/kg, respectively.

Per the EPA, lead exposure can have serious and long-term health consequences in adults and children and can also cause health problems in pregnant women and harm to fetuses. "Even at low levels, lead in children can cause I.Q. deficiencies, reading and learning disabilities, impaired hearing, reduced attention spans, hyperactivity other behavioral problems.[1]" Exposure to arsenic has similar serious health consequences and is a known human carcinogen.[2]

II. Remedial Objectives and Preferred Alternatives

The Proposed Plan identifies the following remedial action objectives for soil and sediment at the Route 561 Dump Site: preventing potential current and future unacceptable risks to human and ecological receptors resulting from uptake of soil or sediment contaminants by plants, ingestion of contaminated soils or sediments and food items by humans and ecological receptors, and direct contact with contaminated soils or sediments; and minimizing migration of site-related contaminants in the soil to sediment, surface water, and groundwater.

By addressing contamination in the soil and sediment, EPA has chosen not to develop remedial action objectives for surface water. EPA has delineated the following cleanup goals for the Route 561 Dump Site:

Soil:

Arsenic:

- Non-residential – 19 mg/kg
- Residential – 19 mg/kg
- Ecological – 19 mg/kg

Lead:

- Non-residential – 800 mg/kg
- Residential – 400 mg/kg
- Ecological – 213 mg/kg

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[1] See: https://www.epa.gov/newsreleases/epa-proposes-lead-and-arsenic-clean-route-561-dump-site-gibbsboro-nj.

[2] See: https://www3.epa.gov/airtoxics/hlthef/arsenic.html.

Sediment:
Arsenic – 19 mg/kg
Lead – 235 mg/kg

Pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, EPA is to consider nine criteria when choosing a remedial alternative. Such criteria include: the overall protectiveness of human health and the environment; compliance with applicable or relevant and appropriate requirements; long-term effectiveness and permanence; reduction of toxicity, mobility, or volume of contaminants through treatment; short-term effectiveness; implementability; cost; state/support agency acceptance; and community acceptance.

EPA considered seven soil and four sediment alternatives before choosing its preferred remedy. For soil, EPA selected Alternative 6, which includes a mix of excavation and capping activities and the use of institutional controls. For sediment, EPA selected Alternative 4, which includes excavation of sediment with contaminant levels greater than the cleanup goals from small streams and headwaters within the Dump Site Fenced Area and White Sand Branch, respectively.

Briefly, Soil Alternative 6 would include the removal of two to four feet of soil, or deeper where utilities are located, in the Vacant Lot Developed Area where non-residential cleanup goals are exceeded. Soil below such excavated depth would be capped with either an impermeable cap or clean soil, and the remaining unsaturated soil that exceeds site-specific impact-to-groundwater values would be capped with an impermeable cover. Parking lots in commercial areas would receive an asphalt cap, while unpaved areas would receive a soil cap. Institutional controls, such as deed notices, would be required for all commercial properties.

Sediment Alternative 4 would consist of the removal of all sediment with site-related contaminants exceeding ecological cleanup goals from the Dump Site Fenced Area and White Sand Branch. No capping is necessary because all impacted sediment will be removed and backfilled with clean fill material.

III. Comments to Preferred Alternatives

In light of EPA's selection of the Preferred Alternatives, Soil Alterative 6 and Sediment Alterative 4, 88 S. Lakeview Dr. Associates offers the following comments:

1. Soil Alternative 6 does not adequately address all contaminants in the soil and in fact, permits unknown concentrations of contaminants to remain uncontrolled in the soil at depths greater than two to four feet.

2. Soil Alternative 6 does not adequately protect human health and the environment because placement of an impermeable cap or clean soil over contaminated soil below the excavated depth of two to four feet permits unknown concentrations of contaminants to remain uncontrolled in the soil at such depths.

3. Soil Alternative 6 does not adequately protect human health and the environment because placement of clean soil over contaminated soil below the excavated depth of two to four feet permits uncontrolled contaminants in soil to migrate upward toward, and/or commingle with, the clean soil at grade, thereby creating a source to ground and/or surface water contamination and resultantly, exposing humans and other ecological receptors to contaminants in the short- and long-term.

4. Soil Alternative 6 does not provide the greatest degree of long-term effectiveness and permanence in controlling impacts to groundwater because it permits unknown concentrations of contaminants to remain uncontrolled in the soil at depths greater than two to four feet, thereby creating a source to groundwater contamination and resultantly, exposing humans and other ecological receptors to contaminants in the short- and long-term.

5. Soil Alternative 6 does not reduce toxicity, mobility, or volume through treatment because treatment of the contaminants in the soil is not in any way proposed or contemplated, despite uncontrolled contaminants remaining in the soil below the excavated depth of two to four feet.

6. Soil Alternative 6 does not provide the greatest degree of short-term effectiveness because it presents potential adverse effects to the community, workers, and the environment. Such adverse effects to the community include increased traffic, increased noise, interruptions to local businesses, the presence of contaminated soil, and increased risks to community members and visitors during excavation of contaminated soil. Such adverse effects to workers include increased traffic, increased noise, the presence of contaminated soil, and increased risks during excavation of contaminated soil. Such adverse effects to the environment include the presence of contaminated soil and the disruption of any natural effects during excavation of contaminated soil.

7. Soil Alternative 6 has a common implementability issue that will inconvenience, impact, and disrupt the business 88 S. Lakeview Dr. Associates, including business tenants of, and visitors to, 88 South Lakeview Drive, in addition to any and all business owners in the Vacant Lot Developed Area, the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area. The Proposed Plan fails to discuss how inconveniences, impacts, and disruptions to these businesses will be minimized.

8. The Proposed Plan fails to establish a remedial action objective for surface water despite impacts to surface water from contaminants present in the soil and sediment and apparent impacts to same from implementation of the Preferred Alternatives.

9. According to the Proposed Plan, removal and/or capping of soil and removal of sediment pursuant to the Preferred Alternatives will decrease surface water contaminants, but in the alternate, if surface water contaminants do not in fact decrease, no remedial action, or timeframe associated therewith, to address impacts to surface water is herein contemplated.

10. According to the Proposed Plan, Soil Alternative 6 will provide an equivalent degree of protection as Soil Alternative 7, which proposes to excavate all of the accessible soil containing contaminants at concentrations that exceed the residential cleanup goals, despite Soil Alternative 6 permitting uncontrolled contaminants to remain in the soil below the excavated depth of two to four feet.

11. Removal of anything less than all of the contaminants in the soil, sediment, groundwater, and surface water will result in a significant diminution in the property values of any and all properties in the Vacant Lot Developed Area, as well as those located in the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area.

12. Removal of anything less than all of the contaminants in the soil, sediment, groundwater, and surface water will result in an environmental stigma being associated with any and all properties located in the Vacant Lot Developed Area, as well as those located in the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area.

13. The Proposed Plan fails to establish the long-term reliability of Soil Alternative 6 and specifically, how placement of an impermeable cap or clean soil will be inspected, maintained, or replaced, if necessary, post- implementation of the Preferred Alternatives.

14. The Proposed Plan fails to consider what potential costs property owners in the Vacant Lot Developed Area, the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area will incur as a result of the implementation of the Preferred Alternatives. Such costs may include, but shall not be limited to, costs associated with business or operational interruptions, loss of business or opportunity, future land use restriction, personal injury, and property damage.

15. The Proposed Plan fails to provide property owners in the Vacant Lot Developed Area, the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area who incur costs as a result of the implementation of the Preferred Alternatives recoupment of such costs or recourse or opportunity to present and recover said costs.

16. The Proposed Plan fails to address how and where excavated contaminated soil will be stockpiled, stored, secured, and disposed of during implementation of the Preferred Alternatives.

17. The Proposed Plan fails to establish how excavated areas in the Vacant Lot Developed Area, as well as those located in the Vacant Lot, the Northern Commercial Area, and the Dump Site Fenced Area will be restored to aesthetically similar conditions existing prior to implementation of the Preferred Alternatives.

18. Pursuant to Soil Alternative 6, soil in the Vacant Lot Developed Area that exceeds non-residential clean up goals will be excavated and removed to approximately two to four feet in depth, or deeper where utilities are located. An undeveloped portion of the 88 S. Lakeview Dr. Associates property in the Vacant Lot Developed Area remains zoned as residential. The commercial use of the residentially zoned portion of the 88 S. Lakeview Dr. Associates property in the Vacant Lot Developed Area is approved through a municipal land use variance. Accordingly, the Proposed Plan fails to acknowledge that a portion of the Vacant Lot Developed Area remains zoned residential and has the potential to be developed for residential use. As such, all soil in the Vacant Lot Developed Area that exceeds the more stringent residential cleanup goals must be excavated and removed.

IV. Conclusion

88 S. Lakeview Dr. Associates thanks the EPA for the opportunity to submit these comments to its June 2016 Proposed Plan and welcomes an opportunity to further discuss same with all interested parties.

Very truly yours,

Stuart J. Lieberman, Esq.
of LIEBERMAN & BLECHER, P.C.

SJL/mck

cc: Via Electronic and Certified (R.R.R.) Mail

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Via Electronic Mail

88 S. Lakeview Drive Associates, LLC

Date: July 12, 2016

Ms. Renee Gelblat, Remedial Project Manager
U.S. EPA, Region 2
290 Broadway 19th Floor
New York, NY 10007-1866

Dear Ms. Gelblat:

Thank you for your presentation on the Superfund proposed plan for the Route 561 Dump Site at the June 21, 2016 public meeting. I had made oral comments during the meeting; these are additional written comments.

I have been served on the Voorhees Twp Environmental Commission since 1998 when I retired from U.S. EPA Region 3. Two years ago I joined the Camden County / Citizen's Kirkwood Lake Environment Committee for the purpose of saving the Lake.

In the past, I had served on the Camden County Environmental Commission and taken charge of the Voorhees Twp Task Force to clean up and redevelop the Buzby Landfill.

