Record of Decision

Unimatic Manufacturing Corporation Superfund Site

Operable Unit 1: Soil Remediation

Fairfield, New Jersey

United States Environmental Protection Agency

Region 2

September 2016

DECLARATION STATEMENT

RECORD OF DECISION

SITE NAME AND LOCATION

The Unimatic Manufacturing Corporation Superfund Site (the site) (#NJD002164796) is located in Fairfield, Essex County, New Jersey. The site consists of the property at 25 Sherwood Lane and portions of 21 Sherwood Lane, 30 Sherwood Lane and the adjacent Jersey City Municipal Utilities Authority property, all of which are located in Fairfield, New Jersey.

STATEMENT OF BASIS AND PURPOSE

This decision document presents the selected remedy to address contaminated soils found on the Unimatic Manufacturing Corporation (Unimatic) property and three adjacent properties. 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 the site.

The New Jersey Department of Environmental Protection (NJDEP) concurs with the selected remedy.

ASSESSMENT OF THE SITE

The remedy selected in the Record of Decision (ROD) is necessary to protect public health or the environment from actual or threatened releases of hazardous substances from the site into the environment.

DESCRIPTION OF THE SELECTED REMEDY

The remedy described in this document represents the first remedial phase, designated as operable unit 1 (OU1) which includes the remediation of the contaminated building, debris and principal threat waste soil found on the Unimatic property and the remediation of contaminated soil on three adjacent properties.

The components of the selected remedy include:

- Demolition of the Unimatic building including the building slab and foundation. The building debris will be segregated based on the level of polychlorinated biphenyls (PCBs) contamination and disposed of at Environmental Protection Agency (EPA) approved offsite landfills (i.e., Toxic Substances Control Act (TSCA) landfills, Resource Conservation and Recovery Act (RCRA) Subtitle C landfills, RCRA Subtitle D landfills (municipal landfills)).

- Contaminated soils exceeding the remediation goals will be excavated. The excavated area would be backfilled with imported clean fill. The ground surface will be restored to the original grade consistent with the surrounding areas. The excavated soil would be segregated in accordance with waste characteristics and properly treated off-site to meet land disposal restrictions (LDRs) and disposed of at EPA approved off-site landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills (municipal landfills)).

- A deed notice will be required for the Unimatic property. The soil cleanup for the contaminated soils at 21 Sherwood Lane, the Jersey City Municipal Utilities Authority (JCMUA) property and 30 Sherwood Lane resulting from the activities at Unimatic may attain the New Jersey Residential Direct Contact Soil Cleanup Standards (NJRDCSCS) and, if these levels are attained, would not require a deed notice. A deed notice would be recorded for the JCMUA property, 21 Sherwood Lane or 30 Sherwood Lane if the NJRDCSCS cannot be attained. The deed notice will limit the properties for non-residential use only and provide a description of contamination remaining on-site, the use restrictions, and a map to show the area for restricted use.
- Five–year reviews will be conducted since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

DECLARATION OF STATUTORY DETERMINATIONS

Part 1: Statutory Requirements

The selected remedy is protective of human health and the environment, complies with federal and state requirements that are applicable or relevant and appropriate to the remedial actions, is cost effective, and utilizes permanent solutions and treatment technologies to the maximum extent practicable.

Part 2: Statutory Preference for Treatment

The selected remedy will satisfy the preference for treatment as a principal element for those soils sent off-site and treated to meet LDRs. However, all contaminated soil exceeding remediation goals will be sent off-site for disposal.

Part 3: Five-Year Review Requirements

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining at levels that would not allow for unlimited/unrestricted use, it will be necessary to perform a statutory review within five years after initiation of the remedial actions to ensure that the remedies are, or will be, protective of human health and the environment.

ROD DATA CERTIFICATION CHECKLIST

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

- Chemicals of concern and their respective concentrations may be found in the "Site Characteristics" section.

- Baseline risk represented by the chemicals of concern may be found in the "Summary of Site Risks" section.

- A discussion of remediation goals may be found in the "Remedial Action Objectives" section.

- A discussion of source materials constituting principal threats may be found in the "Principal Threat Waste" section.

- Current and reasonably anticipated future land use assumptions are discussed in the "Current and Potential Future Site and Resource Uses" section.

- Estimated capital, annual operation and maintenance (O&M) and total present worth costs are discussed in the "Description of Alternatives" section.

- Key factors that led to selecting the remedy (i.e., how the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision) may be found in the "Comparative Analysis of Alternatives" and "Statutory Determinations" sections.

Walter E. Mugdan, Director
Emergency & Remedial Response Division
EPA – Region 2

September 20, 2016
Date

Decision Summary

Unimatic Manufacturing Corporation Superfund Site

Operable Unit 1 – Soil Remediation

Fairfield, New Jersey

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APPENDICES

SITE NAME, LOCATION AND BRIEF DESCRIPTION

The Unimatic property is located at 25 Sherwood Lane, in a primarily light industrial area of Fairfield, New Jersey with residential subdivisions located approximately 800 feet to the northeast (Figure 1). The property covers approximately 1.23 acres and contains a centrally located 22,000-square-foot building and a partially paved parking lot. The Unimatic property is bounded to the northwest by 21 Sherwood Lane, to the northeast by 30 Sherwood Lane, and to the north by the JCMUA property. The JCMUA property is approximately 50 feet wide and contains two large underground water supply utility pipes. The site consists of the property at 25 Sherwood Lane and portions of 21 Sherwood Lane, 30 Sherwood Lane and the JCMUA property, all of which are located in Fairfield, New Jersey (Figure 2).

An underground storm water drain to the north of the Unimatic property feeds an unnamed tributary of Deepavaal Brook. The storm drain, which collects nearly all surficial runoff from the site, flows west to the unnamed tributary and into Deepavaal Brook, which flows for 1.5 miles and empties into the Passaic River. A 2003 NJDEP groundwater classification exception area (CEA) not associated with the site restricts the use of groundwater in the area to non-potable uses.

SITE HISTORY

Unimatic operated an aluminum die casting manufacturing process from 1955 until 2001. The original building was constructed at the center of the property in 1955 and was expanded twice by 1970, resulting in its current size of 22,000 square feet.

The high pressure aluminum die casting process required an aluminum alloy to be heated to approximately 1,200°F in a natural gas-powered kiln. The molten aluminum alloy was then injected into a mold under high pressure. Prior to injecting the molten alloy into the molds, each mold was sprayed with a lubricating oil called a mold releasing agent. The lubricating oil contained mineral spirits or naphtha mixed with a semi-solid product. The lubricating oil prevented the aluminum from adhering to the molds.

Reportedly, the lubricating oil contained PCBs. The lubricating oil was sprayed throughout the shop area and overspray covered the floor and walls to a height of approximately 8 feet. Unimatic reportedly washed the PCB-contaminated oil from the floor and walls into floor trenches, which subsequently conveyed the PCB-contaminated wash water to the wastewater pipes located on the northeastern side of the building. The wastewater pipes consisted of both cast concrete and corrugated perforated steel that leaked contaminated wastewater into the underlying soil and groundwater prior to discharging at the northeast corner of the property. The perforated wastewater pipe resulted in PCB-contaminated water discharging onto 30 Sherwood Lane and the JCMUA property. Reportedly, active PCB use at the site ended in approximately 1979 when PCBs were banned nationwide and when Unimatic also began using commercially-made lubricants instead of mineral spirits to pre-coat the molds in 1987. The wastewater was discharged under a NJDEP National Pollutant Discharge Elimination System (NPDES) permit.

The permit indicated that Unimatic discharged production waste and wastewater through the leaking wastewater pipes from at least 1980 until 1988 at volumes ranging from 16,000 to 86,400 gallons per day. EPA and the NJDEP issued numerous noncompliance and violation notices to Unimatic beginning in 1982; however, Unimatic continued to discharge large volumes of contaminated water through more than 200 feet of leaking wastewater pipe until at least 1988.

In December 2001, GZA GeoEnvironmental, Inc. (GZA), a contractor for Unimatic and under NJDEP oversight, conducted an investigation to determine if the area around the wastewater pipe was contaminated with PCBs. The results of this investigation indicated the presence of PCBs, above the NJNRDCSRS of 1 part per million (ppm), to depths of at least 21 feet below ground surface (bgs) and in the water table, which was encountered at a depth of 18 bgs. In 2001, Unimatic ceased operations and GZA removed the wastewater pipe and purportedly excavated the PCB-contaminated soil down to the water table in the vicinity of the former wastewater pipe.

In April 2002, Unimatic sold the property to Cardean, LLC. Cardean leased the property to Frameware, Inc.

Between 2003 and 2011, GZA reportedly conducted several other soil investigations at the site which resulted in the removal of three above-ground storage tanks and one underground storage tank. In addition, approximately 4,800 tons of PCB-contaminated soil were purportedly excavated and removed from the site during various stages of remediation.

In response to a May 9, 2012 request from NJDEP for a removal action assessment, EPA initiated a removal site evaluation (RSE) to determine if a removal action was warranted at the site. EPA investigations included an extensive surficial soil sampling event and a building interior sampling event for PCBs including sampling of air, concrete chips, building surfaces (walls and floor), dust, and materials from items within the facility. The results of the investigation indicated a release of PCBs to the environment from the building and confirmed that past cleanup efforts at the site had not adequately addressed the PCBs in surface soils. The results of the interior sampling event indicated that the building interior, including the walls and floors, were contaminated with PCBs at levels up to 1,400 mg/kg.

On March 8, 2013, based on EPA's data, the New Jersey Department of Health (NJDOH) issued a letter to NJDEP categorizing the current and future use of the site as a public health hazard and recommended the relocation of the workers. In July 2013, in response to the NJDOH recommendation, Frameware, Inc., vacated the building and moved its operation to a new facility.

Based on the data collected as part of the EPA RSE, along with the site history and the GZA data, a hazard ranking system package was prepared and the site was added to the National Priorities List (NPL) on May 8, 2014.

In April 2015, NJDEP installed a chain link fence around the Unimatic property to secure the site from trespassers.

In June 2015, EPA initiated a RI/FS at the site to determine and fully define the nature and extent of contaminated soil, the contamination found in the building structures/materials, and in the soil beneath the building. A limited groundwater investigation was conducted for the purpose of obtaining preliminary geological and hydrogeological data and to estimate the costs required to remediate the contaminated soil and the building. Sediment and surface water samples were not collected during this investigation. However, a comprehensive groundwater, surface water, and sediment investigation (OU2) is planned to determine the full extent and nature of the groundwater contamination at the site.

HIGHLIGHTS OF COMMUNITY PARTICIPATION

At the completion of the RI/FS for OU1, EPA prepared a Proposed Plan presenting remedial alternatives as well as EPA's preferred remedy. The Proposed Plan and supporting documentation for OU1 were released to the public for comment on July 22, 2016. The Proposed Plan and index for the Administrative Record were made available to the public online, and the Administrative Record files were made available at the EPA Administrative Record File Room, 290 Broadway, 18th Floor, New York, New York; Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey, (973) 882-2700.

On July 22, 2016, EPA published a Public Notice in the Star-Ledger newspaper that contained information about the public comment period, the public meeting for the Proposed Plan, and the availability of the administrative record for the site. The comment period closed on August 22, 2016.

SCOPE AND ROLE OF THIS OPERABLE UNIT

The overall strategy for the site is to remove principal threat waste and prevent human exposure to PCB and pesticide contamination. EPA is addressing the cleanup in two phases, called operable units. This Record of Decision (ROD) addresses OU1: the Unimatic building, PCB and pesticide-contaminated soil on the Unimatic property, the JCMUA property, and on the two adjacent properties (at 21 and 30 Sherwood Lane).

The soil is a continuing source of groundwater contamination and is allowing PCBs and other contaminants to migrate from the site. The contaminated groundwater and sediment will be addressed in OU2; however, addressing the contaminated soil will remove the source of the groundwater contamination.

SITE CHARACTERISTICS

Physical Setting of the Site

The Unimatic property sits at a higher elevation than surrounding properties; topography generally grades from the front (southwest) to the back (northeast), sloping away from the facility in all directions. Most of the runoff on the property flows north, northwest, and northeast toward the adjacent properties at 21 and 30 Sherwood Lane and toward the JCMUA property, which is 6 to 8 feet lower in elevation than the Unimatic property. During heavy rainfall conditions, runoff from the site drains to the JCMUA property and then to a stormwater basin adjacent to the parking lot to the north, which directs stormwater runoff from the site and the adjacent parking lot to the west, discharging to one of the unnamed tributaries of Deepavaal Brook which feeds the Passaic River.

Site Geology and Hydrogeology

Soils at the site are made up of three distinct layers, with a total depth of approximately 30 to 40 feet. From oldest to youngest (bottom to top), the layers encountered include 10 to 12 feet of stratified coarse sands and gravels of glacial origin. Overlying the coarse glacial deposits on the northern half of the site is a 10- to 12-foot thick silty clay unit, which appears to pinch out at the northern edge of the Unimatic building. The youngest and most shallow facies observed on the site consists of 15 to 20 feet of silty sands. Above the silty sand at the site, approximately 2 to 10 feet of sandy fill appears to have been used to level the surface of the Unimatic property. In several areas, the fill is similar to native materials, likely a result of being reworked during site development.

During previous response actions, the site purportedly underwent extensive excavation of PCB-contaminated soils and eventual backfill. Gravelly fill was reportedly brought to the site, but it is likely excavated soils were backfilled into the excavations as well. Underlying the unconsolidated soils is the Preakness Mountain Basalt Formation, which was encountered between approximately 34 to 50 feet bgs.

In the site vicinity, groundwater occurs in both the overlying unconsolidated soils and the underlying Preakness Basalt bedrock. During the investigation, groundwater was encountered between 7 and 15 feet bgs within the unconsolidated soils. Groundwater in both the overburden and bedrock in the area generally flows in a northerly direction toward the Passaic River. Overburden aquifers in the study area are hydraulically connected with the underlying bedrock aquifers. The presence of a shallow clay layer in the northern portion of the site acts as an aquitard, complicating localized groundwater flow.

Nature and Extent of Contamination

The contaminants of concern in the soil at the site are PCBs and pesticides. PCBs were detected in the Unimatic building materials/structures, soil beneath the Unimatic building, soil on the Unimatic property, soil at the JCMUA property, and in soil at 21 and 30 Sherwood Lane. Pesticides were detected mostly in the soil beneath the Unimatic building and on the northeastern side of the building and are co-located with PCBs which is indicative of past releases, misuse, or disposal of pesticides at the site. Figure 3 summarizes the extent of the soils contamination delineated during the RI. Figures 4 and 5 illustrate the PCBs and pesticide concentrations that were detected in the soil.

PCBs were found throughout the Unimatic building with high levels of PCBs encountered in the concrete floors, walls, and on surfaces in rooms where active manufacturing processes took place. The highest concentration of PCBs detected in the building materials, which includes the floor surface, walls, and concrete cores, was 1,900 parts per million (ppm).

Under the building, PCB concentrations exceeding 50 ppm were found in soils ranging from ground surface to just above the water table, primarily underneath the northeastern portion of the building (the former casting room and the former receiving room). This area includes the primary production areas of the building where several floor trenches and pits were located. The highest concentration of PCBs (7,000 ppm) was detected in soil borings beneath the building between 2 and 6 feet bgs.

The former wastewater pipe located in the northeast portion of the site was used to convey PCB-contaminated wastewater from the Unimatic building to the storm water drain located on the JCMUA property. The perforated pipe also leaked PCB-contaminated wastewater into the soil at 30 Sherwood Lane. Soils near the former wastewater pipe contained some of the highest concentrations of total PCBs. The highest PCB concentration in surface soils in the former wastewater pipe area was from 0 to 2 feet bgs at 2,300 ppm. The highest PCB concentration in subsurface soils in this area was observed from 6 to 10 feet bgs at 970 ppm.

The 21 Sherwood Lane property is located on the western side of the Unimatic property. PCB contamination potentially traveled to this property through surface water runoff and PCB particulate deposition from the facility fan vents on the western side of the Unimatic building. Five soil borings were advanced at 21 Sherwood Lane to delineate the western extent of contamination from the Unimatic property. PCBs were detected in 21 of the 28 soil samples collected. Only one sample (0 to 2 feet bgs) on the 21 Sherwood Lane property exceeded the NJNRDCSRS of 1 ppm and it had a concentration of 10 ppm.

Aldrin and dieldrin were the two main pesticides detected above NJNRDCSRS criteria of 0.2 ppm in surface soils (0 to 2 feet bgs) throughout the site and in a third of the samples from 2 to 6 feet bgs. Elevated concentrations include: areas below the northern portion of the facility; the entire eastern side of the Unimatic property, including previously excavated areas adjacent to the property at 30 Sherwood Lane; and north of the building, generally decreasing in concentration moving north. Only dieldrin exceeded the NJNRDCSRS criteria on the JCMUA property. No pesticides exceeded the NJNRDCSRS criteria on the 21 Sherwood Lane property. Although unassociated with elevated risk, several additional pesticides (4,4'-DDE, 4,4'-DDT, alpha- and gamma-chlordane, and lindane) were found in soils at concentrations exceeding New Jersey Impact to Groundwater (IGW) default screening levels and were generally collocated with PCB detections.

Other contaminants detected in the soil at the site include: Semi-volatile compounds and volatile organic compounds. No volatile organic compounds detected exceeded the NJNRDCSRS. Only three polycyclic aromatic hydrocarbons (PAHs) were detected above the NJNRDCSRS. Nearly all were detected on either the 21 Sherwood Lane property or the JCMUA property suggesting that PAHs are not related to the Unimatic property. Manganese (248 ppm) was the only metal detection exceeding the NJNRDCSRS at one location at the site. At the Unimatic property these contaminants are co-located with the PCBs and pesticides so the remediation of the PCBs and pesticides should remediate the other contaminants. However, post-remediation sampling will be collected to ensure that the soil beneath the site meets the remediation goals.

Groundwater samples were collected from eleven (11) overburden and bedrock on-site monitoring wells that were installed by GZA. Total PCBs exceeded the federal groundwater RI screening criterion of 0.039 parts per billion in all monitoring wells, with the exception of monitoring well MW-1.

Further remedial investigations are needed before a remedy can be selected for groundwater and sediment. A comprehensive groundwater, surface water, and sediment investigation is planned to determine the full extent and nature of the groundwater contamination at the site as part of a separate operable unit.

CURRENT AND POTENTIAL FUTURE LAND AND RESOURCE USES

Land Uses

The Unimatic property is situated in a primarily light industrial area of Fairfield, New Jersey with residential subdivisions located approximately 800 feet to the northeast. The site is bounded to the northwest by 21 Sherwood Lane, to the northeast by 30 Sherwood Lane, and to the north by the JCMUA property. Farming and agriculture are nonexistent within the general vicinity. EPA expects that the land-use pattern at and surrounding the Unimatic property will not change.

Groundwater and Surface Water Use

Two aquifers in sedimentary and igneous rock layers beneath the site serve as sources of drinking water for the area. Two residential drinking water wells are in use approximately 0.28 to 0.35 miles to the northeast of the site. Eleven public supply wells, serving more than 20,000 people, are located between 2 and 4 miles from the site. The public supply wells are operated by two municipal water departments, the Verona Water Department and the Essex Fells Water Department. The active public and private drinking water wells within 4 miles of the site range in depth from 55 to 650 feet and withdraw water from both aquifers beneath the site. The direction of groundwater flow in the area is north-northeast toward the Passaic River. Although the groundwater is classified by NJDEP as Class IIA, a potable aquifer, a 2003 NJDEP groundwater CEA not associated with the site restricts the use of groundwater in the area to non-potable uses.

An underground storm water drain to the north of the site feeds an unnamed tributary of Deepavaal Brook. The storm drain, which collects nearly all surficial runoff from the site, flows west to the unnamed tributary and into Deepavaal Brook, which flows for 1.5 miles and empties into the Passaic River. Due to its location behind industrial facilities, Deepavaal Brook is not currently being used for recreational or fishing purposes.

SUMMARY OF SITE RISKS

As part of the RI/FS, EPA conducted a baseline risk assessment to estimate the 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 of releases of hazardous substances from a site in the absence of any actions or controls to mitigate such releases, under current and future land uses. The baseline risk assessment includes a human health risk assessment (BHHRA) and a screening level ecological risk assessment (SLERA). It provides the basis for taking action and identifies the contaminants and exposure pathways that need to be addressed by the remedial action. This section of the ROD summarizes the results of the baseline risk assessment for the site.

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 (COPC) at the site for each medium, with consideration of a number of factors explained below;

- *Exposure Assessment* - estimates the magnitude of actual and/or potential human exposures, the frequency and duration of these exposures, and the pathways by which humans are potentially exposed;
- *Toxicity Assessment* - determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and
- *Risk Characterization* - summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks. The risk characterization also identifies contamination with concentrations which exceed acceptable levels, defined by the NCP as an excess lifetime cancer risk greater than 1 x 10^{-6} to 1 x 10^{-4}, or a Hazard Index greater than 1.0; contaminants at these concentrations are considered chemicals 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, COPCs in each medium were identified based on such factors as toxicity, frequency of occurrence, fate and transport of the contaminants in the environment, concentrations, mobility, persistence and bioaccumulation. The site is located in a primarily industrial and commercial area, with residential subdivisions located nearby to the northeast. Future land use is expected to remain the same. The baseline human health risk assessment began with selecting COPCs in soil that could potentially cause adverse health effects in exposed populations. Risks and hazards from groundwater are being evaluated separately and are, therefore, not presented in this ROD. Groundwater results will be part of future decisions regarding this site. The primary COC driving remedial action is PCB Aroclor 1248, although pesticides including aldrin, dieldrin, heptachlor and heptachlor epoxide slightly contributed as well. Although unassociated with elevated risk, several additional pesticides (4,4'-DDE, 4,4'-DDT, alpha- and gamma-chlordane, and lindane) were found in soils at concentrations exceeding IGW default screening levels and were generally collocated with PCB detections. PAHs and manganese were used in the risk calculations but were within/below the EPA threshold values of 10-6 and 1 for cancer and HI respectively. A comprehensive list of all COPCs can be found in the BHHRA in the Administrative Record. Only risk-driving COCs (Aroclor 1248) are included in Table 1.

Exposure Assessment

Consistent with Superfund policy and guidance, the BHHRA 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.

The site is currently zoned for industrial and commercial use and is connected to the public water supply. It is anticipated that the future land use for this area will remain consistent with current use. The BHHRA evaluated potential risks to populations associated with both current and potential future land uses. Exposure pathways were identified for each potentially exposed population and each potential exposure scenario for surface soil, subsurface soil and indoor air via vapor intrusion. Based on current zoning and anticipated future use, the risk assessment focused on a variety of current and future possible receptors, which include:

- Commercial/Industrial Workers: adults who primarily work outdoors on commercial/industrial properties and might be exposed through incidental ingestion of, and dermal contact with, surface soil as well as inhalation of wind-generated particulates released from surface soil and inhalation of indoor air via vapor intrusion.
- Trespassers: adults who might be exposed through incidental ingestion of, and dermal contact with, surface soil as well as inhalation of particulates and vapors from surface soil.
- Construction/Utility Workers: adults who may perform short-term intrusive work for construction or utility installation, maintenance, or repair and might be exposed through incidental ingestion of, and dermal contact with, soil and inhalation of mechanically-generated particulates released from surface and subsurface soil.

Adult exposure scenarios were solely evaluated in the HHRA since the site and immediately adjacent properties are industrial. Therefore, child or adolescent receptors are not assumed to be present. In addition, exposure assumptions used to calculate hazard and risk to the adult site worker are more conservative than the adolescent trespasser scenario. It is, therefore, understood that the selected alternative proposed to limit health risks to the adult site worker would also be protective of an adolescent trespasser.

A summary of the exposure pathways included in the BHRRA can be found in Table 2. Typically, exposures are evaluated using a statistical estimate of the exposure point concentration, which is usually an upperbound estimate of the average concentration for each contaminant, but in some cases may be the maximum detected concentration. A summary of the exposure point concentrations for the COCs in each medium can be found in Table 1, while a comprehensive list of the exposure point concentrations for all COPCs can be found in the BHHRA.

<u>Toxicity Assessment</u>

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 noncarcinogenic 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 human health risk assessment 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's directive on toxicity values. This information is presented in Table 3 (non-carcinogenic toxicity data summary) and Table 4 (cancer toxicity data summary). Additional toxicity information for all COPCs is presented in the BHHRA.

Risk Characterization

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

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

HQ = Intake/RfD

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

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

As previously stated, the HI is calculated by summing the HQs for all chemicals for likely exposure scenarios for a specific population. An HI greater than 1.0 indicates that the potential exists for noncarcinogenic health effects to occur as a result of site-related exposures, with the potential for health effects increasing as the HI increases. When the HI calculated for all chemicals for a specific population exceeds 1.0, separate HI values are then calculated for those chemicals which are known to act on the same target organ. These discrete HI values are then compared to the acceptable limit of 1.0 to evaluate the potential for noncarcinogenic 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 non-carcinogenic hazards associated with these chemicals for each exposure pathway is in Table 5.

As seen in Table 5, the potential for adverse, noncarcinogenic health effects were indicated for each exposure pathway evaluated, including:

- Adult industrial/commercial workers and trespassers attributable to PCB Aroclor 1248 in surface soil.
- Adult construction workers attributable to PCB Aroclor 1248 in surface and subsurface soil.

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

Risk = LADD x SF

Where: Risk = a 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 assessment. Again, as stated in the NCP, the acceptable risk range for site-related exposure is 1×10^{-6} to 1×10^{-4}.

As shown in Table 6, total carcinogenic risks for COCs greater than 1×10^{-4} were estimated for adult industrial/commercial workers predominantly attributable to PCB Aroclor 1248 in surface soil. Cancer risks estimated for the adult trespasser and construction worker receptors were less than, or within, the acceptable risk range established by the NCP.

The qualitative screening level evaluation, conducted as part of the BHHRA, indicated that the potential for vapor intrusion exists within the Unimatic building. Indoor air samples collected in October 2012, and analyzed for PCB Aroclors, were compared to vapor intrusion screening levels (VISLs) based on a cancer risk of 1×10^{-6} and a HQ of 1 for commercial buildings. Aroclor 1242 was the only detected Aroclor exceeding the respective VISL and was further identified at levels exceeding a cancer risk of 1×10^{-4}, thus indicating that current and future workers may be exposed via inhalation of vapor emanating into ambient air via vaporization from contaminated building materials. A comparison of the vapor intrusion sampling results with the VISLs can be found in Table 7. Further discussion of the indoor air results can be found in Section 6.3 of the BHHRA.

In summary, the results of the BHHRA indicate that there are significant carcinogenic risks and noncarcinogenic health hazards to potentially exposed populations from the ingestion of, and dermal contact with, site soils. In addition, workers may further be exposed to elevated PCB concentrations in air via the inhalation of vapor emanating into ambient air via vaporization from contaminated building materials. Site worker, trespasser, and construction worker exposure to PBCs in site soils results in either an excess lifetime cancer risk that exceeds the acceptable risk range established by the NCP or an HI above the acceptable level of 1, or both. The noncarcinogenic hazards and carcinogenic risks from all COPCs can be found in the BHHRA.

The response action selected in the Record of Decision 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; and,
- Toxicological data.

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

Uncertainties in the exposure assessment are related to estimates of how often an individual would actually come in contact with the chemicals of concern, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the chemicals of concern at the point of exposure.

Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the risk assessment provides upper-bound estimates of the risks to populations at the site, and is highly unlikely to underestimate actual risks related to the site.

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

As a part of the RI, a SLERA was conducted to evaluate the potential for risk to ecological receptors from the contaminated soil. As part of this assessment, an ecological reconnaissance was performed at the site to characterize and identify potential habitat and biota. Also, the maximum concentrations of the contaminants in surface soil at the site were compared to ecological screening levels (ESLs) to derive a screening level hazard quotient (HQ). If resultant

HQs are greater than unity (1), risk is implied. An HQ less than 1suggests there is a high degree of confidence that minimal risk exists and, therefore, are considered insignificant.

The comparisons of maximum detected concentrations of chemicals in surface soil to conservative ESLs resulted in potential ecological risk. Specifically, HQs greater than unity were calculated for PCBs, semi-volatile organic compounds (SVOCs), pesticides, and metals. However, the ecological reconnaissance conducted at the site concluded that the site has limited vegetation and wildlife and little to no viable habitat to support ecological receptors.

The site and the surrounding area are primarily light-industrial, and based on observations made during the ecological reconnaissance, no ecological function is expected. Additionally, the site is not managed for ecological use and does not appear to offer any appreciable ecological attractiveness. All of these findings indicate that ecological risks at the site are negligible. Thus, it is recommended that no further ecological investigation is warranted to evaluate the potential for risks to ecological receptors from exposure to contaminants at the site.

REMEDIAL ACTION OBJECTIVES

Remedial action objectives (RAOs) are specific goals to protect human health and the environment. These objectives are based on available information and standards, such as applicable or relevant and appropriate requirements (ARARs), to-be-considered (TBC) guidance, and site-specific, risk-based levels.

The following RAOs address the human health risks posed by contaminated soil at the site:

- Reduce or eliminate human exposure via inhalation, incidental ingestion, and dermal absorption to contamination present within the site building.
- Reduce or eliminate the human exposure threat via inhalation, incidental ingestion, and dermal adsorption to contaminated site soils to levels protective of current land and anticipated future use.
- Prevent/minimize the migration of site contaminants off-site through surface runoff and storm sewer discharge.
- Prevent/minimize the migration of contamination in soil to groundwater and sediment.

In order to meet the RAOs, the Unimatic building will need to be demolished. The building is unusable due to the presence of PCBs inside the building and the associated inhalation risk by future workers or other occupants.