With all my environmental knowledge and experience from community services, I consider Sherwin-William (SW) Superfund sites as a whole the County's No. 1 environmental problem. It consists of multiple sites, heavily contaminated with toxic chemicals, Lead and Arsenic, in soil, sediments and surface water and also ground water with organic chemicals. These sites are not only pose an adverse effects on the residents' property value, approximately 65 homes as indicated at the meeting, and their quality of life; but also damage our natural resources, Hilliards Creek and Kirkwood Lake. According the recent study by Sadat Associates, Inc., the lake is becoming shallower and shallower due to the accumulation of sediments from up stream loaded with Lead and Arsenic. The average lake depth of approximately 4.5 feet reported in 1979 to just 2.5 feet measured in late 2007. It seems to me that the lake has a cancer which is growing and spreading and poses immediate threat to the health of Cooper River and needs a surgery as soon as possible, not only to save the lake but also the Cooper River.

This is a very complex case in term of technical and legal aspects. I believe that EPA Region 2 misjudged and / or mishandled this case. Current EPA Region 2's sequential clean up approach / strategy from up stream first and then to down stream to Kirkwood Lake, the dead last, for preventing recontamination is unreasonable , unrealistic, counter productive , ineffective and inefficiency for the following reasons:

1. The remedial process consists of many moving parts and is an open-end process.

The EPA briefing for Voorhees Twp Committee on September 15, 2008 (see Attachment #1), the Discrete Milestones Chart provided no date / time table

which was totally unacceptable by the professional engineering standards. I just do not know how someone can manage a project without this necessary information. When we asked the clean up date for the Kirkwood Lake, the answer was " 10 years from now", which had become the standard answer for every briefing and public meeting. I felt painful when I saw the anger and frustration from residents at each briefing and/ or public meeting and saw my former employer losing its credibility / public trust.

At the June 21, 2016 public meeting, Mr. Richard Puvogel, the EPA Section Chief of Central New Jersey Remediation, indicated that the first "Record of Decision" (ROD) for the residential properties has been approved and signed by both EPA and SW but still has to negotiate with SW to finalize the remedial design. On one hand, he expected to complete the clean up for residential properties in 2 to 3 years, on the other hand he expected the remediation for Kirkwood Lake would start in sometime 2018 or 2019 (see attachment #2, the local newspaper covered the public meeting on 06/21/2016). No one believed that it would happen since the remedial process consists of so many moving parts. Any delay in one part of the process will have a dominating effect on the next part and / or next site. It is a moving target and an open-end process.

2. To clean up residential properties first is in contradictory with current EPA's sequential approach to prevent recontamination. To clean up residential properties first without clean up the contaminated sediments from water bodies up streams, there will be a potential recontamination during the flooding and over flooding conditions.

3. The current EPA's sequential clean up approach is ineffective and inefficient.

Now remedial investigation (RI) has been completed; the level and the extent of contamination have been determined. Methodology and formulation for evaluation and assessment have been established. As stated by Mr. Puvogel (see attachment #2), the clean up plan has proposed for Route 561 Dump Site is similar to the remedy selected for residential properties which involved with excavation of contaminated soil and sediments and installation of a cap with an impermeable cover or clean soil. Also proposed plan for the Route 561 Dump site is similar to the Burn Site according Mr. Ray Klimcsak, the Remedial Project manager for both Residential Properties and the Burn Site. Ms. Renee Gelblat takes on the Route 561 Dump Site. This appears to be a fragmented approach since all basically using the similar or same plan. It would be better off to centralize to one project manager for better coordination, eliminating duplication of effort, saving monies and time to speed up the entire process.
Same approach applying to water bodies clean up, dredging has been the foregone conclusion for removal of contaminated sediments from creeks and lakes, it would be better off to centralized to another project manager in charge for the efficiency and effectiveness purpose.

I believe that all sites can be cleaned up simultaneously except the ground water remediation by streamlining the whole remedial process, adding safety margin as needed, grouping sites with similar clean up plans. Yes, we can do all these at the same time by working together and supporting each other from federal to local levels. Ground water contamination poses no exposure to human health risk and is long term remediation process which can be treated as the low / last priority.

One resident raised a question at the meeting, " why all sites can't clean up simultaneously?" Mr. Puvogel's response was local traffic and safety concern from road closing. My response to Mr. Puvogel's concern was to work and closely coordinate with local officials for the traffic logistics. They are the experts and handle this issue all the time. It is my belief that to relief the residents' long suffering from the Superfund sites is far more important and outweighs the temporary traffic inconvenience.

Lastly I believe that the victims from the SW Superfund sites deserve a Congressional House Environment Committee Hearing to look at the whole case, crime versus victims for justice, to look for answers why they have to wait 30 years and nothing happened, and how to save the Kirkwood Lake since it is dying? Our government is supposed to be of the people, by the people and <u>for</u> the people!

Thank you for taking my comments for consideration.

Best regards,

K.K. Wu
Member of Voorhees Twp Environmental Commission
Member of Kirkwood Lake Environment Committee
2 Cranberry Place, Voorhees, NJ 08043

CC: Honorable Donald Norcross (D-1st District)
Honorable Camden County Freeholders Jeffrey Nash
Honorable Voorhees Twp Mayor Michael Mignogna

August 8. 2016

Renee Gelblat
US EPA
290 Broadway
19th Floor
New York, NY 10007-1866

Borough of Gibbsboro
49 Kirkwood Road · Gibbsboro, NJ 08026-1499
Tel: (856) 783-6655
Fax: (856) 782-8694
www.gibbsborotownhall.com

Edward G. Campbell, III
Mayor · *Ext. 160*

Anne D. Levy, RMC
Borough Clerk · *Ext. 105*

RE: Public Comments Regarding the Proposed Plan for the Route 561 Dump Site Gibbsboro, New Jersey

Transmitted by email and US Mail

Dear Renee,

In addition to this letter, enclosed please find comments, exhibits and documents submitted on behalf of the Borough of Gibbsboro which include input from various public bodies.

The selected alternative proposed by US EPA is unacceptable to Gibbsboro. If implemented it will leave behind for future generations tens of thousands of cubic yards of contaminated soils under buildings, parking lots and roadways for which utilities, governments and property owners will need to deal. Further US EPA and Sherwin Williams have not fully investigated the Site and the pollution emanating from it as documented in our comments, nor has US EPA evaluated an alternative to remove all contaminates from the Site to truly render the site clean, free of engineering controls and deed restrictions.

Gibbsboro's submission includes three resolutions opposing US EPA's Proposed Plan from the Gibbsboro Borough Council, Planning Board, and Environmental Commission as well as a letter of opposition to the Proposed Plan from the Superintendent of the Gibbsboro Elementary School. Note that the Board of Education did not meet in July to adopt a resolution.

Please do not hesitate to contact me should you have any questions regarding the Borough's comments.

Sincerely,

Edward G. Campbell, III
Mayor
Gibbsboro Borough

cc: The Honorable Donald Norcross, U. S. Congressman (D-01, NJ)
The Honorable Jeffrey Nash, Camden County Freeholder
The Honorable Michael Mignogna, Mayor, Voorhees Township
Andrew Kricun, P.E., BCEE, Executive Director/Chief Engineer, CCMUA
Peter Fontaine, Cozen O'Connor
Chris Orlando, Camden County Counsel
Raymond Klimcsak, US EPA
Pat Seppi, US EPA
Rich Puvogel, US EPA
Lynn Vogel, NJ DEP
Gibbsboro Borough Council
Gibbsboro Planning Board
Gibbsboro Environmental Commission
Gibbsboro Board of Education

Route 561 Dump Site Public Comments.docx

Borough of Gibbsboro

Comments Regarding the Proposed Plan for Cleanup of the 561 Dump Site

Gibbsboro Borough, Camden County, New Jersey

1. The Borough Council of Gibbsboro, the Gibbsboro Planning Board, and the Gibbsboro Environmental Commission have adopted resolutions opposing the US EPA's Proposed Plan for the Cleanup of the Route 561 Dump Site. The Superintendent of the Gibbsboro Elementary School also has written a letter supporting the Borough Council's position in opposition to the Proposed Plan.
2. The Route 561 Dump Site has not been fully investigated:
    a. US EPA has not investigated the wooden pipeline discovered by the Borough of Gibbsboro during sewer main construction within Marlton Avenue near Crown Liquors. The pipeline was estimated to 100 years old and had a trajectory pointing to the former manufacturing plan and the Route 561 Dump Site. This may have been a means of pumping manufacturing wastes to the Dump Site. The line needs to be investigated to determine if there is any contamination along its route. (See Exhibit 1)
    b. A canal ran from Clement Lake to Silver Lake. A portion of the canal still exists at Kresson (Milford) Road and near its terminus at Silver Lake near Lakeview Drive. It was dug to increase the horsepower of the mill near the dam at Silver Lake. At some point the canal became known as the Paris Green Ditch. Paris Green was a famous color produced by the John Lucas Company and contained arsenic. It was common to see various colors in the terminus of the canal at Silver Lake in the 1960s and 1970s. The course of the canal needs to be investigated to determine if it is contaminated.
    c. The alternatives considered by US EPA for soils are not comprehensive in that they did not consider an alternative that would remove <u>all</u> the contaminated soil (except as noted), including contaminated soils beneath existing structures, parking lots and roadways. This is a feasible alternative as just a few properties are involved. The option

would include acquiring the two contaminated commercial properties (strip center and liquor store), relocating the businesses, and removing all the contaminated soils such that no cap, engineering controls or deed restrictions would be necessary. While this option would be more expensive and have a greater impact on businesses, it would be comprehensive, final, and long term monitoring would not be necessary. (Note that the Borough of Gibbsboro previously reached an agreement with Sherwin Williams to accept a cap and engineering controls on a lot which it owns (Block 18.07 Lot 9). That agreement does not apply to any other parcel included in the Route 561 Dump Site.)

d. None of the alternatives considered by US EPA addresses contamination within any of the roadways. Within Lakeview Drive and Marlton Avenue lie utilities that require periodic maintenance and end-of-life replacement. Also, Gibbsboro maintains a sewer line within an easement that runs along White Sands Branch then behind the office complex on Lakeview Drive. Broken sewer or water lines cannot be left unaddressed for US EPA or Sherwin Williams to mobilize, study, and solve at a future time. The alternatives considered by US EPA do not account for the future cost that governments and utilities will incur to repair, maintain and replace infrastructure within contaminated roadways. The selected alternative must satisfactorily address roadway and utility easement contamination to be acceptable to Gibbsboro. Further, trenches that contain household and business utility connections are not addressed.
e. For the removal of soil sediments from the White Sands Branch, activities in the 1960's that impacted the stream corridor have not been adequately studied to determine if contamination exists within the stream course or flood plain as they existed pre-1965. Evidence of two major activities that impacted most of the stream corridor from Lakeview Drive to the United States Avenue Burn Site is documented in exhibits 2, 3 and 4. The first activity, construction of the Nursing Home at 60 Berlin Road, began by 1965 and relocated the White Sands Branch near its intersection with Berlin Road closer to Berlin Road for several hundred feet (Exhibit 2, picture 2). Transects 6, 7 and 8 do not appear to

be of sufficient length to intersect the course of the stream prior to its relocation around1965. This needs to be investigated. Exhibit 3 documents clear existing evidence of the original stream course. The second disturbance involved filling the area along White Sands Branch between Lakeview Drive and Berlin Road around 1970. It is clearly visible the 1970 DVRPC aerial photograph depicted in Exhibit 2, picture 3 and Exhibit 4. Many feet of fill was placed on the wetlands and floodplain and the stream was nudged to the east.