Although the building is currently unoccupied, there is a threat of release to the environment posed by the uncontrolled PCBs inside the building due to fire or other outside causes. Left unattended, the building will deteriorate and fall into disrepair increasing the likelihood of a release to the environment. In addition, the building covers approximately 40% of the 1.23-acre Unimatic property. A significant portion of the soils contamination, including principal threat waste, is located underneath the building and could not be remediated without demolition of the building.

The lack of space on the Unimatic property without demolition of the building would make implementation of any of the potential remedial alternatives very difficult or impossible. In order to mitigate these risks, address the contamination including the principal threat waste beneath the building, and meet RAOs identified for the site, it will be necessary to demolish the building.

Demolition of the building will prevent human exposure to building contaminants and will prevent the migration of contamination sources to the environment through off-site disposal of the contaminated building materials.

REMEDIATION GOALS

The aim of remediation goals is to meet ARARs and eliminate exposure to contaminants of concern such that human health and the environment are adequately protected. This can be achieved by eliminating exposure pathways or reducing contaminant concentrations to levels that are accepted to be adequately protective of human health and the environment. Remediation goals were selected by review of state and federal laws, regulations, and guidance documents, as well as by evaluating risks identified in the screening-level risk assessment.

The criteria used to determine the remediation goals at the site are the NJDEP NJNRDCSRS, as defined in NJAC 7:26D, which are based on human health-based criteria for ingestion-dermal exposure pathways and the site-specific impact to groundwater (IGW) pathway remediation standard. The remediation goals for cleaning up the contaminated soil are listed below:

Chemical of Concern	**Remediation goals (ppm)**	**Criteria**
Total PCBs (including Aroclor 1248 and 1254)	1.00	NJNRDCSRS
4,4'- dichlorodiphenyldichloroethene	9	NJNRDCSRS
4,4' - dichlorodiphenyltrichloroethane	8	NJNRDCSRS
Aldrin	0.2	NJNRDCSRS
Chlordane (alpha (cic) and gamma)	1.00	NJNRDCSRS
Dieldrin	0.03	IGW
Heptachlor	0.7	NJNRDCSRS
Heptachlor epoxide	0.3	NJNRDCSRS
Lindane	0.002	IGW

DESCRIPTION OF ALTERNATIVES

CERCLA Section 121(b)(1), 42 U.S.C. § 9621(b)(1), requires that each selected site 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 practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

Potentially applicable technologies were identified and screened with emphasis on the effectiveness of the remedial action. Those technologies that passed the initial screening were then assembled into five remedial alternatives. In addition, the no-action alternative was evaluated. The timeframes below for construction do not include the time for designing the remedy or the time to procure necessary contracts.

The six alternatives developed for the site are listed below.

- Alternative 1 – No Action
- Alternative 2 – Excavation of Soils above 10 ppm PCBs to Water Table and Off-site Disposal, and In Situ Solidification/Stabilization and Capping of Remaining Soils above Remediation goals
- Alternative 3 – In Situ Solidification/Stabilization and Capping of Soils above Remediation goals
- Alternative 4 – Excavation of Soils above Remediation goals, and Off-site Disposal
- Alternative 5 – Excavation and Onsite Treatment of Soils above Remediation goals, and Backfill of Treated Material
- Alternative 6 – Targeted Excavation, and Off-site Disposal

Common Elements

The common elements included as part of Alternatives 2 through 6 are described below:

Demolition of Unimatic building - To prevent exposure to PCBs from the building and to remediate soil contamination including the principal threat waste located beneath the building, the building will be demolished, including the building slab and foundation. The debris will be segregated based on the level of PCB contamination. PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be managed in accordance with TSCA regulations. Therefore, building materials with PCB concentrations > 50 ppm would be disposed of in a TSCA landfill; building materials with PCB concentrations < 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the building debris would be treated off-site to meet land disposal restrictions (LDRs).

30 Sherwood Lane, JCMUA property, and 21 Sherwood Lane soils remediation - For the 30 Sherwood Lane, JCMUA and 21 Sherwood Lane properties, contaminated soil resulting from Unimatic activities that exceed remediation goals will be removed to eliminate the direct contact risks, and the excavated area will be backfilled with imported clean fill. Removal of the soil contamination within the JCMUA pipeline easement would also prevent contaminant migration through surface runoff to the stormwater inlet.

Institutional Controls – A deed notice will be required for the Unimatic property. Based on the small volume of contaminated soil found at 21 Sherwood Lane, the JCMUA property and 30 Sherwood Lane resulting from the activities at Unimatic, EPA expects to meet the NJRDCSCS. However, a deed notice will be recorded for the JCMUA property, 21 Sherwood Lane or 30 Sherwood Lane if the NJRDCSCS cannot be attained. The deed notice will limit the properties for non-residential use only and provide a description of contamination remaining on-site, the use restrictions, and a map to show the area for restricted use.

Five Year Reviews - Five–year reviews will be conducted for all alternatives, except the no action alternative, since contamination would remain above levels that allow for unlimited use and unrestricted exposure.

For the cost estimates of each alternative, the FS assumed 30 years to implement the remedy, including the active and passive (long-term management) phases of the cleanup. The time required to achieve the soil remediation and meet RAOs is less than 30 years for all of the alternatives and only monitoring costs for the alternatives that require long-term monitoring would have a cost estimate beyond the time required to achieve the soil remediation standard.

The approximate dimension of the areas to be remediated can be found in Figure 3.

Alternative 1 - No Action

No work would be conducted under the No Action alternative. The No Action alternative was retained in accordance with the NCP to serve as a baseline for comparison with the other alternatives.

Total Capital Cost: $0
Operation and Maintenance: $0
Total Present Net Worth: $0
Estimated Construction Timeframe: 0 year

Alternative 2 – Excavation of Soils above 10 ppm PCBs to Water Table and Off-site Disposal, and In Situ Solidification/Stabilization (ISS) and Capping of Remaining Soils above Remediation goals

This alternative includes excavation of vadose zone contaminated soils. The contaminated soils exceeding 10 mg/kg of PCBs would be excavated to the water table (15 feet bgs). The value of 10 ppm was selected in accordance with EPA PCB guidance and is at the lower commercial/industrial PCB concentration recommended. It would represent a “hot spot” approach and would leave PCB-contaminated soils above the NJNRDCSRS of 1 ppm for commercial/industrial properties. In addition to the PCBs and pesticides, this alternative would also remediate the other co-located contaminants. However, post-remediation sampling will be conducted to ensure that the soil beneath the site meets the remediation goals. Due to the limited space and that the excavation would be conducted to neighboring property boundaries at depth, sheet piles would be used to support the excavation as necessary.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the toxicity characteristic leaching procedure (TCLP) test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TSCA-regulated landfill; soil with PCB concentrations less than 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet LDRs.

For FS cost-estimating purposes and based on RI data, it is assumed that approximately 1,000 cubic yards (cy) or 1,400 tons of the excavated soils would be considered hazardous waste and disposed of off-site. The remaining contaminated soil exceeding the remediation goals (PCB concentrations between 1 and 10 mg/kg and pesticides exceeding the remediation goals) would be consolidated into the excavation areas to level the excavated areas and prepare the areas for ISS.

Based on the volume estimates, approximately 10,000 cy of contaminated soil would be excavated for off-site disposal, and approximately 8,000 cy of contaminated soil would be consolidated into the excavated areas for treatment.

ISS is implemented either through soil mixing with an auger or jet grouting. Soil mixing with an auger is usually performed by a crane-mounted drill attachment that turns an auger with mixing blades. The treated column is generally 6 to 12 feet in diameter.

Soil volume will generally increase during treatment through expansion of ISS additives, such as kiln dust, fly ash, or bentonite. A bench scale treatability study would be conducted to determine the composition and the appropriate additive for the ISS treatment. As a result, the excavated/consolidated areas would need to be a few or several feet below grade prior to the ISS treatment. After consolidation, post-excavation samples would be collected as necessary to verify that the remediation goals have been met for areas that would not be treated with ISS. After completion of ISS, a 1-foot compacted soil cap would be placed on top of the ISS-treated area to eliminate the direct contact risks.

Annual inspection of the soil cap would be performed to ensure continued protection of human health from direct contact risks. The soil cap would be maintained as necessary. Groundwater samples would be collected from monitoring wells periodically to monitor if contaminants would leach over time.

Total Capital Cost: $13.9 million
Operation and Maintenance: $668,000
Total Present Net Worth: $14.3 million
Estimated Construction Timeframe: 1 year

Alternative 3 – In Situ Solidification/Stabilization and Capping of Soils above Remediation goals

Under this alternative, no soils would be excavated from the site for off-site disposal. All soils with COC concentrations exceeding remediation goals of 1 ppm of PCBs would be treated using ISS technology. In addition to the PCBs and pesticides, this alternative would also remediate the other co-located contaminants. Different equipment may be used for ISS of soil at different depths. The operation of ISS would be as described under Alternative 2. After completion of ISS, a 1-foot compacted soil cap would be placed on top of the ISS-treated area to eliminate the direct contact risks. It should be noted that after ISS treatment, the soil volume would increase, and the final grade at the treated area would be higher than the original grade. The site would be graded for positive drainage.

Annual inspection of the soil cap would be performed to ensure continued protection of human health from direct contact risks. The soil cap would be maintained as necessary. Groundwater samples would be collected from monitoring wells periodically to monitor if contaminants would leach over time.

Total Capital Cost: $6.1 million
Operation and Maintenance: $668,000
Total Present Net Worth: $6.4 million
Estimated Construction Timeframe: 1 year

Alternative 4 –Excavation of Soils above Remediation goals and Off-site Disposal

Under this alternative, contaminated soils exceeding the remediation goals would be excavated. Dewatering would be necessary for excavation below the water table; sheet piling would be used for deep excavation support. Water generated from dewatering of excavation areas would be treated on-site and discharged to the stormwater system. An NJDEP pollution discharge elimination system/discharge to surface water permit equivalent would be obtained. Post-excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the TCLP test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TSCA-regulated landfill; soil with PCB concentrations less than 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet LDRs.

Total Capital Cost: $ 18.1 million
Operation and Maintenance: $0
Total Present Net Worth: $18.1 million

Estimated Construction Timeframe: 1.5 years

Alternative 5 – Excavation and Onsite Treatment of Soils above Remediation goals, and Backfill of Treated Material

Implementation of this alternative would be similar to Alternative 4 except that excavated soils would be treated on site using a low temperature thermal desorption (LTTD) system, with additional treatment implemented to address contaminants in the gas being released from the thermal treatment of the soil (off-gas). Since the off-gas would contain hazardous chemicals, residuals from off-gas treatment would be treated or disposed of at a permitted waste disposal facility. The treatment is expected to reduce contamination concentrations to meet the remediation goals. Following treatment, soils would be backfilled on-site in accordance with EPA and NJDEP site remediation regulations. Additional imported clean fill would be brought on-site to complete the remedial action as necessary. Due to the limited space, excavation, thermal desorption, and backfill would need to be sequenced in several phases in order to treat all the soils above the remediation goals. For the operation of the on-site LTTD units, permit equivalents for air emission and for liquid waste disposal would be obtained as necessary.

Total Capital Cost: $15.1 million
Operation and Maintenance: $0
Total Present Net Worth: $15.1 million
Estimated Construction Timeframe: 2 years

Alternative 6 –Targeted Excavation and Off-site Disposal

This alternative is very similar to Alternative 4 except that excavation of contaminated soils below the water table would only be targeted to 10 times the remediation goals and would represent a "hot spot" cleanup approach as discussed for Alternative 2.

Under this alternative, contaminated soils above the water table that exceed the remediation goals would be excavated. Below the water table, excavation would be limited to those soils with COC concentrations exceeding 10 times the remediation goals (e.g., above 10 ppm PCBs). Dewatering would be necessary for excavation below the water table; sheet piling would be used for deep excavation support. Water generated from dewatering of excavation areas would be treated on-site and discharged to the stormwater system. An NJDEP pollution discharge elimination system/discharge to surface water permit equivalent would be obtained.
Post excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas. Alternative 6 leaves approximately 5,000 cy of contaminated soil in place.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the toxicity characteristic leaching procedure (TCLP) test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TSCA-regulated landfill; soil with PCB concentrations less than 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet LDRs.

Total Capital Cost: $ 16.4 million
Operation and Maintenance: $0
Total Present Net Worth: $16.4 million
Estimated Construction Timeframe: 1 year

COMPARATIVE ANALYSIS OF ALTERNATIVES

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

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.*

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*.

Alternative 1 would not provide protection of human health and the environment. Alternative 6 would address direct contact and surface water runoff RAOs but would not address the impact to groundwater RAO as residual contaminated soil would continue to impact the groundwater quality.

Alternatives 2 to 5 would provide overall protection of human health and the environment. Alternatives 2, 3, and 4 would prevent further migration of COCs to groundwater, off-site surface water, and sediment by minimizing the availability of contaminants to the environment through ISS or removal and off-site disposal. Alternative 5 would prevent further migration of COCs to groundwater and off-site surface water by removing contaminants from soil via LTTD, with additional treatment implemented to address contaminants in the gas being released from the thermal treatment of the soil (off-gas). Under Alternative 6, some soils exceeding remediation goals would remain below the water table and would continue to impact the groundwater quality due to leaching of the contaminants.

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

Section 121(d) of CERCLA and NCP §300.430(f) (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, addresses 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 address 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.*

A complete list of ARARs can be found in Table 8 in Appendix I

Because no action would be taken under Alternative 1, the presence of unaddressed contaminated soil would not meet chemical-specific ARARs, and the presence of PCB contamination in the building would not meet TSCA requirements for re-using the building. Alternatives 2, 3, and 4 would meet chemical-specific ARARs (TSCA PCB Remediation Waste (40 Code of Federal Regulations Part 761.61)) and NJNRDCSRS through removal/off-site disposal and/or ISS of soils with COC concentrations exceeding remediation goals. Alternative 5 would meet the chemical-specific ARARs for soils through LTTD treatment of excavated soils prior to backfilling the treated material on-site. For Alternatives 2 and 3, meeting the chemical-specific ARARs would be dependent on developing an effective ISS mix for solidifying the COCs during treatability testing. For Alternative 6, soils with COC concentrations exceeding remediation goals that remain below the water table would not meet the IGW remedial goal (a "To Be Considered" criterion). All alternatives except the no action alternative would meet action and location-specific ARARs.

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

3. Long-Term Effectiveness and Permanence

Long-term effectiveness and permanence refers to expected residual risk and the ability of a remedy to maintain reliable protection of human health and the environment over time, once 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 would provide no long-term effectiveness and permanence because no action would be taken. Risks from the site contaminants would remain the same.
Alternative 4 would provide the highest degree of long-term protectiveness and permanence because contaminated building debris and soil above the remediation goals, including the principal threat waste (concentrations greater than or equal to 500 ppm total PCBs), would be removed from the site. Alternative 5 would also provide a high degree of long-term effectiveness and permanence through the irreversible treatment of contaminated soil, including the principal threat waste to meet the remediation goals prior to backfilling the treated material on-site.

Alternatives 2 and 3, which both involve ISS of contaminated soil, would respectively provide moderate and low to moderate long-term effectiveness and permanence. While ISS has been successfully implemented at many sites and is considered a reliable technology to immobilize organic COCs such as PCBs, toxicity would not be reduced and volume would increase. Alternative 3 would leave the largest amount of residual contamination, including the principal threat waste, behind; while Alternative 2 would leave the second largest amount of residual contamination behind, but all principal threat waste would be removed under Alternative 2. As a result, placement and long-term inspection, monitoring and maintenance of a soil cap to eliminate or minimize residual risks from the treated soil would be required as part of these alternatives.

Long-term effectiveness and permanence of Alternatives 2 and 3 also would be dependent on the development of an effective ISS mix to address both PCBs and pesticides. In addition, because groundwater is contaminated with VOCs, the potential long-term impact of that groundwater on the stabilized materials would need to be assessed as part of the development of the ISS mix which creates uncertainty with respect to the long-term effectiveness and permanence.

Alternative 6 would not provide long-term effectiveness and permanence because untreated soil above remediation goals would remain below the water table. Further remedial action would be required to address the residual contaminated soil that would remain under Alternative 6.

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.

Because no action would be taken, Alternative 1 would not address this criterion.
Alternative 5 would be rated high for this criterion. Thermal desorption is an irreversible treatment process, and there would be high reductions in toxicity, mobility, and volume of contaminated soil treated thermally. Alternative 5 satisfies the statutory preference for treatment

as a principal element of the remedial action and uses treatment to address soils exceeding remediation goals, including those soils defined as principal threat waste.

Alternatives 2, 3 and 4 would all be rated moderate for this criterion. Like Alternative 5, Alternative 3 satisfies the statutory preference for treatment as a principal element of the remedial action and uses treatment to address soils exceeding remediation goals, including those soils defined as principal threat waste.

Under Alternative 3, the mobility of COCs in the treated soil would be greatly reduced, however, toxicity would not change and the volume of the ISS-treated soils would likely be greater than the pre-treated soils due to the addition of the stabilization agent. In addition, the irreversibility of the ISS treatment process would be dependent on developing an effective ISS mix for stabilizing the COCs and withstanding the potential long-term impact of VOC-contaminated groundwater (if any) on the stabilized materials.

Alternative 2 uses ISS to treat those soils with PCB concentrations above 1 mg/kg that remain after excavation of soils above the water table with PCB concentrations greater than 10 mg/kg. Hence, relative to Alternatives 3 and 5, Alternative 2 would only partially meet the statutory preference for treatment. In addition, all the soils defined as principal threat waste would be addressed by excavation and off-site disposal, not treatment.

Under Alternatives 2, 4, and 6 for debris and soils removed for off-site disposal that are deemed hazardous under these alternatives, reduction of toxicity and mobility would occur through treatment at a RCRA permitted treatment/disposal facility to meet RCRA treatment standards. However, it is anticipated only a small volume of contaminated soil would exceed the hazardous waste criterion; the majority of the wastes would be disposed of in EPA approved off-site landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills, municipal landfills). This would reduce the mobility of the waste, including the soil defined as principal threat waste through containment. Toxicity and volume would not be changed.

Alternative 6 would not achieve the same level of reduction in mobility as Alternative 4 because it would leave approximately 5,000 CY of untreated contaminated soil behind at the site.

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.

Alternative 1 would not have any impacts to the community and workers because no action would be taken. The remaining alternatives, to varying degrees, would result in short-term risks to the community and potential impact on workers carrying out the remedial action. This is due in part not only to the nature of the activities that would be conducted for each alternative, but also because those activities in some cases would be required in a very small footprint (approximately 1.23 acres) that would present significant implementation challenges.

Alternative 5 would require the largest amount of space to effectively carry out all components of the alternative (i.e., excavation, dewatering operation, staging, treatment and backfill operations). As a result, Alternative 5 would likely cause the greatest level of short-term risk to the community and potential impact to workers due to the need to safely manage and conduct significant excavation, dewatering, ex situ treatment, and backfill operations in a very small space. Heavy construction activities would require implementation of dust control measures and stormwater runoff control. Excavation below the water table would pose significant challenges because of dewatering requirements and water treatment operations.

Vibration from installation of sheet piling to support deep excavation needs to be very carefully conducted so that there is no impact to the integrity of the nearby JCMUA pipelines, which provides a drinking water supply. In addition, air monitoring would be required to reduce risks to workers and the community from fugitive emissions during construction and remediation. Potential risk to remediation workers associated with direct contact with contaminated material would be mitigated through the use of personal protective equipment and standard health and safety practices.

In addition to short-term risk to the community and potential impact to workers associated with construction activities, Alternative 5 also presents additional risks and impacts related to the use of thermal treatment. Thermal treatment has high energy demands, which would require additional power to be delivered to the site. Higher capacity and high voltage electrical power lines would likely need to be installed to supply the electrical needs of the thermal treatment system and would pose a short-term risk to workers. Off-gas releases from thermal treatment system also could occur and would need to be mitigated through air treatment and monitoring to reduce risks to workers and the community.

Alternatives 2, 3, 4, and 6 would have risks and impacts associated with heavy construction activities associated with excavation, ISS treatment, and/or off-site disposal. All four alternatives would temporarily increase particulate emissions and would require the implementation of dust control measures, stormwater runoff control, and air monitoring to reduce risks to the community and workers.

Alternative 4 would require the largest amount of soils to be excavated and shipped off-site and would therefore have the bigger impact to the community because of truck traffic associated with trucks hauling contaminated debris and soil away from the site and trucks hauling backfill material to the site. Because Alternative 6 would require the excavation of a smaller amount of contaminated soil than Alternative 4, it would be expected to pose slightly less of an impact to the community and workers. Like Alternative 5, both Alternatives 4 and 6 would require excavation below the water table.

For Alternative 3, like Alternatives 2, 4 and 5, vibration from installation of sheet piling to support deep excavation needs to be very carefully conducted so that there is no impact to the integrity of the nearby JCMUA pipelines, which provide a drinking water supply.

Alternatives 4, 5, and 6 would require dewatering of soils excavated from below the water table and, therefore, add an additional waste stream to manage within the compact site footprint.

Water generated from dewatering of excavation areas would need to be treated on-site and discharged to the stormwater system.

Alternatives 2 and 3 would have slightly less short-term impacts to the workers and the community, when compared to Alternatives 4 and 6. Alternative 2 would require less excavation and off-site disposal than Alternatives 4, 5 and 6; however, it includes an ISS component that would contribute to construction-related short-term risk.

Alternative 3 would likely have the smallest impact to the community because all contaminated soils would be addressed on the site via ISS meaning minimal truck traffic-related concerns relative to the alternatives that include significant excavation components. However, Alternative 3 could still require some excavation (or an alternate more expensive and time-consuming jet grouting process) if, after building demolition, any subsurface structures (e.g., foundations, column piers, concrete/steel pipes, or other obstructions) remain and must be removed before ISS can proceed.

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.

Alternative 1 would be the easiest to implement since it involves no action. Each of the remaining alternatives, will need to be conducted in a very small footprint (approximately 1.2 acres) and this would present significant implementation challenges. Alternative 5 would be the most difficult alternative to implement. This is because it would require excavation (of approximately 26,000 cy of soil), ex-situ treatment, and backfilling of treated soil and additional clean fill to occur almost concurrently within a footprint of less than 1.2 acres. In addition, Alternative 5 would also need to meet substantive requirements of permitting related to assembly and construction of the thermal treatment unit as well as permitting for the release of treated off-gas emissions. The technical challenges in meeting the substantive requirements of an air permit equivalency may be difficult.

Alternatives 4 and 6 would require the excavation of 26,000 CY, and 21,000 CY, respectively, of contaminated soil for off-site disposal. While these alternatives do not include an on-site treatment component, they would require dewatering of soils excavated from below the water table and onsite treatment of the water before discharge to the stormwater system. In addition, the excavated soils would need to be sufficiently segregated based on characterization data into different stockpiles based on the ultimate disposition of the different categories of soil. The need to undertake all these components in the small site footprint could make Alternatives 4 and 6 only slightly less challenging then Alternative 5. However, the advantage offered by Alternatives 4 and 6 over Alternative 5 is that they could be implemented in phases, sequentially, in small portions of the site, without the need to consider excavation rates and locations relative to the input and output rates of the thermal treatment unit employed under Alternative 5. Therefore, Alternatives 4 and 6 are considered more implementable than Alternative 5.

Alternative 2 would require sufficient space to segregate excavated soils for appropriate off-site disposal based on characterization data. Alternatives 2 would be dependent on developing an effective in-situ stabilization/in-situ solidification (ISIS) mix. This would require testing the long-term effectiveness of in-situ treated PCB and pesticide contaminated soils in contact with groundwater highly contaminated with volatile organic compounds (VOCs). VOCs negatively impact curing, material physical properties and long-term permanence of the ISIS matrix. This could require extensive treatability testing that likely would delay implementation of the remedy and if unsuccessful require remedy revision. Nonetheless, Alternative 2 would be easier to implement than Alternatives 4 and 6.

The performance tests and ISS treatability studies also would be required for Alternative 3. Because Alternative 3 would use ISS to treat all soils with contaminant levels above remediation goals the impact of an increase in volume caused by the ISS treatment process would be greater under Alternative 3 than Alternative 2 and may cause an unacceptably large change to site elevations. Alternatives 3 and 2, respectively, would leave the largest and second largest amount of contaminants behind and the presence of the stabilized material, particularly for Alternative 3, would limit options for future re-use of the site. Both Alternatives 2 and 3 would require ongoing inspection, maintenance, and monitoring activities of the soil cap placed over the ISS-treated soils. These activities could be easily implemented using available materials, equipment, and labor resources.

7. Cost

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

A 7% discount rate was used.to estimate the costs for each alternative. Alternative 1 costs $0 and Alternative 2 costs $14.3 million. Alternative 3 is the least expensive of the active remedial alternatives at $6.4 million. The cost of Alternative 4 is $18.1 million. Alternative 5 will cost $15.1 million. The cost of Alternative 6 is $16.4 million.

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

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 all components of the selected remedy.

9. Community Acceptance

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

EPA solicited input from the community on the remedial response measures proposed for the site. Oral comments presented at the public meeting were recorded, and EPA received written comments during the public comment period, which was also extended. The Responsiveness Summary addresses all public comments received by EPA during the public comment period.

Overall, the community members, elected officials and stakeholders with the exception of Unimatic were in favor of EPA's recommended alternative.

PRINCIPAL THREAT WASTE

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 groundwater, surface water or air, or acts as a source for direct exposure. 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. EPA's August 1990 guidance, entitled: "A Guide on Remedial Actions at Superfund Sites with PCB Contamination," states that principal threats will include soils contaminated at industrial sites at concentrations greater than or equal to 500 ppm total PCBs. 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. In accordance with the EPA guidance, treatment alternatives are considered for the principal threat wastes at the site. In instances where treatment is not implementable, other methods such as removal or containment that significantly reduce or eliminate the risks due to principal threat wastes are considered.

The areas of the site, with the highest soil contamination are located under the Unimatic building, along the eastern side of the property and on the adjacent 30 Sherwood Lane property. The highest detected PCB concentration of 7,000 ppm, is an order of magnitude above the principal threat waste guidance value. This highly contaminated soil poses direct contact risks to human health (risks for current and future workers are greater than EPA's target cancer risk range under the reasonable maximum exposure (RME) scenario, and risks for current and future workers, construction workers and trespassers exceed EPA's target noncancer risk under the RME scenario) and also acts as a continuous source of groundwater contamination.

SELECTED REMEDY

Based upon consideration of the results of the site investigations, the requirements of CERCLA, the detailed analysis of the response measures, and public comments, EPA has determined that Alternative 4: Excavation of Soils above Remediation goals and Off-site Disposal is the appropriate remedy for the contamination found in the soil on the Unimatic property, inside and beneath the Unimatic building, and the three adjacent properties, because it best satisfies the requirements of Section 121 of CERCLA, 42 U.S.C. § 9621, and the NCP's nine evaluation criteria for remedial alternatives, 40 CFR § 300.430(e)(9). The major components of the selected remedy include:

- Demolition of the Unimatic building including the building slab and foundation. The building debris will be segregated based on the level of PCBs contamination and disposed of at EPA approved offsite landfills TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills (municipal landfills)).

- Contaminated soils exceeding the remediation goals will be excavated. The excavated area would be backfilled with imported clean fill. The ground surface will be restored to the original grade consistent with the surrounding areas. The excavated soil would be segregated in accordance with waste characteristics and properly treated off-site to meet LDRs and disposed of at EPA approved off-site landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills (municipal landfills)).

- A deed notice will be required for the Unimatic property. The soil cleanup for the contaminated soils at 21 Sherwood Lane, the Jersey City Municipal Utilities Authority (JCMUA) property and 30 Sherwood Lane resulting from the activities at Unimatic may attain the NJRDCSCS and, if these levels are attained, would not require a deed notice. A deed notice would be recorded for the JCMUA property, 21 Sherwood Lane or 30 Sherwood Lane if the NJRDCSCS cannot be attained. The deed notice will limit the properties for non-residential use only and provide a description of contamination remaining on-site, the use restrictions, and a map to show the area for restricted use.

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

Alternative 4 was chosen as the selected remedy for contaminated soil because it would provide the highest degree of long-term protectiveness and permanence. All contaminated building debris and all contaminated soil associated with the principal threat waste would be removed from the site and the excavated area would be backfilled with clean soil.

Summary of the Rationale for the Selected Remedy

The selection of Alternative 4 is believed to provide the best balance of trade-offs among the alternatives with respect to the evaluation criteria. EPA and NJDEP concur that the selected alternative will be protective of human health and the environment, complies with federal and state requirements that are legally applicable or relevant and appropriate to the remedial action, is cost-effective, and will utilize permanent solutions and treatment technologies to the maximum extent practicable.

Alternative 4 was selected for contaminated soil because it would provide the highest degree of long-term protectiveness and permanence. All contaminated building debris and all contaminated soil associated with the principal threat waste would be removed from the site and the excavated area would be backfilled with clean soil. Although Alternatives 2, 3, and 4 would prevent further migration of COCs to groundwater and off-site surface water by minimizing the availability of contaminants to the environment there is less uncertainty with Alternative 4 since contaminated soil would be completely removed from contact with groundwater. The long-term effectiveness and permanence of Alternatives 2 and 3 would be dependent on the development of an effective ISS mix to address the organic contaminants in groundwater and continued inspection, monitoring, and maintenance of the cap over the treated material would be required.

Under Alternative 4 all soil exceeding remediation goals would be excavated and removed from the site. Alternative 3 would use ISS to treat all soils with contaminant levels above remediation goals, the impact of an increase in volume caused by the ISS treatment process would be greater under Alternative 3 than Alternative 2 and may cause an unacceptably large change to site elevations. Alternatives 3 and 2, respectively, would leave the largest and second largest amount of contaminants behind and the presence of the stabilized material, particularly for Alternative 3, would limit options for future re-use of the site. Alternative 6 would result in soil remaining at the site above levels protective for groundwater. Given the serious space constraints as well as technical and substantive permit issues Alternative 5 presents many implementation challenges.