3. Regarding the implementation of a Soil Removal Process:
    a. The location of any construction trailer should be approved by the Gibbsboro Planning Board via Site Plan approval which will address the location, screening, ingress and egress.
    b. Specific residences and businesses should be notified of a tentative schedule involving the cleanup of their property at least 30 days in advance. Final confirmation should be supplied seven days in advance. The local police and governing bodies should receive the same notices.
    c. Contractors should contract with the Borough of Gibbsboro for local police to provide security for activities within or near to roadways and to provide safe access to roads for construction traffic.
    d. The implementation plan needs to address how dust will be controlled and, depending on the plan, how they will collect and dispose of contaminated particles and dust.
    e. If any residents or businesses will be required to vacate their properties during the cleanup process their expenses should be covered by Sherwin Williams. If they do not need to vacate the properties, how will they be protected from exposure during the cleanup process? Will businesses be compensated for lost or reduced business during construction? If businesses are open during clean up, how will the public be protected?
    f. Will restoration work be bonded?
4. Regarding Block 18.07 Lot 9 which is owned by the Borough of Gibbsboro, is directly in front of the dam at Clement Lake and will include a cap:
    a. Upon completion of work, the dam at Clement Lake <u>MUST</u> be accessible for Gibbsboro to maintain the dam.

b. The design of the remedy must be such that it will withstand a dam collapse as the White Sands Branch is fed directly from the dam adjacent to lot 9.
c. As lot 9 will have limited practical use, Sherwin Williams should construct a park on the lot as part of the cleanup.

5. Regarding the offsite (with respect to the property from which they are removed) stockpiling of contaminated soils:
   a. Any site selected for offsite storage of contaminated soils should be approved by the Gibbsboro Borough Council and Planning Board.
   b. Any areas that are to used to stockpile contaminated soils need to be secured from public access.
   c. Proposed storage areas should be disclosed to the public and approved by the local municipality.
   d. Transportation routes to local stockpiling sites should be disclosed to the public and approved by the local governing body.
   e. The transportation of contaminated soils must be in sealed drums or in vehicles that are loaded such that no material or dust will escape.
   f. Off site storage of contaminated soils must be in sealed drums or within a volume that is not easily penetrated.
   g. No material should be stored offsite more than seven days.
   h. Offsite storage should be screened such that it cannot be seen from any residence, business, public building, public recreation area, or public street.
6. Regarding the stockpiling of contaminated soils on site:
   a. Any properties on which contaminated soils are temporarily stored need to be secured from public access.
   b. Proposed areas should be disclosed to the public and approved by the local municipality.
   c. The on site storage of contaminated soils must be in sealed drums or within a volume that is not easily penetrated.
   d. No material should be stored on site more than 24 hours.
7. Regarding the decontamination of vehicles used to transport contaminated soils:
   a. A process needs to be established to remove contaminated particles from trucks before allowing transit on public streets.

b. The process should also address the collection and security of contaminated particles removed during the decontamination process.
c. The process needs to be disclosed to the public and the local governing body.

8. Regarding the hours of operation:
   a. All work within Gibbsboro shall comply with local ordinances regarding commercial operations and noise.

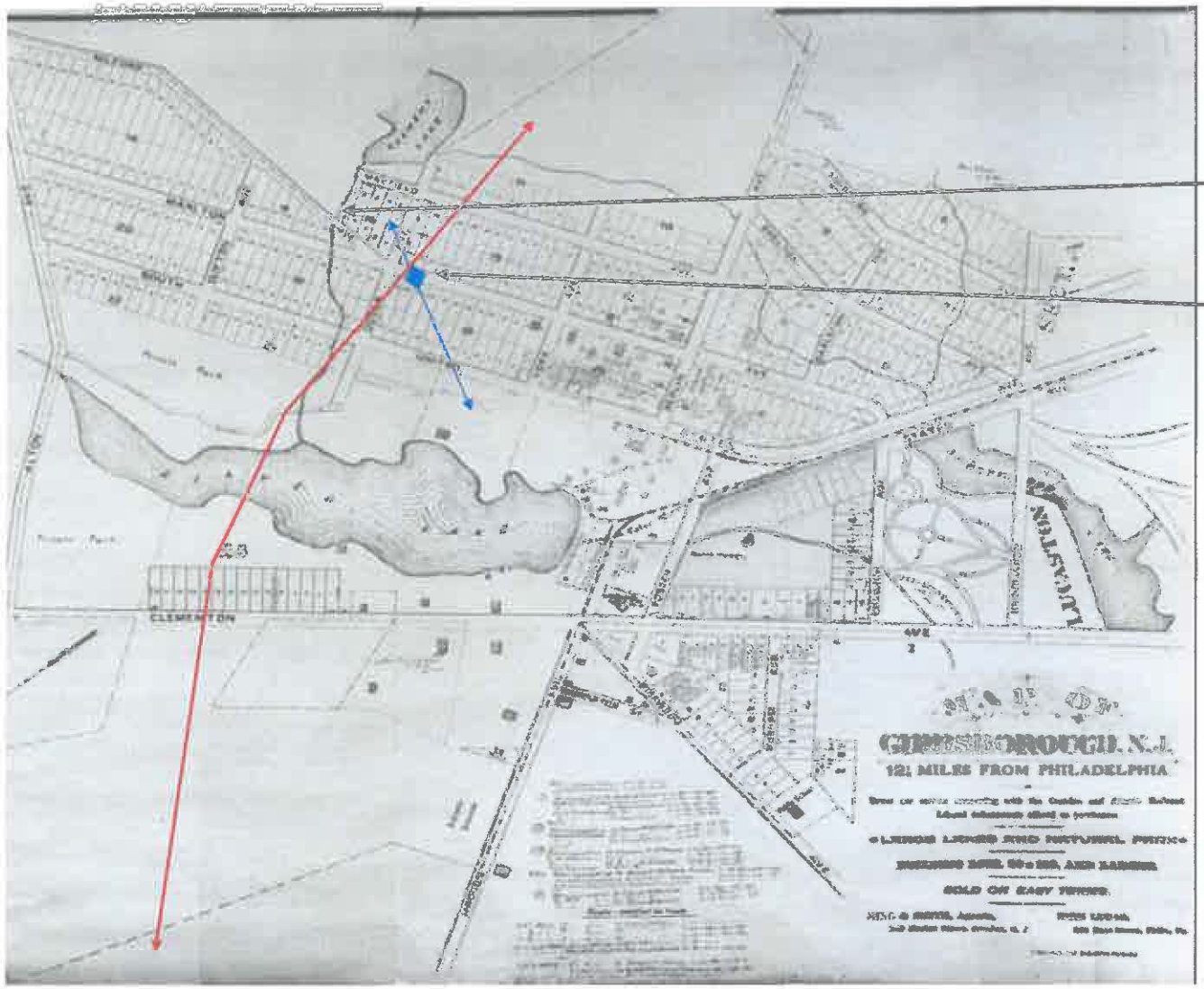


Exhibit 1 – Circa 1900 Map of Gibbsboro Showing Canal

Canal from Clement Lake to Silver Lake, later known as the "Paris Green Ditch"

Approximate location of wooden pipe located in approximately 1990 during sewer system construction

Future Lakeview Drive

Wooden pipe discovered around 1990

Modern Development that impacted White Sands Branch

Exhibit 2 – Aerial Photographs show development and the Relocation of White Sands Branch toward Berlin Road

DVRPC 1959 Aerial Photo

Before relocation of White Sands Branch toward Berlin Road

DVRPC 1965 Aerial Photo

60 Berlin Road (During construction)

DVRPC 1970 Aerial Photo

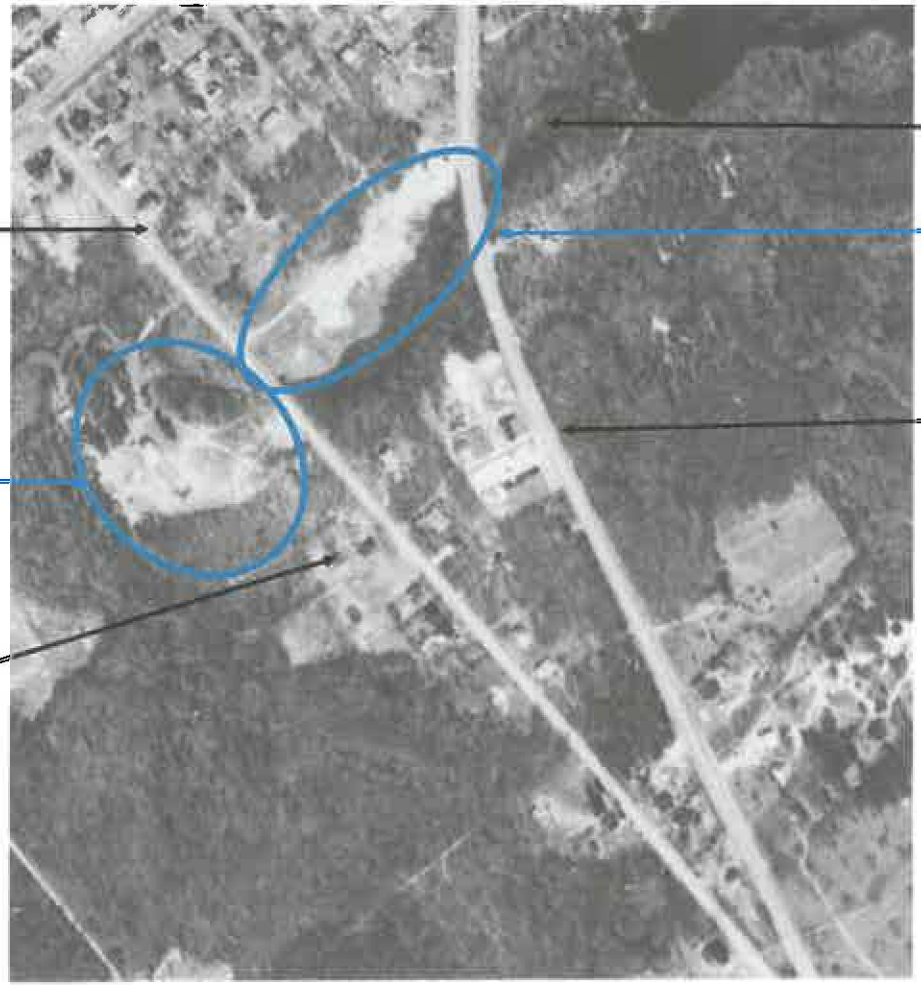
60 Berlin Road post-construction/Berlin Road "Dirt Dump" filled around 1968-1972.

Exhibit 3 –Photographs depicting the historical location of White Sands Branch

June 25, 2016 pictures documenting existing evidence of the original stream course. The metal box below was installed as a bridge across White Sands Branch to access a "trail" that was constructed to Berlin Road and is visible on the 1970 aerial photograph. The road can be seen in the upper left of the picture below.

DVRPC 1970 Aerial Photograph Sheet: A37_B29

Exhibit 4 – 1970 Aerial Photograph showing disturbances along White Sands Branch



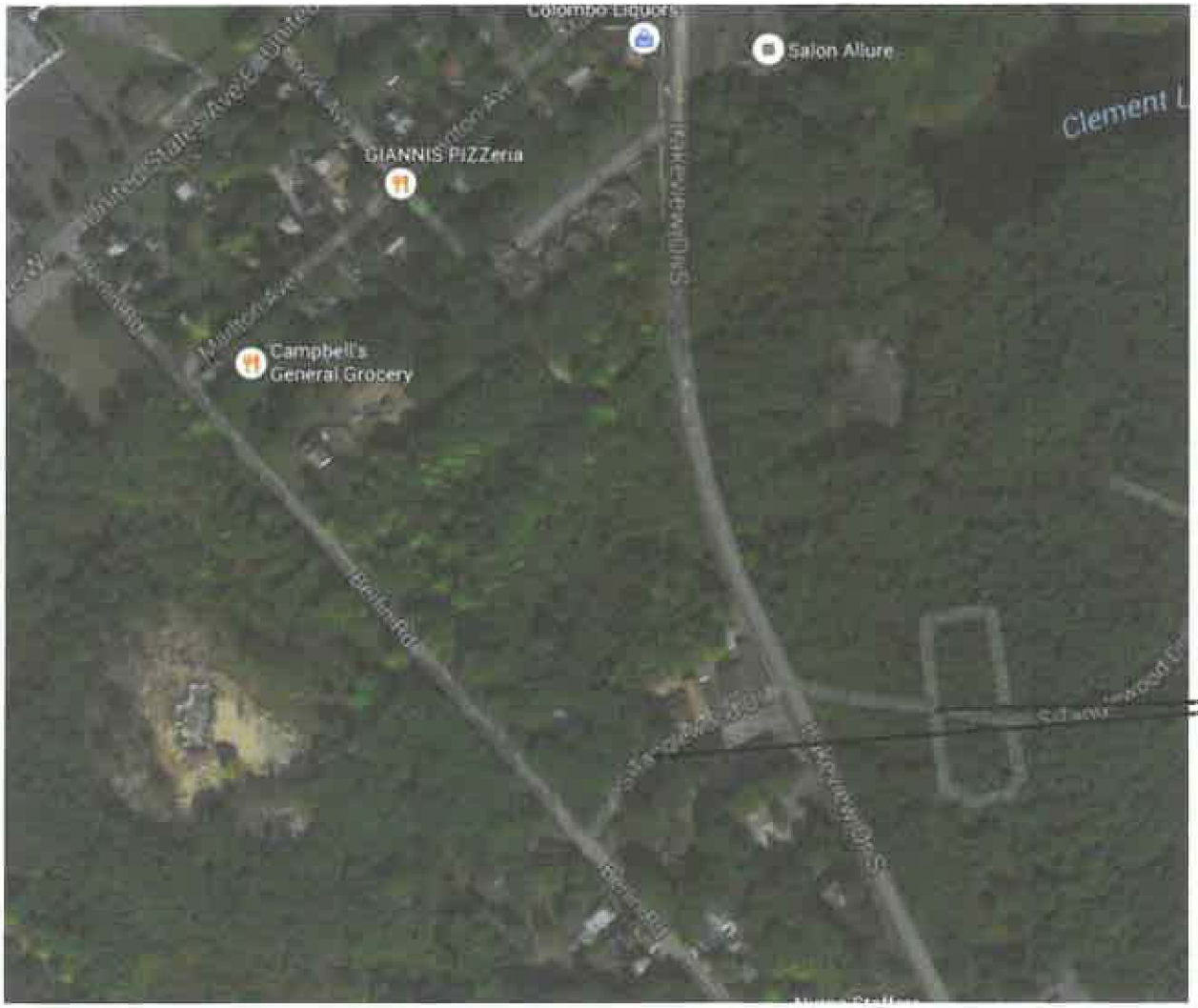


Exhibit 5 – 2016 Google Maps image depicting current state of White Sands Branch

S. Tanglewood Drive (Erroneous)

2016EC-7-04

RESOLUTION BY THE GIBBSBORO ENVIRONMENTAL COMMISSION OPPOSING THE SUPERFUND PROPOSED PLAN FOR THE ROUTE 561 DUMP SITE

WHEREAS, the United States Environmental Protection Agency (US EPA) released a proposed plan for the cleanup of Operational Unit 2 (OU2) soil, sediments, and surface water associated with the Route 561 Dump Site on or about June 13, 2016 and a public meeting was conducted on June 21, 2016 at the Gibbsboro Senior Center; and

WHEREAS, the investigations of the site performed to date are incomplete and the alternatives for remediation considered by US EPA do not address the full scope of the known contamination to the satisfaction of the Borough of Gibbsboro.

NOW, THEREFORE, BE IT RESOLVED, by the Gibbsboro Environmental Commission of the Borough of Gibbsboro, County of Camden, and State of New Jersey, hereby opposes the Proposed Plan for the following reasons:

1. None of the alternatives considered addressed contaminated soil under route 561 or existing buildings. The Borough operates sewer lines within these areas and other utilities provide service within the contaminated areas as well.
2. By US EPA's own calculation Alternative 6 leaves 13,000 more cubic yards of contamination than Alternative 7.
3. Both Alternatives 6 and 7 leave huge volumes of contamination under route 561 and commercial buildings and require perpetual reviews to determine continued efficacy. This is an unacceptable state for US EPA to leave the site in.
4. US EPA has failed to investigate the historical stream channel of White Sands Branch from Berlin Road to the United States Avenue Burn Site.
5. US EPA has failed investigate evidence of related industrial activity in and around the Route 561 Dump Site and to assess potential contamination associated with such activity.

BE IT FURTHER RESOLVED that US EPA is urged to perform additional studies and consider more comprehensive alternatives a copy of this resolution shall be forwarded to:

Renee Gelbelt, Remedial Project Manager
US EPA Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

John E. Flynn
Chairman

2016PB-7-12

RESOLUTION OPPOSING THE SUPERFUND PROPOSED PLAN FOR THE ROUTE 561 DUMP SITE

WHEREAS, the United States Environmental Protection Agency (US EPA) released a proposed plan for the cleanup of Operational Unit 2 (OU2) soil, sediments, and surface water associated with the Route 561 Dump Site on or about June 13, 2016 and a public meeting was conducted on June 21, 2016 at the Gibbsboro Senior Center; and

WHEREAS, the investigations of the site performed to date are incomplete and the alternatives for remediation considered by US EPA do not address the full scope of the known contamination to the satisfaction of the Borough of Gibbsboro.

NOW, THEREFORE, BE IT RESOLVED, by the Gibbsboro Planning Board of the Borough of Gibbsboro, County of Camden, and State of New Jersey, hereby opposes the Proposed Plan for the following reasons:

1. None of the alternatives considered addressed contaminated soil under route 561 or existing buildings. The Borough operates sewer lines within these areas and other utilities provide service within the contaminated areas as well.
2. By US EPA's own calculation Alternative 6 leaves 13,000 more cubic yards of contamination than Alternative 7.
3. Both Alternatives 6 and 7 leave huge volumes of contamination under route 561 and commercial buildings and require perpetual reviews to determine continued efficacy. This is an unacceptable state for US EPA to leave the site in.
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Renee Gelbelt, Remedial Project Manager
US EPA Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

George P. Miller
Chairman

Anne D. Levy, RMC
Secretary

Adopted: July 7, 2016

2016-7-95

RESOLUTION OPPOSING THE SUPERFUND PROPOSED PLAN FOR THE ROUTE 561 DUMP SITE

WHEREAS, the United States Environmental Protection Agency (US EPA) released a proposed plan for the cleanup of Operational Unit 2 (OU2) soil, sediments, and surface water associated with the Route 561 Dump Site on or about June 13, 2016 and a public meeting was conducted on June 21, 2016 at the Gibbsboro Senior Center; and

WHEREAS, the investigations of the site performed to date are incomplete and the alternatives for remediation considered by US EPA do not address the full scope of the known contamination to the satisfaction of the Borough of Gibbsboro.