EPA expects that the selected remedy will satisfy the statutory requirements of Section 121(b) of CERCLA, 42 U.S.C. § 9621(b): 1) be protective of human health and the environment; 2) comply with ARARs; 3) be cost effective over the long-term, and 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The selected remedy will satisfy the preference for treatment as a principal element for those soils sent off-site and treated to meet LDRs. However, all contaminated soil exceeding remediation goals will be sent off-site for disposal.

Green Remediation

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 all components of the selected remedy.

STATUTORY DETERMINATIONS

As was previously noted, Section 121(b)(1) of CERCLA, 42 U.S.C. § 9621(b)(1), mandates that remedial actions 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) of CERCLA, 42 U.S.C. § 9621(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. Section 121(d) of CERCLA, 42 U.S.C. § 9621(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 Section 121(d)(4) of CERCLA, 42 U.S.C. § 9621(d)(4).

Protection of Human Health and the Environment

The selected remedy, Alternative 4, will provide a greater degree of protection for human health and the environment through the excavation of all contaminated soil associated with the principal threat waste, the demolition of the Unimatic building, off-site treatment and disposal of the contaminated soil, and backfilling the excavated areas with clean soil. The selected remedy will eliminate all significant direct-contact risks to human health and the environment associated with contaminated soil on the three adjacent properties. This action will result in the reduction of exposure levels to acceptable risk levels within EPA’s generally acceptable risk range of 10^{-4} to 10^{-6} for carcinogens and below a HI of 1.0 for noncarcinogens.

Implementation of the selected remedy will not pose any unacceptable short-term risks to human health and the environment.

Compliance with ARARs

A comprehensive ARAR discussion is included in the final FS and a complete listing of ARARs is included in Table 8. Highlights of ARARs:

Chemical-Specific

- Federal TSCA 40 CFR Part 761.61 – PCBs Remediation Waste.
- NJDEP Soil Remediation Standards (N.J.A.C. 7:26D). Residential and Non-residential direct.
- New Jersey Ground Water Quality Standards (NJGQS) Class IIA (N.J.A.C. 7:9C), December 30, 2015.

Location-Specific

- Endangered Species Act (16 U.S.C. 1531 et seq.; 40 CFR 400)
- New Jersey Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A).
- Endangered Plant Species List Act (N.J.A.C. 7:5B).

Action-Specific

- RCRA: Identification and Listing of Hazardous Waste (40 CFR 261); Standards Applicable to Generators of Hazardous Waste (40 CFR 262); Standards for

Owners/Operators of Permitted Hazardous Waste Facilities (40 CFR 264.10-164.18); Preparedness and Prevention (40 CFR.30-264.31); Contingency Plan and Emergency Procedures (40 CFR 264.50-264.56).

- Department of Transportation (DOT) Rules for Hazardous Materials Transportation Regulations (49 CFR 107, 171, 172, 177, and 179).
- TSCA Disposal of PCB Bulk Product Waste (40 CFR Part 761.62)
- RCRA Land Disposal Restrictions (40 CFR 268)
- Transportation of Hazardous Materials (N.J.A.C. 16:49)

Cost Effectiveness

EPA has determined that the selected remedy is cost-effective and represents a reasonable value. Overall effectiveness was evaluated by assessing three of the five balancing criteria in combination (long-term effectiveness and permanence; reduction in toxicity, mobility, and volume through treatment; and short-term effectiveness). Overall effectiveness was then compared to costs to determine cost-effectiveness. The overall effectiveness of the selected remedy has been determined to be proportional to the costs, and the selected remedy therefore represents reasonable value. A summary of the costs associated with Alternative 4 is provided in Table CS-4.

Utilization of Permanent Solutions and Alternative Treatment Technologies

EPA has determined that the selected remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner. Of those alternatives that are protective of human health and the environment and comply with ARARs, EPA has determined that the selected remedy provides the best balance of trade-offs in terms of the five balancing criteria, while also considering the statutory preference for treatment as a principal element and state and community acceptance. The selected remedy will provide adequate long-term control of risks to human health and the environment through eliminating and/or preventing exposure to the contaminated soil. The selected remedy is protective of short-term risks.

Preference for Treatment as a Principal Element

Based on the sampling performed to date, some of the contaminated soil will require treatment to meet the requirements of off-site disposal facilities. The selected remedy meets the statutory preference for the use of remedies that employ treatment that reduces toxicity, mobility or volume as a principal element.

Five-Year Review Requirements

Because this remedy will result in hazardous substances, pollutants, or contaminants remaining at levels that would not allow for unlimited/unrestricted use, it will be necessary to perform a statutory review within five years after initiation of the remedial actions to ensure that the remedy is, or will be, protective of human health and the environment.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for the OU1 contaminated soils at the site was released for a public comment period on July 22, 2016. The public comment period closed on August 22, 2016.

The Proposed Plan identified Alternative 4 (Excavation of Soils above preliminary remediation goals and Off-site Disposal) as the preferred response action. EPA reviewed all written and verbal comments submitted during the public comment period. Upon review of these comments, it was determined that no significant changes to the remedy, as it was originally identified in the Proposed Plan, were necessary.

APPENDIX I: Tables and Figures

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

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

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration (EPC)[1]	EPC Units	Statistical Measure
		Min	Max					
The Site (21, 25, and 30 Sherwood Lane and JCMUA)	Aroclor 1248	110	2300000	µg/kg	44 / 48	389070	µg/kg	97.5% KM Chebyshev UCL

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

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration (EPC)[1]	EPC Units	Statistical Measure
		Min	Max					
The Site (21, 25, and 30 Sherwood Lane and JCMUA)	Aroclor 1248	110	2300000	µg/kg	68 / 75	258977	µg/kg	97.5% KM (Chebyshev) UCL

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

Exposure Point	Chemical of Concern	Concentration Detected		Concentration Units	Frequency of Detection	Exposure Point Concentration (EPC)[1]	EPC Units	Statistical Measure
		Min	Max					
The Site (21, 25, and 30 Sherwood Lane and JCMUA)	Aroclor 1248	3.3	7000000	µg/kg	178 / 211	319287	µg/kg	97.5% KM (Chebyshev) UCL

Footnotes:
(1) 95% UCLs were calculated using ProUCL version 5.1 for constituent datasets with a sample size greater than or equal to 10 samples and 5 or more detects.

Definitions:
bgs=below ground surface
ft=feet
JCMUA=Jersey City Municipal Utilities Authority
mg/kg=milligram per kilogram
UCL=upper confidence limit
µg/kg=microgram per kilogram

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 and Future	Soil	Surface Soil	The Site (21, 25, and 30 Sherwood Lane and JCMUA)	On-site Worker	Adult	Dermal	Quantitative	Workers may come into contact with contaminants in surface soil and/or inhale fugitive dust and volatile chemicals while working at the site.
						Ingestion	Quantitative	
						Inhalation	Quantitative	
			The Site (21, 25, and 30 Sherwood Lane and JCMUA)	Trespasser	Adult	Dermal	Quantitative	Trespassers may come into contact with contaminants in surface soil and/or inhale fugitive dust and volatile chemicals while visiting the site.
						Ingestion	Quantitative	
						Inhalation	Quantitative	
		Indoor Air	25 Sherwood Lane (1)	On-site Worker	Adult	Inhalation	Qualitative (1)	Workers may be exposed to contaminants in indoor air via vapor intrusion pathway. Indoor air concentrations are screened against the Vapor Intrusion Screening Levels in the risk assessment.
		Surface and Subsurface Soil	The Site (21, 25, and 30 Sherwood Lane and JCMUA)	Construction/ Utility Worker	Adult	Dermal	Quantitative	Construction workers may come into contact with contaminants in soil and/or inhale fugitive dust and volatile chemicals while working at the site.
						Ingestion	Quantitative	
						Inhalation	Quantitative	

Footnotes:
(1) Potential risk was evaluated qualitatively via a screening comparison of Aroclors data provided in the EPA/Weston Removal Assessment Investigation report, dated February 2013, to Vapor Intrusion Screening Levels (VISLs) provided by the EPA VISL calculator (https://www.epa.gov/vaporintrusion).

Definitions:
JCMUA = Jersey City Municipal Utilities Authority

Table 3
Non-Carcinogenic Toxicity Data Summary

Pathway: Ingestion/Dermal

Chemicals of Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Absorp. Efficiency (Dermal)[1]	Adjusted RfD (Dermal)	Adj. Dermal RfD Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfD[2]
Aroclor 1248[3]	Chronic	0.00002	mg/kg-day	1	0.00002	mg/kg-day	Eye/Finger/Toe Nail/Immune System	300	IRIS	1/11/2016

Pathway: Inhalation

Chemicals of Concern	Chronic/ Subchronic	Inhalation RfC	Inhalation RfC Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfC[2]
Aroclor 1248[3]	NA	NA	NA	NA	NA	NA	NA

Footnotes:
(1) Source: Risk Assessment Guidance for Superfund. Volume 1: Human Health Evaluation Manual (Part E). Section 4.2 and Exhibit 4-1.
(2) Dates reflect when the source was searched and not the publication date.
(3) Based on Aroclor 1254

Definitions:
IRIS=Integrated Risk Information System
mg/kg-day=milligrams per kilogram per day
NA=not available
RfC=reference concentration
RfD=reference dose

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[1]	Source	Date[2]
Aroclor 1248[3]	2.0E+00	$(mg/kg\text{-}day)^{-1}$	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	1/11/2016

Pathway: Inhalation

Chemical of Concern	Unit Risk	Units	Inhalation Cancer Slope Factor	Slope Factor Units	Weight of Evidence/Cancer Guideline[1]	Source	Date[2]
Aroclor 1248[4]	5.7E-04	$(\mu g/m^3)^{-1}$	NA	NA	B2	IRIS	1/11/2016

Footnotes:
(1) Weight of evidence information obtained from IRIS. Categories are as follows:
- A=Known human carcinogen
- B2=Probable human carcinogen based on sufficient evidence of carcinogenicity in animals
- C=Possible human carcinogen
- D=Not classifiable due to lack of animal bioassays and human studies

(2) Dates reflect when the source was searched and not the publication date.
(3) Based on upper-bound SF for high risk and persistence polychlorinated biphenyls.
(4) Based on upper-bound IUR for high risk polychlorinated biphenyls.

Definitions:
IRIS=Integrated Risk Information System
IUR=inhalation unit risk
NA=Not available
(mg/kg-day)-1=per milligrams per kilogram per day
$(\mu g/m^3)^{-1}$=per micrograms per cubic meter
SF=slope factor

Table 5
Risk Characterization Summary - Non-Carcinogens

Scenario Timeframe: Current
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary Target Organ(s)	Non-Carcinogenic Hazard Quotient			
					Ingestion	Dermal Contact	Inhalation	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	Eyes/Fingers/Toe Nails/Immune System	16.7	9.7	NA	26.4
							Soils Hazard Index Total[1]=	**27**
							Receptor Hazard Index[1]=	**27**
							Eyes HI=	**26**
							Fingers HI=	**26**
							Immune system HI=	**26**
							Toe Nails HI=	**26**

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary Target Organ(s)	Non-Carcinogenic Hazard Quotient			
					Ingestion	Dermal Contact	Inhalation	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	Eyes/Fingers/Toe Nails/Immune System	6.7	11.3	NA	17.9
							Soils Hazard Index Total[1]=	**18**
							Receptor Hazard Index[1]=	**18**
							Eyes HI=	**18**
							Fingers HI=	**18**
							Immune system HI=	**18**
							Toe Nails HI=	**18**

Scenario Timeframe: Future Receptor Population: Worker Receptor Age: Adult								
Medium	**Exposure Medium**	**Exposure Point**	**Chemical Of Concern**	**Primary Target Organ(s)**	**Non-Carcinogenic Hazard Quotient**			
					Ingestion	**Dermal Contact**	**Inhalation**	**Exposure Routes Total**
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	Eyes/Fingers/Toe Nails/Immune System	11.1	6.5	NA	17.5
							Soils Hazard Index Total[1]=	**18**
							Receptor Hazard Index[1]=	**18**
							Eyes HI=	**18**
							Fingers HI=	**18**
							Immune system HI=	**18**
							Toe Nails HI=	**18**

Scenario Timeframe: Future Receptor Population: Trespasser Receptor Age: Adult								
Medium	**Exposure Medium**	**Exposure Point**	**Chemical Of Concern**	**Primary Target Organ(s)**	**Non-Carcinogenic Hazard Quotient**			
					Ingestion	**Dermal Contact**	**Inhalation**	**Exposure Routes Total**
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	Eyes/Fingers/Toe Nails/Immune System	4.4	7.5	NA	11.9
							Soils Hazard Index Total[1]=	**12**
							Receptor Hazard Index[1]=	**12**
							Eyes HI=	**12**
							Fingers HI=	**12**
							Immune system HI=	**12**
							Toe Nails HI=	**12**

Scenario Timeframe: Current/Future Receptor Population: Construction Worker Receptor Age: Adult					
Medium		**Exposure Point**			**Non-Carcinogenic Hazard Quotient**

	Exposure Medium		Chemical Of Concern	Primary Target Organ(s)	Ingestion	Dermal Contact	Inhalation	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Surface/Subsurface Soil	Aroclor 1248	Eyes/Fingers/Toe Nails/Immune System	18	8	NA	26
							Soils Hazard Index Total[1]=	**27**
							Receptor Hazard Index[1]=	**27**
							Eyes HI=	**26**
							Fingers HI=	**26**
							Immune system HI=	**26**
							Toe Nails HI=	**26**

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.