NOW, THEREFORE, BE IT RESOLVED, by the Governing Body of the Borough of Gibbsboro, County of Camden, and State of New Jersey, hereby opposes the Proposed Plan for the following reasons:

1. None of the alternatives considered addressed contaminated soil under route 561 or existing buildings. The Borough operates sewer lines within these areas and other utilities provide service within the contaminated areas as well.
2. By US EPA's own calculation Alternative 6 leaves 13,000 more cubic yards of contamination than Alternative 7.
3. Both Alternatives 6 and 7 leave huge volumes of contamination under route 561 and commercial buildings and require perpetual reviews to determine continued efficacy. This is an unacceptable state for US EPA to leave the site in.
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5. US EPA has failed investigate evidence of related industrial activity in and around the Route 561 Dump Site and to assess potential contamination associated with such activity.

BE IT FURTHER RESOLVED that US EPA is urged to perform additional studies and consider more comprehensive alternatives a copy of this resolution shall be forwarded to:

Renee Gelbelt, Remedial Project Manager
US EPA Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

Edward G. Campbell, III
Mayor

Anne D. Levy, RMC
Borough Clerk

Adopted: July 7, 2016

GIBBSBORO ELEMENTARY SCHOOL DISTRICT

Grades PS through 8

Mr. Jack Marcellus
Superintendent/Principal
jmarcellus@gibbsboroschool.org

Mrs. Barri Veytsman
Supervisor of Special Services
bveytsman@gibbsboroschool.org

To: Renee Gelbert, Remedial Project Manager
From: Jack Marcellus, Gibbsboro School District Superintendent
Re: Support of the Borough of Gibbsboro Resolution
Date: July 21, 2016

Please allow this letter to serve as support of the resolution adopted on July 7, 2016 by the Borough of Gibbsboro opposing the superfund proposed plan for the route 561 dump site. What is in the best interest of the Borough is obviously in the best interest of our students. I have attached a copy of the resolution for your reference.

From:	Campbell, Edward G
To:	Gelblat, Renee
Cc:	Puvogel, Rich; Seppi, Pat; Beitin, Clara; Vogel, Lynn; Anne Levy; Klimcsak, Raymond
Subject:	Remaining Route 561 Dump Site Questions
Date:	Wednesday, August 10, 2016 4:31:02 PM

Hi Renee. In addition to the comments and questions submitted by Gibbsboro on the proposed plan, these are the outstanding questions that I have regarding the proposed plan. Please add them to the record.

If the Dump Site is addressed as planned:

Can you tell me what the status of the site becomes at completion of the "cleanup"? Specifically will it be listed in ANY state, federal, or private database as a Brownfield or otherwise contaminated site?

If it is listed, the existence of a record of existing contamination will impair local property values and tax revenues for local governments. How will governments and property owners within a mile or so be compensated?

How does EPA plan for local utilities to deal with the remaining contamination on the commercial sites and in the public rights-of-way when utilities require maintenance or replacement? (Gibbsboro
maintains sewer lines within Lakeview Drive, Marlton Avenue, Milford Road and easements along White Sands Branch as well as service connections.)

What (re)development restrictions will be placed on the remaining contaminated properties? (For example, how is a demolition and reconstruction to be handled? Will Sherwin Williams or EPA conduct additional cleanup activities if a contaminated site is redeveloped?)

The existence of a contaminated site within a specified distance may disqualify certain projects for federal or state funding. Will Sherwin Williams be required to fund opportunities for which Gibbsboro is denied funding due to the continued existence of a brownfield?

What legal disclosures will be required when contaminated properties are sold or leased? Are any disclosures required for nearby properties?

Edward G. Campbell
Mayor – Gibbsboro Borough

Senior Principal Research Engineer
Lockheed Martin
Mission Systems and Training (MST)
760-2 Tech Campus
Mt Laurel, NJ

(856) 359-1800

COZEN O'CONNOR

Peter J. Fontaine
Direct Phone 215-665-2723
Direct Fax 866-850-7491
pfontaine@cozen.com

August 11, 2016

VIA EMAIL (gelblat.renee@epa.gov)

Renee Gelblat, Remedial Project Manager
U.S. EPA – Region 2
290 Broadway, 19th Floor
New York, N.Y. 10007

Re: Proposed Plan for the Route 561 Dump Site, Gibbsboro, New Jersey

Dear Ms. Gelblat:

We write on behalf of our client, Camden County, New Jersey, to provide these comments on the Proposed Plan for the Route 561 Dump Site, Operable Unit 2 of the Sherwin-Williams Superfund Site. We appreciate the willingness of the U.S. Environmental Protection Agency ("EPA") to extend the comment period to August 11, 2016.

Interests of Camden County in the Sherwin-Williams Superfund Site

Camden County owns Kirkwood Lake and Route 561 and has been adversely impacted by hazardous substances released from the Sherwin-Williams Superfund Site. Camden County has an important interest in ensuring that hazardous substances from the Sherwin-Williams Superfund Site are fully remediated as expeditiously as possible to protect the people and environmental resources of the County. Camden County is vested with broad authority under the New Jersey County Environmental Health Act ("CEHA"), N.J.S.A. 26:3A-21 et seq., P.L.1977, c.443, C.26:3A-21 et seq., and the implementing regulations of the New Jersey Department of Environmental Protection ("DEP") to investigate hazardous substance releases and surface water pollution and to enforce applicable standards. The CEHA was enacted by the Legislature to expand the environmental law enforcement authority of county health departments, and municipal and regional health agencies certified by the DEP pursuant to CEHA. CEHA mandates that each certified County health agency investigate citizen complaints, monitor the various State environmental statutes, gather evidence of violations as required, and provide witnesses for any resultant court action as needed. CEHA, Sec. 7. DEP has delegated to all 21 counties the authority to enforce State environmental laws and to protect the public from hazardous substances. CEHA declared it the policy of the State to provide for the administration of environmental health services by county departments of health throughout the State in a manner consistent with certain overall performance standards to be issued by the DEP. These CEHA Performance Standards are set forth in N.J.A.C. 7:1H-1.1 et seq., "County Environmental Health Standards of Administrative Procedure and Performance" (CEHA Performance Standards). The environmental health services include the authority to monitor and enforce environmental health

standards, including responsibility for enforcing hazardous substance control and water pollution laws. The CEHA defines "Water pollution" to mean the presence in or upon the surface or ground waters of this State of one or more contaminants, including any form of solid or liquid waste of any composition whatsoever, in such quantities and duration as are, or tend to be, injurious to the human health or welfare, animal or plant life, or property, or would unreasonably interfere with the enjoyment of life or property within any portion of the State." CEHA Sec. 2h.

Summary of Comments

Camden County fully endorses and supports the comments submitted by the Borough of Gibbsboro. Camden County joins with Gibbsboro in demanding that EPA require Sherwin-Williams to:

1. completely remove all arsenic and lead contamination above applicable residential clean-up standards from all areas within Gibbsboro,

2. undertake additional investigations of previously missed areas and features,

3. in designing any remedy fully consider the geotechnical issues related to the Clement Lake dam,

4. create a park and/or open space on Block 18.07 Lot 9 directly in front of the Clement Lake dam, and

5. implement stringent work-practices to protect residents during remedial activities.

Camden County also has several additional objections to the Proposed Plan. First, the County objects to EPA's decision to bifurcate remedial action on the Sherwin-Williams Superfund Site into multiple operable units, each subject to its own remedial timeframe and managed in sequential, rather than parallel, fashion. Second, the County objects to EPA's proposal to leave in place toxic levels of arsenic and lead within Gibbsboro, which is contrary to CERCLA's statutory criteria for evaluating remedial actions and therefore is arbitrary and capricious.

Bifurcation of Site into Sequential Operable Units Is Contrary to the NCP

EPA has bifurcated the Sherwin-Williams Superfund Site into multiple operable units, each subject to its own timeline. The proposed sequenced remedial approach to the entire Site is unreasonable given the ongoing risks posed by Site contaminants, which are uncontrolled and migrate with every rainfall event. The migration of hazardous substances from the former Manufacturing Plant and waste disposal areas into Hilliards Creek, Kirkwood Lake and the Cooper River is totally uncontrolled and will continue for many more years unless the current sequential remedial approach is altered. The paint waste contaminants that accumulated in the Route 561 Dump Site, White Sands Branch, Hilliards Creek and other waterways adsorb to fine organic sediments and frequently are resuspended in surface water flow which enables arsenic and lead to travel downstream long distances from source areas. For example, certain areas of Hilliards Creek contain up to 221,900 ppm of lead, which exceeds the "safe level" by 1,000 times and meets the definition of "hazardous waste." These hot spots are subject to frequent flooding events which transport contaminants further downstream.

Given these emergent, uncontrolled conditions, EPA's sequenced operable unit-by-operable unit approach is contrary to the NCP. The whole notion of "operable units" was to facilitate early

actions when "necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite the completion of total site cleanup. 40 CFR 300.430(a)(ii) (emphasis added). Here, the use of an operable units approach has neither enabled significant risk reduction quickly nor expedited completion of a total site cleanup. To the contrary, it has allowed Sherwin-Williams to unreasonably protract the remedial schedule to ridiculous lengths, failed to achieve source control, allowed significant migration of site related contaminants, and prevented attainment of an expeditious, site-wide remedy, all contrary to CERCLA.

Since closure of the Sherwin-Williams facility in 1978, remedial action at the Site is best described as a massive data gathering exercise with little actual remedial action. Through a series of negotiated administrative orders, EPA has allowed Sherwin-Williams to delay permanent remedial action for nearly forty years, while paint wastes continue to leach into Gibbsboro, Voorhees, Lindenwold and the communities along the Cooper River. At the current pace of cleanup, permanent remedial action at the Site will not be completed for at least another 20 – 30 years—and more than 60 years after government agencies first discovered the toxic waste legacy left behind by the Company. This timeframe for permanent remedial action is completely unacceptable.

Sherwin-Williams's remedial activities at the Superfund Site reportedly will begin at the most "upstream" source areas first and then will move sequentially downstream through the impacted waterways. The first remedial action phase—OU1—is the residential properties excavations. The next phase is the Route 561 Dump Site (OU2), then the U.S. Avenue Burn Site (OU3), then the Former Manufacturing Area (OU4), then Hilliards Creek (OU5), then Kirkwood Lake (OU6), then groundwater (OU7). All of this work will be done sequentially not concurrently. In other words, it appears that remedial design and remedial action on each successive operable unit will not be completed until each previous operable unit is finished.

For example, in 2015, EPA issued a Record of Decision addressing contaminated soils on residential properties located along Hilliards Creek and Kirkwood Lake, referred to as Operable Unit 1 ("OU1 ROD"). The OU1 ROD is limited to the excavation and removal of contaminated soils at 34 homes located along Hilliards Creek (11 homes), Kirkwood Lake (16 homes), and the former manufacturing plant (7 homes). The OU1 ROD concluded that periodic flooding has caused contaminated sediments from Hilliards Creek and Kirkwood Lake to migrate onto a number of residential properties within Gibbsboro and Voorhees, including many of the homes along Kirkwood Lake. Contamination is generally found in shallow soils on residential properties along Hilliards Creek and Kirkwood Lake. The extent of the shallow contaminated soils at residential properties is limited to near shore or floodplains of Hilliards Creek and Kirkwood Lake. In general, the contaminant concentrations within the floodplain properties are greater upstream, closer to the source areas, and decrease downstream. Of the 13 residential properties sampled along Hilliards Creek, 11 require remedial action. Of the 31 residential properties sampled along Kirkwood Lake, 16 require remedial action. Sherwin-Williams is planning to excavate contaminated soils at these homes, which will be the first remedial action undertaken at the Superfund Site since the site was listed on the NPL 18 years.

At the current rate, OU1—the residential soil excavations—will not be finished for at least another five years (i.e., ~ 2021), as EPA has acknowledged that Sherwin-Williams still needs to collect samples on approximately thirty additional residential properties and then it needs to complete the remedial design work on all of the proposed excavations before shovels actually will be in the ground. EPA states in the OU1 ROD that these additional residential property investigations could add up to one year to the typical remedial design timeframe, which is 15 to 18 months. After the

remedial design work is finished for all of the residential properties that are to be excavated, the actual excavation work on those residential properties will take at least another two years to implement, according to EPA. Adding it all up, it will be at least 54 months before Sherwin-Williams finishes the residential property excavations.

After completing the residential soil excavation work, Sherwin-Williams apparently will then start the remedial design work on the Route 561 Dump Site. How long this will take is unknown, as is the length of time needed to complete remedial action at the 561 Dump Site. After the Dump Site is finished, then Sherwin-Williams will begin the design work on the Burn Site, and so on.

The current timeframe for permanent remedial action across the entire Site is completely unacceptable. Given the number of soil and sediment samples collected over the past 30 years, there is sufficient delineation of the lateral and vertical extent of site related contaminants. The site conceptual model is well understood. Data and information is sufficient to formulate a site-wide final remedy for soils and sediment that can be implemented in our lifetime. EPA should eliminate the current sequenced operable unit-by-operable unit approach and instead compel Sherwin-Williams immediately to move forward with an integrated, site-wide RI/FS encompassing the entirety of the Sherwin-Williams Superfund Site, including the Route 561 Dump Site, U.S. Avenue Burn Site, Former Manufacturing Plant, Hilliard's Creek, and Kirkwood Lake. The current piecemeal approach has resulted in an unreasonably protracted remedial action timeline that has failed to achieve source control and has allowed Site contaminants to continuously migrate from source areas, exposing more people and ecological resources to arsenic and lead, among other contaminants of concern. Advancements in rapid field screening technology and low-impact excavation and dredging techniques present an opportunity to accelerate remedial action across the entire Site. The risk of recontamination of downstream areas has been greatly exaggerated, can be effectively minimized with proper sedimentation controls and dredging techniques, and is not a defensible justification for the current sequenced approach.

EPA Has Failed to Properly Designate Arsenic and Lead Contamination in Soils as Principal Threat Waste

The Proposed Plan fails to adequately support much less even explain in the face of contrary data how "lead and arsenic in soil and sediment . . . are not considered principal threat wastes at this Site." Arsenic and lead contamination at the Route 561 Site <u>are</u> principal threat wastes because they pose a long-term risk to people and the environment. Contrary to EPA's conclusion, the arsenic and lead wastes identified at the Route 561 Dump Site are not rendered "low level threat wastes" merely because they are at depth or exist beneath existing structures. EPA guidance makes clear that the determination of whether a source material is a "principal threat waste" or "low level threat waste" should be based on the inherent toxicity of the material, not on whether the material poses the primary risk at the site. Soils containing significant concentrations of highly toxic materials are generally considered to constitute principal threats. See EPA, "A Guide to Principal Threat and Low Level Threat Wastes," (November 1991). The distinction between a principal threat waste and a low level threat waste is important because CERCLA and the NCP establish an expectation that the EPA will use treatment to address the principal threats posed by a Site whenever practicable (see NCP Section 300.430(a) (1) (iii) (A)). The "principal threat" concept is applied to the characterization of "source materials" at a Superfund site. A source material is material that includes or contains hazardous substances, pollutants, or contaminants, in soil that act as a source for direct exposure. <u>Principal threat wastes are those source materials considered to be highly toxic or highly mobile that generally cannot be reliably contained or</u> <u>would present a significant risk to human health or the environment in the event exposure should occur</u>. The manner in which principal threat wastes are addressed provides a basis for making a statutory

finding that the remedy employs treatment as a principal element. CERCLA requires that each selected remedy 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 alternatives to the maximum extent practical.

The arsenic and lead contamination from the Route 561 Dump Site are principal threat wastes because they are highly toxic and would present a significant risk to human health or the environment in the event exposure should occur. As such, they pose a long-term risk to construction workers, including Camden County employees who in the future may be exposed to these hazardous substances during maintenance and construction work on County Route 561. For this reason, EPA's conclusion that the arsenic and lead contamination is not a principal threat waste is deeply flawed. Because EPA failed to properly characterize the arsenic and lead contamination as a principal threat waste, it failed to make the necessary statutory finding that treatment is a principal element in the remedy. CERCLA states that EPA should select "remedial actions in which treatment which permanently and significantly reduces the volume, toxicity or mobility of the hazardous substances, pollutants, and contaminants." See 42 USC 9621. The statute also favors remedial action "that utilizes permanent solutions." Id. EPA's recommended remedial action Alternative 6, and rejected Alternative 7, would both leave significant levels of arsenic and lead in the soils and is therefore contrary to both statutory preferences for treatment and permanence. In essence, EPA's remedy allows Sherwin-Williams to land dispose of its paint wastes.

In sum, EPA's Proposed Plan for the Route 561 Dump Site does not satisfy CERCLA's statutory criteria because it:

1. fails to achieve overall protection of human and health and the environment because residual contamination well above residential standards for arsenic and lead would be left behind, thereby posing a long-term risk to future occupants, including Gibbsboro and Camden County workers. Camden County will not consent to leave such contamination behind on County-owned property, such as Route 561.

2. fails not comply with Applicable or Relevant and Appropriate Requirements (ARARs) because a deed restriction is a necessary applicable requirement to restrict the future use of County Route 561. The County will not consent to the use of such an institutional control on its property.

3. fails to adequately consider the long-term effectiveness and permanence of leaving elevated concentrations of arsenic and lead in subsurface soils and does not maintain protection of human health and the environment over time, as compared to a complete removal remedy.

4. fails to reduce the toxicity, mobility, or volume of principal threat contaminants of arsenic and lead, and contravenes the statutory preference for permanent, treatment-based remedies.

5. fails to properly consider the short-term effectiveness of complete excavation and removal of arsenic and lead contamination, completion of which would impose insignificant additional time or risk to the community during implementation.

6. fails to adequately consider the technical, administrative, and cost feasibility of implementing a complete excavation and removal remedy, which would be only marginally more expensive than the selected remedy.

7. fails to satisfy the community, which is demanding a complete excavation and removal of all arsenic and lead contamination above residential standards.

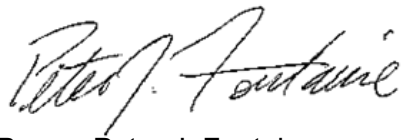
Conclusion

The former Sherwin-Williams Paint Works facility has a long history of pollution that has left Gibbsboro and other Camden County communities with a legacy of arsenic and lead contamination. For the past 40 years, the residents of Gibbsboro and the other impacted communities in Camden County have waited patiently for the Sherwin-Williams Company to finally clean-up the contamination it left behind when it abruptly closed its doors and fired hundreds of workers. It should not be forgotten that the Sherwin-Williams Company shuttered the plant in 1978 shortly after EPA announced it would issue new federal environmental regulations under the Clean Water Act and Resource Conservation and Recovery Act that would have required the Company to treat its waste stream and clean-up and dispose of the hazardous wastes it had dumped on the ground throughout Gibbsboro. The Company closed the plant before the new regulations took effect thereby saving itself hundreds of millions of dollars at the expense of local residents and communities. For the past 40 years, the residents of Gibbsboro, Voorhees, Lindenwold and surrounding communities have lived in fear that they, their children, and their grandchildren may be exposed to arsenic, lead, and other toxins. At the same time, Gibbsboro and portions of Voorhees around Kirkwood Lake are unable to attract new investments due to the very real stigma of contamination left behind by Sherwin-Williams.

EPA must revisit its cleanup approach by eliminating the multiple operable unit/phased remedial approach and by accelerating permanent remedial action across the entire Site. EPA should also revise the Proposed Plan for the Route 561 Dump Site by analyzing an eighth remedial alternative involving complete excavation of all impacted soils above residential standards, including soils beneath existing structures, such as roadways. Only with a complete removal of impacted soils can CERCLA's objective of a permanent, treatment-based remedy be achieved. The additional cost associated with complete excavation deserves little consideration, given the unreasonable delay in achieving permanent remedial action and the associated savings to Sherwin-Williams.
Please contact me if you have any questions about the enclosed.