Definitions:
NA=not available

Table 6
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	2.0E-04	1.0E-04	3.0E-05	4.0E-04
						Exposure Medium Total=	4.0E-04
						Total Risk=	**4.0E-04**

Scenario Timeframe: Current
Receptor Population: Trespasser
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	3.0E-05	5.0E-05	8.0E-07	8.0E-05
						Exposure Medium Total=	8.0E-05
						Total Risk=	**8.0E-05**

Scenario Timeframe: Future
Receptor Population: Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	2.0E-04	9.0E-05	2.0E-05	3.0E-04
						Exposure Medium Total=	3.0E-04
						Total Risk=	**3.0E-04**

Scenario Timeframe: Future
Receptor Population: Trespasser
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point		Carcinogenic Risk

			Chemical Of Concern	Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface Soil	Surface Soil	Surface Soil	Aroclor 1248	2.0E-05	3.0E-05	6.0E-07	6.0E-05
						Exposure Medium Total=	6.0E-05
						Total Risk=	**6.0E-05**

Scenario Timeframe: Current/Future
Receptor Population: Construction Worker
Receptor Age: Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Inhalation	Dermal	Exposure Routes Total
Surface/Subsurface Soil	Surface/Subsurface Soil	Surface/Subsurface Soil	Aroclor 1248	1.0E-05	5.0E-06	3.0E-07	2.0E-05
						Exposure Medium Total=	2.0E-05
						Total Risk=	**2.0E-05**

Table 7
Risk Screening Summary - Vapor Intrusion

Chemical of Concern	Unit	Indoor Air VISL[1]	Indoor Air Results[2]
Aroclor 1016	$\mu g/m^3$	0.61	ND
Aroclor 1221	$\mu g/m^3$	0.022	ND
Aroclor 1232	$\mu g/m^3$	0.022	ND
Aroclor 1242[3]	$\mu g/m^3$	0.022	1.9 - 20
Aroclor 1248	$\mu g/m^3$	0.022	ND
Aroclor 1254	$\mu g/m^3$	0.022	ND
Aroclor 1260	$\mu g/m^3$	0.022	ND
Aroclor 1262	$\mu g/m^3$	0.022	ND
Aroclor 1268	$\mu g/m^3$	0.022	ND

Footnotes:
(1) VISLs –EPA vapor intrusion screening levels for indoor air are based on future commercial exposure at a target risk of 10-6 for carcinogens and target hazard quotient of 1 for noncarcinogens, and calculated using the VISL calculator version 3.5.1 (May 2016).
(2) Indoor air samples were collected by EPA in October 2012.
(3) The VISL reflecting a target risk of 10-4 for Aroclor 1242 is 2.2 $\mu g/m^3$.

Definitions:
ND=not detected in any sample above the reporting limit
$\mu g/m^3$=microgram per cubic meter
VISL=Vapor Intrusion Screening Level

Table 8
ARARs, Criteria, and Guidance
Unimatic Manufacturing Corporation Superfund Site
Fairfield, New Jersey

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
CHEMICAL-SPECIFIC				
Federal	Toxic Substance Control Act (TSCA) 40 CFR Part 761.61 – PCB Remediation Waste	ARAR	Establishes cleanup and disposal options for PCB remediation waste.	The regulation will be used to establish the cleanup and disposal levels for bulk PCB remediation waste.
State	NJDEP Residential Direct Contact and Non-residential Direct Contact Soil Remediation Standards (N.J.A.C. 7:26D)	ARAR	Establishes standards for soil cleanups. Nonresidential standards for site COCs: 4,4'-DDE 9 ppm 4,4'-DDT 8 ppm Aldrin 0.2 ppm Alpha- and gamma-Chlordane 1 ppm Total PCBs 1 ppm Dieldrin 0.2 ppm Heptachlor 0.7 ppm Heptachlor epoxide 0.3 ppm Lindane 2 ppm	The standards will be used to develop the remediation goals (RGs).
State	NJDEP Impact to Groundwater Soil Remediation Criteria (N.J.A.C. 7:26D)	To Be Considered	Establishes criteria for soil cleanups.	The criteria will be considered in developing the RGs.
State	New Jersey Ground Water Quality Standards (NJGQS) Class IIA (NJAC 7:9C)	Applicable	Establish the water quality standards for State's ground waters based on the type of groundwater use.	The standards will be used to develop the soil impact to groundwater values.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
LOCATION-SPECIFIC				
Wildlife Habitat Protection Standards and Regulations				
Federal	Endangered Species Act (16 U.S.C. 1531 et seq.; 40 CFR 400)	Applicable	This requirement establishes standards for the protection of threatened and endangered species.	USFWS reported one endangered species, Indiana bat (Myotis sodalist), one threatened species, northern long-eared bat (Myotis septentrionalis), and no critical habitats within the project area. Site activities and remedy would be designed and implemented in a manner that protects and conserves threatened or endangered species if they are observed on-site.
Federal	Fish and Wildlife Conservation Act (16 U.S.C. 2901 et seq.)	To Be Considered	This act protects and conserves nongame fish and wildlife.	If the remedial action involves activities that affect wildlife and/or non-game fish, federal agencies must first consult with the USFWS and the relevant state agency with jurisdiction over wildlife resources.
Federal	Fish and Wildlife Coordination Act (16 U.S.C. 661)	To Be Considered	This act maintains and coordinates wildlife conservation.	If the remedial action involves activities that affect wildlife and/or non-game fish, federal agencies must first consult with the USFWS and the relevant state agency with jurisdiction over wildlife resources.
Federal	Migratory Bird Treaty Act (MBTA, 1 U.S.C. 03 *et seq.*)	Applicable	The selected remedial action(s) must be carried out in a manner that avoids the taking or killing of protected migratory bird species, including individual birds or their nests or eggs.	Site activities and remedy would be designed and implemented to avoid adverse impact to migratory bird species and/or their nests.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
State	New Jersey Endangered and Nongame Species Conservation Act (N.J.S.A. 23:2A-1 - 15)	Potentially Applicable	This act protects and conserves endangered and nongame species.	The records of NJDEP Natural Heritage Program indicate no occurrence of any threatened or special concern species except great blue heron (Ardea Herodias), a special concern species, on or in the immediate vicinity of the site. The species was not observed on-site during site ecological reconnaissance. However site activities and remedy would be designed and implemented in a manner that protects and conserves threatened or special concern species if they are observed on-site.
State	New Jersey Endangered Plant Species List Act (N.J.A.C. 7:5B)	Potentially Applicable	This act protects endangered plant species.	Ecological reconnaissance did not indicate the presence of endangered plant species. With the exception of a small area of the gravel lot in the northern corner of the Unimatic property, sparse vegetation is present, A neglected landscaped patch, gravel lot, and the cracks of the driveways were overgrown with invasive vines, grasses, and wildflowers.
Cultural Resources, Historic Preservation Standards and Regulations				
Federal	National Historic Preservation Act (40 CFR 6.301)	Potentially Applicable	This requirement establishes procedures to provide for preservation of historical and archeological data that might be destroyed through alteration of terrain as a result of a federal	To date, a cultural resources survey archeological investigation has not been completed at the site. The effects on historical and archeological data will be evaluated during remedy design.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
			construction project or a federally licensed activity or program.	
ACTION-SPECIFIC				
	General Site Remediation			
Federal	RCRA Identification and Listing of Hazardous Wastes (40 CFR 261)	Applicable	This regulation describes methods for identifying hazardous wastes and lists known hazardous wastes.	This regulation is applicable to the identification of hazardous wastes that are generated, treated, stored, or disposed during remedial activities.
Federal	RCRA Standards Applicable to Generators of Hazardous Wastes (40 CFR 262)	Applicable	Describes standards applicable to generators of hazardous wastes.	Standards will be followed if any hazardous wastes are generated on-site.
Federal	RCRA Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities – General Facility Standards (40 CFR 264.10–264.19)	Relevant and Appropriate	This regulation lists general facility requirements, including general waste analysis, security measures, inspections, and training requirements.	Facility will be designed, constructed, and operated in accordance with this requirement. All workers will be properly trained.
Federal	RCRA Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities – Preparedness and Prevention (40 CFR 264.30–264.37)	Relevant and Appropriate	This regulation outlines the requirements for safety equipment and spill control.	Safety and communication equipment will be installed at the site. Local authorities will be familiarized with the site.
Federal	RCRA Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities – Contingency Plan and Emergency Procedures (40 CFR 264.50–264.56)	Relevant and Appropriate	This regulation outlines the requirements for emergency procedures to be used following explosions, fires, or other emergencies.	Emergency procedure plans will be developed and implemented during remedial action. Copies of the plans will be kept on-site.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
State	Substantive requirements of the New Jersey Technical Requirements for Site Remediation (N.J.A.C. 7:26E)	Relevant and Appropriate	This regulation provides the minimal technical requirements to investigate and remediate contamination at the site.	The substantive requirements of the regulation will be applied to any hazardous waste operation during remediation of the site.
State	New Jersey Hazardous Waste Regulations - Identification and Listing of Hazardous Waste (N.J.A.C. 7:26G-5)	Applicable	This regulation describes methods for identifying hazardous wastes and lists known hazardous wastes.	This regulation will be applicable to the identification of hazardous wastes that are generated, treated, stored, or disposed during remedial activities.
State	New Jersey Soil Erosion and Sediment Control Act (N.J.A.C. 2:90)	Applicable	This act outlines the requirements for soil erosion and sediment control measures.	This act will be considered during the development of alternatives.
State	New Jersey Bureau of Water Allocation Temporary Dewatering Permit equivalency (N.J.A.C. 7:19)	Relevant and Appropriate	A temporary dewatering permit will be required for the withdrawal of groundwater in excess of 100,000 gallons of water per day for a period of more than 30 days in a consecutive 365-day period, for purposes other than agriculture, aquaculture, or horticulture. For dewatering in excess of 100,000 gallons of water per day, the project owner must obtain a Temporary Dewatering Allocation Permit, or Dewatering Permit-by-Rule, or Short Term Permit-by-Rule depending on the duration of construction and the method employed.	The requirement will be considered during the development of the alternatives.
State	New Jersey Noise Control (N.J.A.C. 7:29)	Relevant and Appropriate	This standard provides the requirement for noise control.	This standard will be applied to any remediation activities performed at the site.
	Waste Transportation			

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
Federal	Department of Transportation (DOT) Rules for Transportation of Hazardous Materials (49 CFR Parts 107, 171, 172, 177 to 179)	Applicable	This regulation outlines procedures for the packaging, labeling, manifesting, and transporting hazardous materials.	Any company contracted to transport hazardous material from the site will be required to comply with this regulation.
Federal	RCRA Standards Applicable to Transporters of Hazardous Waste (40 CFR 263)	Applicable	Establishes standards for hazardous waste transporters.	Any company contracted to transport hazardous material from the site will be required to comply with this regulation.
State	New Jersey Transportation of Hazardous Materials (N.J.A.C. 16:49)	Applicable	Establishes substantive requirements and standards related to the manifest system for hazardous wastes.	Any company contracted to transport hazardous material from the site will be required to comply with this regulation.
	Waste Disposal			
Federal	TSCA Disposal of PCB Bulk Product Waste (40 CFR Part 761.62)	Applicable	This regulation identifies treatment and disposal requirements for bulk PCB contaminated waste.	Bulk PCB waste will be treated or disposed of to meet the regulatory requirements.
Federal	RCRA Land Disposal Restrictions (40 CFR 268)	Applicable	This regulation identifies hazardous wastes restricted for land disposal and provides treatment standards for land disposal.	Hazardous wastes will be treated to meet disposal requirements.
Federal	RCRA Alternate Soil Treatment Standards (40 CFR 268.49)	Applicable	This regulation identifies alternate treatment standards for contaminated soil to meet land disposal restrictions.	Hazardous wastes will be treated to meet alternate disposal requirements.
Federal	RCRA Hazardous Waste Permit Program (40 CFR 270)	Applicable	This regulation establishes provisions covering basic EPA permitting requirements.	All permitting requirements of EPA must be complied with.
Federal	Area of Contamination (55 FR 8758-8760, March 8, 1990)	Potentially Applicable	These regulations establish rules for consolidation of contiguous waste within an Area of Contamination.	Hazardous wastes may be consolidated and contained within a specific area based on these rules.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
Federal	Corrective Action Management Units (Subpart S of 40 CFR 264.552)	Applicable	These regulations provide exceptions to LDR requirements and establish rules for consolidation and treatment of noncontiguous waste within a site.	Hazardous wastes that are noncontiguous may be consolidated and contained within the same area at a different location.
State	New Jersey Land Disposal Restrictions (N.J.A.C. 7:26G-11)	Applicable	These regulations provide exceptions to LDR requirements and establish rules for consolidation of non-contiguous waste from one area to another area within the site.	Hazardous wastes in one area of the site may be consolidated in a different portion of the site.
State	New Jersey Hazardous Waste (N.J.A.C. 7:26C)	Applicable	These regulations establish rules for the operation of hazardous waste facilities in the State of New Jersey.	All remedial activities must adhere to these regulations while handling hazardous waste during remedial operations.
	Water Discharge or Subsurface Injection			
State	The New Jersey Pollutant Discharge Elimination System (N.J.A.C. 7:14A)	Applicable	This permit governs the discharge of any wastes into or adjacent to State waters that may alter the physical, chemical, or biological properties of State waters, except as authorized pursuant to a NPDES or State permit.	Project will meet NPDES permit requirements for surface discharges or groundwater discharge such as injection of reagent for in situ treatment.
	Off-Gas Management			
Federal	Clean Air Act (CAA)—National Ambient Air Quality Standards (NAAQs) (40 CFR 50)	Potentially Applicable	These provide air quality standards for particulate matter, lead, nitrogen dioxide, sulfur dioxide, carbon monoxide, and volatile organic matter.	During excavation, treatment, and/or stabilization, air emissions will be properly controlled and monitored to comply with these standards.
Federal	Standards of Performance for New Stationary Sources (40 CFR 60)	Potentially Applicable	Set the general requirements for air quality.	During excavation, treatment, and/or stabilization, air emissions will be properly controlled and monitored to comply with these standards.

Regulatory Level	Authority/Source	Status	Requirement Synopsis	Comments
Federal	National Emission Standards for Hazardous Air Pollutants (40 CFR 61)	Potentially Applicable	These provide air quality standards for hazardous air pollutants.	During excavation, treatment, and/or stabilization, air emissions will be properly controlled and monitored to comply with these standards.
State	New Jersey Air Pollution Control Act (N.J.A.C. 7:27)	Potentially Applicable	Describes requirements and procedures for obtaining air permits and certificates; rules that govern the emission of contaminants into the ambient atmosphere.	Air-stripper emission from groundwater remediation activity is considered trivial activity and does not require application for an air permit.
State	New Jersey Ambient Air Quality Standards (N.J.A.C. 7:27-13)	Potentially Applicable	This standard provides the requirement for ambient air quality control.	This standard will be applied to any remediation activities performed at the site.

TABLE CS-4

Alternative 4

Building Demolition, Excavation and Offsite Disposal

COST ESTIMATE SUMMARY

Site: Unimatic Mfg. Corp. Superfund Site
Location: Fairfield, New Jersey
Phase: Feasibility Study - Final
Base Year: 2016
Date: July 2016

Description: Alternative 4 Building demolition and offsite disposal of debris; Excavation and soil cap within JCMUA pipeline easement; Excavation of contaminated soils exceeding the PRGs; Post excavation sampling; Backfill with imported clean fill; Offsite disposal; Deed notice. Under this alternative, contaminated soils exceeding the PRGs would be excavated. Dewatering would be necessary for excavation below the water table, sheet piling may be used along the eastern property boundary for excavation support. Water generated from dewatering of excavation areas would be treated onsite and discharged to the stormwater system. Post excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas.

INSTITUTIONAL CONTROLS CAPITAL COSTS: (Assumed to be Incurred During Year 0)

DESCRIPTION	QTY	UNIT(S)	UNIT COST	TOTAL	NOTES
Institutional Controls	1	LS	$16,347	$16,347	Includes cost for environmental lawyer for implementing ICs for the site
Community Awareness Activities	1	LS	$6,923	$6,923	Includes community awareness meetings
Deed Notice	1	LS	$8,613	$8,613	Includes preparation of deed notices for the site and JCMUA pipeline easement.
SUBTOTAL				$31,883	
Project Management	10%			$3,188	Percentage from Exhibit 5-8 in EPA 540-R-00-002 was used.
TOTAL				$35,071	
TOTAL CAPITAL COST				**$35,000**	Total capital cost is rounded to the nearest $1,000.