Sincerely,

COZEN O'CONNOR



By: Peter J. Fontaine

cc: Jeffrey L. Nash, Freeholder, Board of Chosen Freeholders, Camden County
The Honorable Donald Norcross, U.S. Congressman (D-01 NJ)
The Honorable Edward Campbell, Mayor, Borough Gibbsboro
The Honorable Michael Mignogna, Mayor, Voorhees Township
Andrew Kricun, Executive Director, CCMUA
Christopher Orlando, Camden County Counsel

From: barbara.kelleher@comcast.net
To: Gelblat, Renee
Cc: jnash@camdencounty.com; mignogna@voorheesnj.com; johnston15@comcast.net; alfred_mason@booker.senate.gov; nj01dnima@mail.house.gov
Subject: Comments - EPA
Date: Thursday, August 11, 2016 4:42:22 PM

Ms. Renee Gelblat
U.S EPA, Region 2
290 Broadway, 19th Floor
New York, NY 10007-1866

Dear Ms.Gelblat:

We have massive polution. We have a responsible party - Sherwin Williams, who by their own admisssion have knowingly, willfully and wantonly perpetrated this envirnomental disaster. We have a regulatory agency - YOU - who has both the authority and obligation to protect the envirnoment and human health. What we don't have is any apparent sense of urgency to do the right thing. To date remedial results have been abysmal.

Sherwin Williams (an extremely profitable $12 billion Corporation) over the last several years has accrued literally hundreds of millionsof dollars ear-marked for the remediation of two former paint manufacturing plants - this, of course being one. But, they reassure their shareholders in their last several Annual Reports not to worry. Their strategy is obvious - protraction, delay, obfuscation, recalcitrance - anything and everything so as to not spend one penny more than, one day sooner than they are absolutely compelled to by the EPA.

It is now time for the EPA to compel them! S-W may be entitled to due process, but not at the expense of the citizens who have been, and continue to be, harmed by their profligate behavior and avoidance of their responsibility.

I cannot understand why more pressure has not already been brought to bear. Nor can I understand why the remediation can't be acelerated - why, in fact, can't more resources be employed so that multiple phases of the remediation can be undertaken concurrently, rather than in the plodding, turgid sequence proposed.

As a 74 year old resident for more than 35 years of a property along Kirkwood Lake I have watched my taxes go up as my property value goes down and my quality of life has diminished. At the pace you are going, odds are that I will not live to see Kirkwood Lake restored. That is unacceptable! But, it's not just personal.

Kirkwood Lake continues to lose depth, owing the build-up of contaminated silt. Pollutants continue to over-top the dam endangering downstream communities and the Cooper River. How can this NOT be a higher priority than cleaning up the Dump Site, or residential properties.

The top priority for EPA should be to DREDGE KIRKWOOD LAKE - NOW!!!

Please do the right thing.

Edward J. Kelleher
1128 Gibbsboro Rd.
Voorhees, NJ 08043
ekelleher101@comcast.net

Mary Lamielle, Executive Director
National Center for Environmental Health Strategies, Inc.
1100 Rural Avenue
Voorhees, New Jersey 08043
(856)429-5358; (856)816-8820
marylamielle@ncehs.org

August 11, 2016

Ms. Renee Gelblat, Remedial Project Manager
U.S. EPA Region 2
290 Broadway, 19th Floor
New York, New York 10007-1866
(212)637-4414; Gelblat.Renee@epa.gov

Dear Ms. Gelblat:

I am commenting both as the executive director of the National Center for Environmental Health Strategies (NCEHS), a national, nonprofit focused on protecting the public health and improving the lives of people injured or disabled by chemical and environmental exposures, as well as a life-long resident of Voorhees Township, New Jersey. As executive director of NCEHS I have worked with many federal and state agencies and in particular on committees with ATSDR, as a member of CDC's National Conversation on Public Health and Chemical Exposures, and as a member of the National Institute of Environmental Health Sciences "Partners." I am also the recipient of a 2010 US EPA Region 2 Environmental Quality Award.

I have lived for 65 years along the banks of the Main Stem of the Cooper River downstream from Kirkwood Lake and the Sherwin-Williams site, formerly Lucas Paint Works. I am concerned for the health and wellbeing of my neighbors and for those community members in Gibbsboro and Voorhees, particularly those along Kirkwood Lake who have lived with the contamination resulting from over a century of toxic pollutants from the Lucas Paint Works and Sherwin-Williams operations.

As a child I remember the creek behind our house flowing in different colors. My siblings and I were told to stay out of the creek due to dumping of paints and other solvents into the creek in Gibbsboro. I understand that significant contaminants from Lucas Paints continue to flow downstream, particularly with heavy rainfalls. I furthermore understand that Kirkwood Lake is becoming more and more shallow due to the failure to remediate the current situation, and that the more shallow the lake becomes, the more toxic chemicals spill downstream into the Cooper River. I did request soil samples be taken on our property along Cooper Creek to see if our soil is contaminated with heavy metals. We do not yet have the results of these tests.

I strongly support the comments of Alice Johnston, Chair of the Kirkwood Lake Environment Committee and Chair of the Kirkwood Lake Subcommittee dated August 11, 2016. I support immediate action to dredge and remediate Kirkwood Lake in an attempt to remove contaminates and to avert further contamination downstream.

I also have significant concern for the application of potent pesticides including 2,4-D to the lake in an attempt to address vegetation resulting from federal and state inaction. My understanding is that Kirkwood Lake has been treated at least once, if not more than once with potent herbicides without advance notification and protections for residents along the Lake and those residents downstream.

I would ask to be placed on the distribution list for further announcements on actions to address Hilliard Creek Superfund Site.

I appreciate the opportunity to provide public comment. I look forward to your response.

Sincerely,

Mary Lamielle, Executive Director
NCEHS

CC: Honorable Donald Norcross (D-1st District)
Honorable Cory Booker
Honorable Camden County Freeholder Jeffrey Nash
Honorable Voorhees Township Mayor Michael Mignogna

DONALD NORCROSS
FIRST DISTRICT NEW JERSEY

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NJCD1@mail.house.gov

Congress of the United States
House of Representatives
Washington, DC 20515-3001

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10 MELROSE AVENUE, SUITE 210
CHERRY HILL, NJ 08003
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(856) 427-4109 FAX

August 11, 2016

Renee Gelblat, Remedial Project Manager
U.S. EPA – Region 2
290 Broadway, 19th Floor
New York, N.Y. 10007

Dear Ms. Gelbat,

Please accept my thanks for extending the public comment period to provide more time for the various groups and members of the community to express their disapointment in the Environmental Protection Agency's (EPA) Plan for the Route 561 Dump Site located in Gibbsboro, New Jersey.

In my discussions of this plan I have spoken with representatives of Camden County who have a deep concern for the safety of their residents and also bear responsibility for County Road 561and ownership of Kirkwood Lake. The County as well as the residents that live along Kirkwood Lake and Hilliard Creek agree that the proposed sequential plan for remediating the various sections of the Sherwin-Williams/Hilliard's Creek Superfund Site is insupportable. Please accept this letter of comment as an endorsement of the community's concerns that the current remediation plan does not adequatly address the challenges of the Route 561 Dump Site and ignores the pressing need to conduct remediation on all the areas of the Superfund site immediately.

The EPA has known of the contamination of this site for four decades and yet the entirety of the EPA's efforts have revolved around diagnosis of the issues related to the site rather than actual cleanup. The EPA has recently issued a Record of Decision regarding remediation on residential areas on the banks of Kirkwood Lake and Hilliard Creek, yet as reported by the EPA, the completion of the remediation will not be completed this year, or the next. In fact at current rate it could be as many as four years before these handful of homes are remediated. At that point the entirety of the Superfund Site would still need to be remediated.

In short, given the proposed rate of remediation, I have no confidence that these sites will be cleaned up in my lifetime. That is unacceptable.

It is my understanding that the current strategy for bifurcating the cleanup leaves the remediation of Kirkwood Lake until the last possible step. Kirkwood Lake continues to be heavily silted, and the risk of the lake "dying" outright with each passing year of no action increase unabated. The death of the lake would not only be a great environmental tragedy but would risk the contaminants that currently settle in the lake to be deposited in Cooper River downstream.

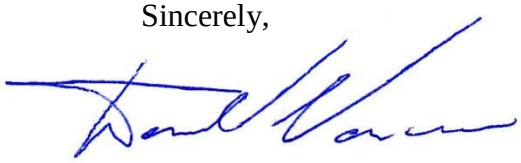
The only possible way to insure the safety of the entire region is to implement a strategy that remediates all areas of the site simultaneously.

In analyzing the particulars of the plan, I have had no greater resource than the Mayor of Gibbsboro who has been candid with me in his concerns with the current proposal as written. The borough, with their deep understanding of their town, has identified numerous aspects of the site for which the EPA currently has no remediation plan, to our knowledge. I request that you read the Borough of Gibbsboro's letter of comment with great attention.

The Borough maintains a more than reasonable concern that the allowance of contaminated materials to remain on the site would make permanent restrictions on development through engineering controls and deed restrictions. Because of these restrictions to development and out of concern for the health of both residents and worker I urge you to reconsider the decision to opt to keep some toxic materials in place. If the EPA maintains that there is absolutely no possibility of removing all these materials, the EPA must guarantee that the site be remediated to the highest possible safety standards, not only that which is legally acceptable.

The EPA is charged through the Superfund program to remediate contaminated sites to the the highest standards of safety in the shortest amount of time. In none of our conversations has the EPA put forward a plausable reason that these sites cannot be remediated to the pace and standards desired by the community. Therefore please accept this letter of comment as rejection of the current plan, and any plan that would allow the entire remediation of this Superfund to be completed decades from now. South Jersey has been waiting for this site to be cleaned up for decades. We are not going to wait anymore.

Sincerely,



Donald Norcross
Member of Congress

CC: EPA Region 2 Administrator Judith Enck

to: Mary Mears

ACTION

R2-16-001-1281-RA

RA
DRA
COS
cc: ERRD/action
PAD

VOORHEES
TOWNSHIP

August 11, 2016

Renee Gelblat, Remedial Project Manager
U.S. EPA – Region 2
290 Broadway, 19th Floor
New York, NY 10007

Dear Ms. Gelbat,

On behalf of Voorhees Township, kindly accept this letter as an expression of our disappointment in the Environmental Protection Agency's (EPA) Plan for the Route 561 Dump Site located in Gibbsboro, New Jersey.

Representatives of Camden County as well as the residents that live along Kirkwood Lake and Hilliard Creek agree that the proposed sequential plan for remediating the various sections of this Superfund Site is unacceptable. The current remediation plan does not adequately address the challenges of the Route 561 Dump Site and ignores the pressing need to conduct remediation on all the areas of the Superfund site immediately, particularly with regard to Kirkwood Lake.

The EPA has known of the contamination of this site for 40 years, yet an actual cleanup has yet to begin. The EPA has recently issued a Record of Decision regarding remediation on residential areas on the banks of Kirkwood Lake and Hilliard Creek, yet the completion of the remediation has no foreseeable end. This proposal is unacceptable to the residents of Voorhees.

The current proposed cleanup leaves the remediation of Kirkwood Lake until the last possible step. Kirkwood Lake continues to be heavily silted. The demise of the lake would have an environmental impact as far as Cooper River and beyond. An acceptable plan would be one that remediates all areas of the site simultaneously.

The EPA is responsible to remediate contaminated sites safely and efficiently. The EPA has yet to provide an acceptable reason for this ongoing excruciating delay.

Kindly accept this letter as Voorhees' rejection of the current plan. The residents have waited long enough. Kirkwood Lake needs to be fixed.

Sincerely,

Michael R. Mignogna

MICHAEL R. MIGNOGNA
Mayor of Voorhees Township

cc: EPA Region 2 Administrator Judith Enck

U.S. EPA REGION 2
CORRESPONDENCE CONTROL

2016 AUG 16 PM 12:59

RECEIVED

Dear Ms. Renee Gelblat, Remedial Project Manager, Remedial Project Manager,

We are pleased to present you with this petition affirming this statement:

"Clean up the dump sites and residential properties in the same timeline with Hillards Creek/Kirkwood Lake. Doing so will streamline the long-overdue remediation process, as well as save the dying, contaminated waterways and aid in alleviating a portion of continued real estate losses incurred by home owners. The current plan presented as-is once again gives no definitive timeline for lake cleanup, which is not an acceptable solution considering decades of research, delays, promises, and undelivered timeline goals. Further, this same fragmented plan appears to be similar to the one for the dump site. These plans need to be consolidated to a centralized project manager.

"

Attached is a list of individuals who have added their names to this petition, as well as additional comments written by the petition signers themselves.

Sincerely,
Christine Beswick

Nancy Forte
N.j, NJ 08043
Aug 13, 2016

Leah Pileggi
Voorhees, NJ 08043
Aug 12, 2016

Kathy Jacquot
Kirkwood, NJ 08043
Aug 12, 2016

Anne Buniak
Runnemede, NJ 08078
Aug 12, 2016

This has gone on too long.

Marian Nurkiewicz
Waterford works, NJ 08089
Aug 12, 2016

Ree Lutz
Brandon, FL 33510
Aug 11, 2016

John Lyons
Villas, NJ 08251
Aug 11, 2016

Lori Volpe
Voorhees, NJ 08043-3915
Aug 11, 2016

Eileen Kelly
Folcroft, PA 19032
Aug 11, 2016

Savalla Rambo
Sewell, NJ 08080
Aug 11, 2016

CLEAN IT UP !!!!!!!

Linda Sande
Medford, NJ 08055
Aug 10, 2016

enough is enough, lets get it done once and for all!!!

kathleen Jacquot
Voorhees Township, NJ 08043
Aug 10, 2016

This was once a beautiful lake and could be so again, and it is home to many wildlife. Please take needed action to save it!

Karen Scott
Laurel Springs, NJ 08021
Aug 10, 2016

Please save a once beautiful lake..sherwin willians polluted it...i grew up on the lake..please have it dredged asap...tks.

Eleanor Senatore
BELLMAWR, NJ 08031-1233
Aug 10, 2016

Sue Curran
Voorhees, NJ 08043
Aug 10, 2016

Bob Keller
Parsippany, NJ 07054
Aug 10, 2016

This lake once was a staple for sommertime vacationers. The residents who line the banks of Kirkwood Lake have had to endure decades of illegal dumping of deadly chemicals that have all but destroyed this New Jersey landmark. It's wrong to have to fight to have this lake saved. The people responsible for its current condition have been identified. The right thing to do is expeditiously move forward and show the residents who have lived along the banks practically their whole lives that there are some things in life that bureaucracy can not not block. Please do what needs to be done to clean our lake.

Charles Lewandowski
Berlin, NJ 08009
Aug 10, 2016

The time is NOW to take action on cleaning up Kirkwood Lake, Kirkwood, NJ, as well as the same thing with the Rt. 561 Superfund Site in Voorhees, NJ. It is LONG OVERDUE!! Our lake is dying!!

marianne williams
Franklinville, NJ 08322
Aug 10, 2016

Madeleine Lee
Westfield, NJ 07090

Aug 10, 2016

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timothy sevener
Mt Tabor, NJ 07878
Aug 10, 2016

Charles Goins
Somerdale, NJ 08083
Aug 10, 2016

Laura Ehly
Lumberton, NJ 08048
Aug 9, 2016

I grew up on this lake, with many fond memories... Too see it be destroyed is unacceptab.e

Charles tuckwood
Bedford, TX 76021
Aug 9, 2016

Noah Gehman
Mount Royal, NJ 08061
Aug 9, 2016

William Bednarz
Jersey City, NJ 07306
Aug 9, 2016

I grew up one block from this lake, it is criminal to see the condition it is in today. Please do the right thing and clean up the lake. Do the right thing.

David Costello
Coppell, TX 75019
Aug 9, 2016

I remember going to kirkwood lake as a little boy from Phila. Then in 1959 moved to Voorhees and lived there for over 50yrs with my family the Bello and Maiaroto's which the Soccerfield is named after. This lake is not just any lake it is a part of history and must be saved

RONALD Alleva
Sicklerville, NJ 08081
Aug 9, 2016

Irene Kibalo
Haddon Township, NJ 08107
Aug 9, 2016

Allan goldstein
Old Tappan, NJ 07675

Aug 9, 2016

Alan Husted
Voorhees, NJ 08043
Aug 9, 2016

Ryan Blanche
Washington, NJ 07882
Aug 9, 2016

We moved in right on the lake 10 years ago. At the time, we were told a clean up would be underway within 3 years. We cannot believe how much talk has gone on since then, with still no action in sight.

Robyn Bulicki
Voorhees, NJ 08043
Aug 9, 2016

Sharon Callahan
Fieldsboro, NJ 08505
Aug 9, 2016

Donald Tedesco
Maple Shade, NJ 08052
Aug 9, 2016

Shirley Bensetler
Cresskill, NJ 07626
Aug 9, 2016

Doug Blatt
Brick, NJ 08724
Aug 9, 2016

Jonah Shafran
Mendham, NJ 07945
Aug 9, 2016

Nancy Hassab
Marlton, NJ 08053
Aug 9, 2016

William Rilling
Browns Mills, NJ 08015
Aug 9, 2016

Enough is enough!It's time- it's well past time to accelerate the cleanup. Dredge Kirkwood Lake - NOW!!

Ed Kelleher
Voorhees, NJ 08043

Aug 9, 2016

Adriana Nurkiewicz
Waterford Works, NJ 08089
Aug 9, 2016

Melissa Pickering
Northfield, NJ 08225
Aug 9, 2016

Rachael
Laurel Springs, NJ 08021
Aug 9, 2016

Jodi Pedersen
Clementon, NJ 08021
Aug 9, 2016

Virginia LeConey
Kirkwood, NJ 09043
Aug 9, 2016

Please make Kirkwood Lake beautiful again.

Kimarie Eggert
Summerville, SC 29485
Aug 9, 2016

Lois Hensel
Laurel springs, NJ 08021
Aug 8, 2016

Amy Kelly
Voorhees, NJ 08043
Aug 8, 2016

Laura lyons
Voorhees, NJ 08043
Aug 8, 2016

Lillian Paris
Hammonton, NJ 08037
Aug 8, 2016

How many more people's lives need to be cut short as a result of exposure to carcinogens produced and dumped by Sherwin Williams? How many more non-human species must lose their habitat before the EPA takes action?

Kelly Marie Johnston
Bronx, NY 10461
Aug 8, 2016

And don't forget to vote out the politicians who stand in the way of progress. Hold those public servants accountable this election cycle!

Jonathan Nurkiewicz
Waterford Works, NJ 08089
Aug 8, 2016

COME ON GET IT DONE

SARA MERROW
Voorhees, NJ 08043
Aug 8, 2016

Richard Bulicki
Voorhees, NJ 08043
Aug 8, 2016

Denise Maista
voorhees, NJ 08043
Aug 8, 2016

Walter G Hodges
Berlin, NJ 08009
Aug 8, 2016

Bill Johnston
Voorhees, NJ 08043
Jul 30, 2016

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stephen dobbs
voorhees, NJ 08043
Jul 28, 2016

Al Falkenstein
Waterford Works, NJ 08089
Jul 24, 2016

Beth schmidt
Gibbsboro, NJ 08026
Jul 24, 2016

Susan smith
Voorhees, NJ 08043
Jul 23, 2016

Maybe it is time for a congressional meeting!

Rosana
Voorhees, NJ 08043
Jul 22, 2016

Rosana
Voorhees, NJ 08043
Jul 22, 2016

Mark Wilson
Voorhees, NJ 08043
Jul 22, 2016

Joshua Kumar
Voorhees, NJ 08043
Jul 22, 2016

Alice miller
Stratford, NJ 08084
Jul 22, 2016

Michael Mignogna
Voorhees, NJ 08043
Jul 22, 2016

Our lake is dying, our real estate far below normal values for our area and we are continuing to be exposed to unhealthy chemicals. Make Sherwin Williams dredge our lake now!!!

Alice Johnston
Voorhees Township, NJ 08043
Jul 22, 2016

Superfund sites are dangerous to the community and the environment, thank you for your attention in this matter

William lemmerman
Monroeville, NJ 08343
Jul 22, 2016

Christine Beswick
Voorhees, NJ 08043
Jul 22, 2016