EARTHWORK CAPITAL COSTS: (Assumed to be Incurred During Year 0)

DESCRIPTION	QTY	UNIT(S)	UNIT COST	TOTAL	NOTES
General Conditions					
General Requirements	5	MO	$139,030.00	$695,152	Includes onsite staff, per diem, safety and health requirements, temporary facilities, air monitoring, and site security.
Project Planning, Documents, and Submittals	1	LS	$225,999.00	$225,999	Includes project deliverables
Surveying	1	LS	$44,730.00	$44,730	Includes surveying during construction
Mobilization	1	LS	$15,952	$15,952	
Sediment and Erosion Control					
Installation	1	LS	$2,370	$2,370	Includes installation of silt fence and hay bales.
Maintenance	1	LS	$9,665	$9,665	Includes maintenance of silt fence and hay bales for the duration of project.
Demolition of Structure					
Building Inspection	1	LS	$5,011	$5,011	Includes inspection of building prior to demolition for structural integrity.
Demolition	2,070	CY	$39.45	$81,671	Includes demolition of the building.
Transportation and Disposal - TSCA, Non-Haz	1,500	TON	$254.90	$382,347	Includes T&D of TSCA building demolition debris.
Transportation and Disposal - Non-Haz	2,400	TON	$142.00	$341,863	Includes T&D of Non-TSCA building demolition debris.
Excavation and Soil Cap within JCMUA Pipeline Easement					
Excavation	380	BCY	$3.48	$1,322	Includes excavation of contaminated soil within the JCMUA easement.
Transportation and Disposal - Non-Haz	720	TON	$134.95	$97,161	Includes T&D of Non-Haz/TSCA excavated soil.
Placement of Soil Cap	5,040	SF	$4.61	$23,246	Includes placement of clean backfill for soil cap and revegetation.
Excavation of Contaminated Soils					
Excavation Support Installation	41,300	SF	$40.27	$1,662,997	Includes installation of sheet piles for excavation support.
Contaminated Soils Excavation	26,000	BCY	$4.57	$118,800	Includes excavation of contaminated soils exceeding the PRGs
Dewatering and Water Treatment	5	MO	$91,455	$457,277	Includes dewatering and installation and O&M of portable water treatment system
Transportation and Disposal (T&D) of Contaminated Soils					
T&D of Hazardous and TSCA soil	1,400	TON	$813.96	$1,139,544	Includes T&D of Haz/TSCA excavated soil.
T&D of TSCA soil	12,600	TON	$245.26	$3,090,263	Includes T&D of TSCA excavated soil.
T&D of Non-Hazardous and Non-TSCA Soil	22,400	TON	$134.95	$3,022,790	Includes T&D of Non-Haz/TSCA excavated soil.
Post Excavation Sampling	88	EA	$230.39	$20,274	Includes post excavation sampling to verify that the objective of excavation.
Clean Backfill Placement	26,000	ECY	$38.66	$1,005,136	Includes placement of clean soil as excavation backfills.
Topsoil Placement and Revegetation	46,000	SF	$1.63	$74,750	Includes placement of topsoil and installation of vegetation.
Demobilization	1	LS	$15,952	$15,952	
SUBTOTAL				$12,534,272	

TABLE CS-4			
Alternative 4			
Building Demolition, Excavation and Offsite Disposal			**COST ESTIMATE SUMMARY**

Site:	Unimatic Mfg. Corp. Superfund Site	Description:	Alternative 4 Building demolition and offsite disposal of debris; Excavation and soil cap within JCMUA pipeline easement; Excavation of contaminated soils exceeding the PRGs; Post excavation sampling; Backfill with imported clean fill; Offsite disposal; Deed notice. Under this alternative, contaminated soils exceeding the PRGs would be excavated. Dewatering would be necessary for excavation below the water table, sheet piling may be used along the eastern property boundary for excavation support. Water generated from dewatering of excavation areas would be treated onsite and discharged to the stormwater system. Post excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas.
Location:	Fairfield, New Jersey		
Phase:	Feasibility Study - Final		
Base Year:	2016		
Date:	July 2016		

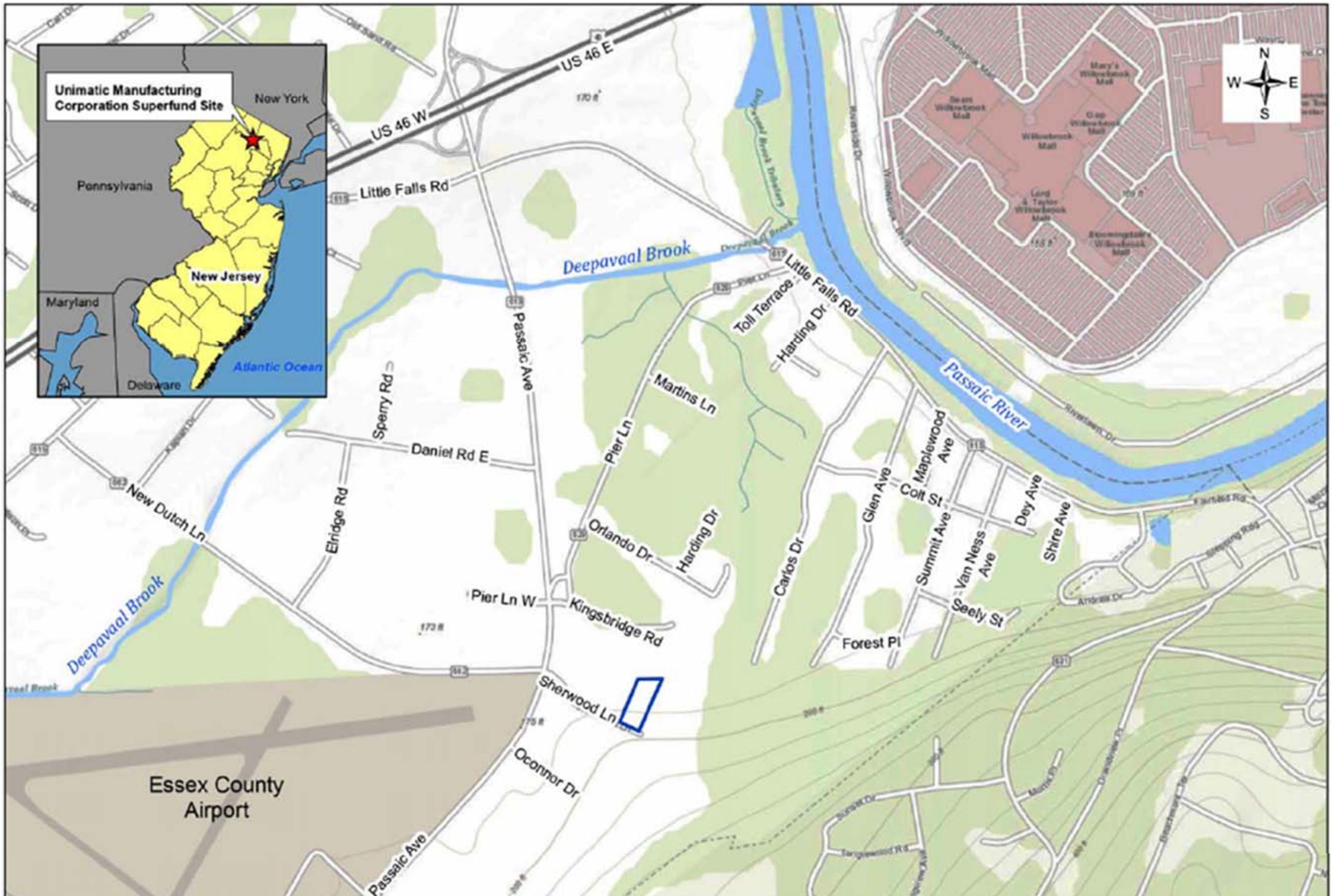
Contingency (Scope and Bid)	30%	$3,760,282	20% Scope, 10% Bid (mid range of the recommended range in EPA 540-R-00-002).
SUBTOTAL		$16,294,554	
Project Management	5%	$814,728	Percentage from Exhibit 5-8 in EPA 540-R-00-002 was used.
Construction Management	6%	$977,673	Percentage from Exhibit 5-8 in EPA 540-R-00-002 was used.
TOTAL		$18,086,955	
TOTAL CAPITAL COST		**$18,087,000**	Total capital cost is rounded to the nearest $1,000.

Notes:

Percentages used for contingency and professional/technical services costs are based on guidance from Section 5.0 of "A Guide to Developing and Documenting Cost Estimates During the Feasibility Study", EPA 2000.
Remedial Design and Five Year Review costs were excluded from the cost estimate per EPA's direction.
Costs presented for this alternative are expected to have an accuracy between -30% to +50% of actual costs, based on the scope presented. They are prepared solely to facilitate relative comparisons between alternatives for FS evaluation purposes.

Abbreviations:

BCY Bank Cubic Yard
CY Cubic Yard
ECY Embankment Cubic Yard
LS Lump Sum
MO Month
QTY Quantity
SF Square Feet
TON Ton



Legend

Unimatic Property Boundary

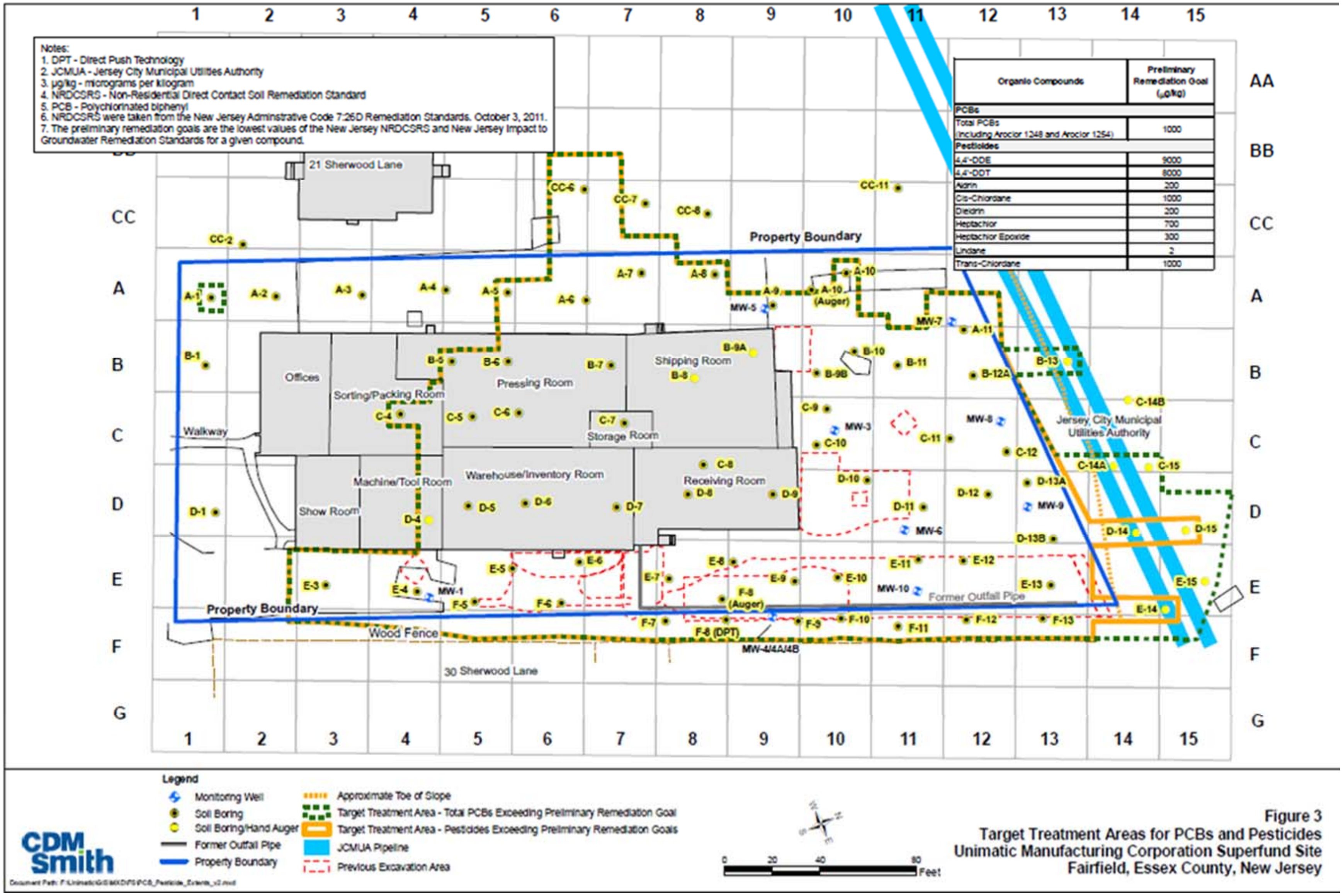
0 500 1,000 2,000 Feet

Figure 1
Site Location Map
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey

CDM Smith

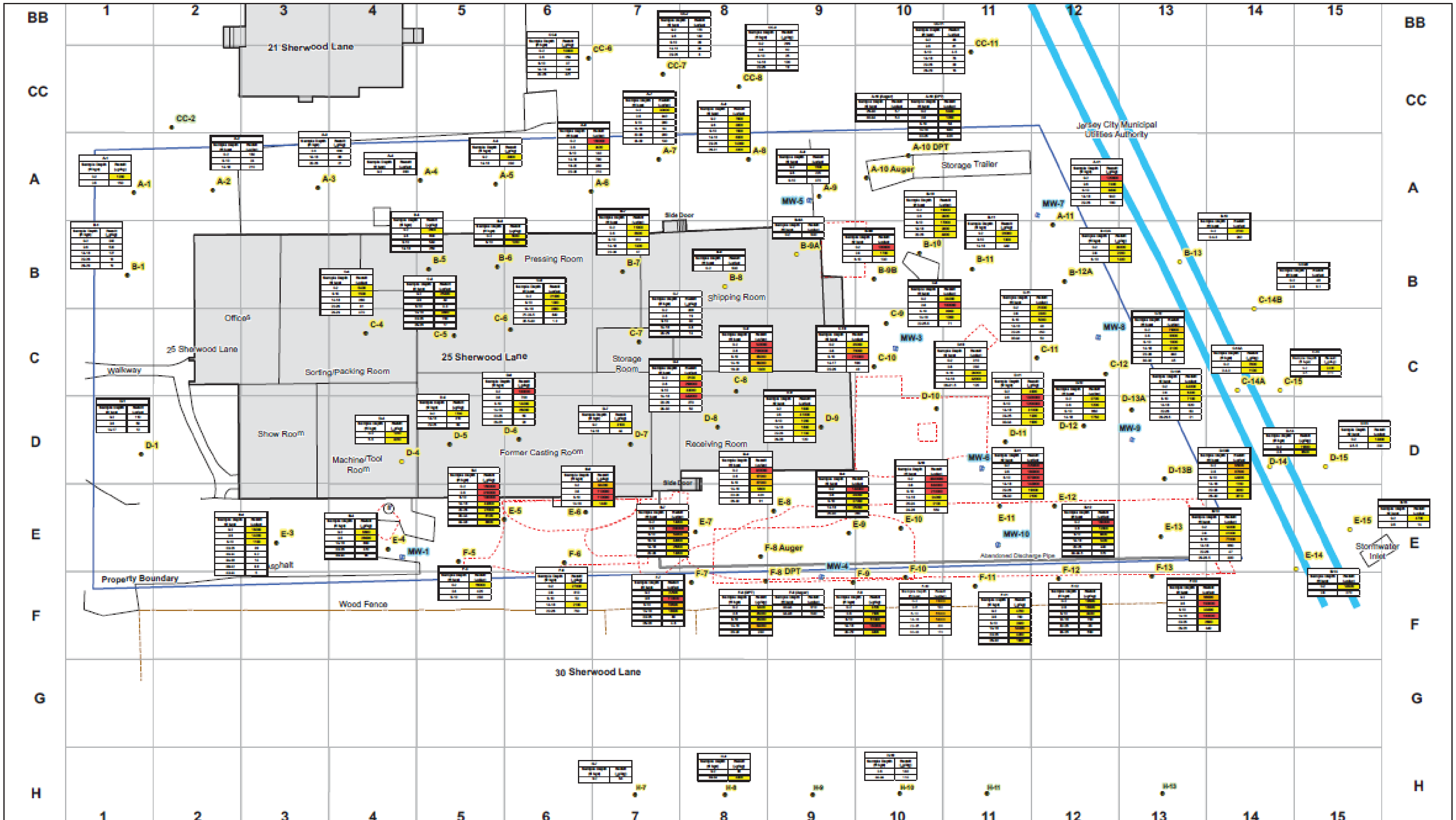
Document Path: F:\Unimatic\GIS\MXD\RIWP\Site Location Map_rev.mxd

Figure 2
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey



Organic Compounds	Preliminary Remediation Goal (µg/kg)
PCBs	
Total PCBs (including Aroclor 1248 and Aroclor 1254)	1000
Pesticides	
4,4'-DDE	9000
4,4'-DDT	8000
Aldrin	200
Cis-Chlordane	1000
Dieldrin	200
Heptachlor	700
Heptachlor Epoxide	300
Lindane	2
Trans-Chlordane	1000

Figure 3
Target Treatment Areas for PCBs and Pesticides
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey



- Soil Boring
- Soil Boring/Hand Auger
- Monitoring Well
- 30_Sherwood_Final
- Abandoned Discharge Pipe
- Property Boundary
- JCMUA Pipeline
- Excavation Area

Total Aroclor Concentration (µg/kg)

- < 1,000
- 1,000 - 50,000
- 50,000 - 100,000
- > 100,000

Notes:
1. ft bgs - feet below ground surface
2. µg/kg - micrograms per kilogram
3. ND - Not detected
4. PCB - Polychlorinated biphenyl
5. Only sampling intervals where aroclors were detected are shown on this figure. Borings were advanced to bedrock or refusal, typically between 30-40 feet bgs.
6. Aroclors were not detected from all sample intervals at CC-2, H-9, H-11 and H-13 (these location lables are highlighted green.)
7. Total aroclor concentrations greater than or equal to 1,000 µg/kg exceed the NJDEP Non-Residential Direct Contact Soil Remediation Standard
8. Total aroclor concentrations greater than or equal to 50,000 µg/kg are considered hazardous waste per the Toxic Substances Control Act (TSCA).

0 7.5 15 30 Feet

CDM Smith

Figure 4
Total Aroclor Concentrations in Soil
Unimatic Manufacturing Corporation Superfund Site Fairfield, Essex County, New Jersey

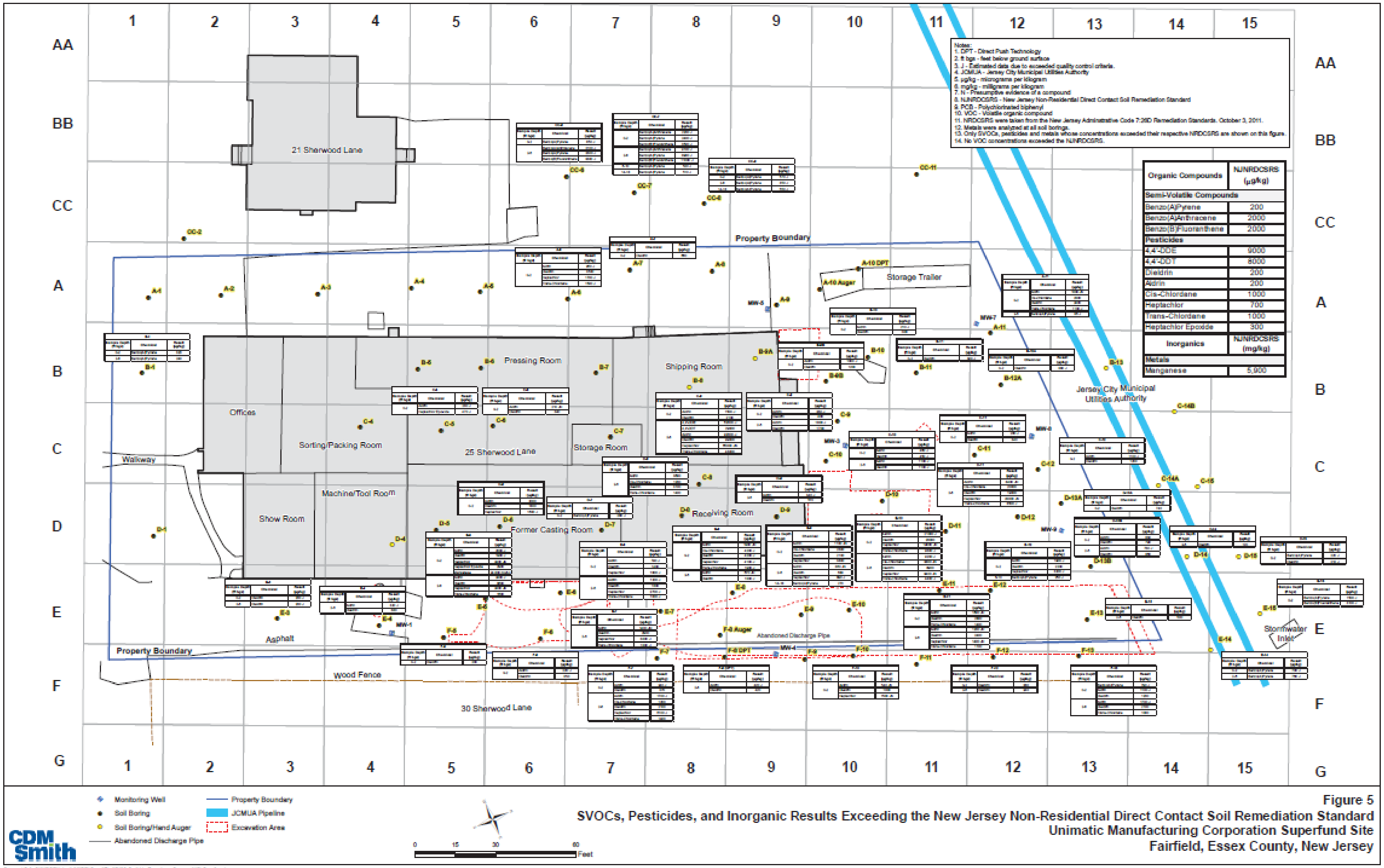


Figure 5
SVOCs, Pesticides, and Inorganic Results Exceeding the New Jersey Non-Residential Direct Contact Soil Remediation Standard
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey

APPENDIX II: Administrative Record Index

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

08/29/2016

REGION ID: 02

Site Name: UNIMATIC MANUFACTURING CORPORATION
CERCLIS ID: NJD002164796
OUID: 01
SSID: A21U
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/Organization:
396009	8/29/2016	ADMINISTRATIVE RECORD INDEX FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	1	ARI / Administrative Record Index		R02: (US ENVIRONMENTAL PROTECTION AGENCY)
230676	2/15/2011	REMEDIAL INVESTIGATION REPORT (RIR) / REMEDIAL ACTION WORK PLAN (RAWP) FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	716	RPT / Report		R02: (GZA GEOENVIRONMENTAL INCORPORATED)
396033	6/10/2015	REVISED FINAL QUALITY ASSURANCE PROJECT PLAN FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	352	WP / Work Plan	R02: (US ARMY CORPS OF ENGINEERS)	R02: (CDM SMITH)
395957	7/15/2016	FINAL REMEDIAL INVESTIGATION REPORT FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	1901	RPT / Report		R02: (CDM SMITH)
395949	7/18/2016	FINAL HUMAN HEALTH RISK ASSESSMENT FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	222	RPT / Report		R02: (CDM SMITH)
395951	7/18/2016	FINAL SCREENING LEVEL ECOLOGICAL RISK ASSESSMENT FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	78	RPT / Report		R02: (CDM SMITH)
395959	7/22/2016	FEASIBILITY STUDY FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	267	RPT / Report		R02: (CDM SMITH)
395964	7/22/2016	PROPOSED PLAN FOR OU1 FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	22	WP / Work Plan		R02: (US ENVIRONMENTAL PROTECTION AGENCY)
407760	6/4/2015	FINAL COMMUNITY INVOLVEMENT PLAN FOR THE UNIMATIC MANUFACTURING CORPORATION SITE	41	WP / Work Plan	R02: (US ARMY CORPS OF ENGINEERS)	R02: (CDM SMITH)

APPENDIX III: State Concurrence Letter

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

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

September 16, 2016

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

Re: Former Unimatic Manufacturing Corporation Superfund Site
Record of Decision Operable Unit 1
EPA ID# NJD002164796
DEP PI# 99235

Dear Mr. Mugdan:

The New Jersey Department of Environmental Protection (DEP) completed its review of the "Record of Decision, Unimatic Manufacturing Corporation Superfund Site, Operable Unit 1: Soil Remediation, Fairfield, New Jersey" prepared by the U.S. Environmental Protection Agency (EPA) Region II in September 2016 and concurs with the selected remedy to remove PCB-contaminated soil and building materials at commercial properties.

The selected remedy included in this Record of Decision covers the site at 25 Sherwood Lane and portions of 21 Sherwood Lane, 30 Sherwood Lane and the adjacent Jersey City Municipal Utilities Authority property, all of which are located in Fairfield.

The components of the selected Operable Unit 1 remedy include:

- Demolition of the former Unimatic building that includes the building slab and foundation. The building debris will be segregated based on the level of PCB contamination and disposed of at approved off-site landfills.

- Contaminated soils exceeding the New Jersey Non-Residential Direct Contact Soil Cleanup Standard for PCBs of 1 part per million will be excavated. The excavated area will be backfilled with imported clean fill. The ground surface will be restored to the original grade consistent with the surrounding areas. The excavated soil will be segregated in accordance with waste characteristics and properly treated off-site to meet land disposal restrictions and disposed of at EPA approved off-site landfills.

- A deed notice will be required for the Unimatic property since the cleanup requires an institutional control that limits the property for non-residential use without engineering controls. The goal of the cleanup for contaminated soils at 21 Sherwood Lane, the Jersey City Municipal Utilities Authority (JCMUA) property and 30 Sherwood Lane resulting from the activities at the Unimatic property is the New Jersey Residential Direct Contact Soil Cleanup Standards and these adjacent properties would not require a deed notice. A deed notice for an institutional control will be recorded in consultation with property owners of the JCMUA property, 21 Sherwood Lane or 30 Sherwood Lane if the unrestricted cleanup standard cannot be attained.

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

DEP appreciates the opportunity to participate in the decision making process to select an appropriate remedy for this site. Further, DEP is looking forward to future cooperation with EPA in remedial actions to ensure a full cleanup at all areas impacted by this site.

If you have any questions, please call me at 609-292-1251.

Sincerely,

Kenneth J. Kloo
Director, Division of Remediation Management
Site Remediation & Waste Management Program

C: Mark J. Pedersen, Assistant Commissioner,
Site Remediation & Waste Management Program
Edward W. Putnam, Assistant Director, Publicly Funded Response Element, DEP
Carole Petersen, Chief, New Jersey Remediation Branch, EPA Region II

APPENDIX IV: Responsiveness Summary

APPENDIX IV

RESPONSIVENESS SUMMARY

UNIMATIC MANUFACTURING CORPORATION SUPERFUND SITE

Operable Unit 1 – Soil Remediation

INTRODUCTION

This Responsiveness Summary provides a summary of the public's comments and concerns regarding the Unimatic Manufacturing Corporation Superfund Site (the site) Operable Unit 1 (OU1) Proposed Plan, and the Environmental Protection Agency's (EPA) responses to those comments. At the time of the public comment period, EPA proposed a preferred alternative for remediating the OU1 soil contamination associated with the site. All comments summarized in this document have been considered in EPA's final decision for selection of a remedial alternative for OU1.

This Responsiveness Summary is divided into the following sections:

I. BACKGROND ON COMMUNITY INVOLVEMENT AND CONCERNS:

This section provides the history of community involvement and interests regarding the site.

II. COMPREHENSIVE SUMMARY OF MAJOR QUESTIONS, COMMENTS, CONCERNS, AND RESPONSES: This section contains summaries of oral comments received by EPA at the public meeting, EPA's responses to those comments, as well as responses to written comments received during the public comment period.

The last section of this Responsiveness Summary includes attachments, which document public participation in the remedy selection process for OU1. They are as follows:

Attachment A: The July 2016 Unimatic Manufacturing Corporation Superfund Site Proposed Plan that was distributed to the public for review and comment;

Attachment B: The July 22, 2016 public notice that appeared in the Star-Ledger newspaper;

Attachment C: Transcript from the August 10, 2016 public meeting; and

Attachment D: Written comments received by EPA during the public comment period.

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

On April 24, 2015, EPA met with several businesses located in the vicinity of the site. The meetings were conducted to inform the community of the upcoming remedial investigation/feasibility study (RI/FS), and future potential remediation of the site, as well as to address any questions and concerns that the community may have had regarding the site. In addition, on June 4, 2015, EPA completed a Community Involvement Plan (CIP) for the site.

On July 22, 2016, EPA released the Proposed Plan and supporting documentation for the proposed remedy 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 (290 Broadway, New York, New York) and the Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey. EPA published a notice of availability of these documents in the Star-Ledger newspaper on July 22, 2016. EPA opened a public comment period which ran from July 22, 2016, until August 22, 2016.

On August 10, 2016, EPA held a public meeting at the Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey to inform local officials and interested residents about the Superfund process, to present the preferred remedial alternatives for the site, solicit oral comments, and respond to any questions.

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

PART 1: Verbal Comments

This section summarizes comments received from the public during the public meeting along with EPA's responses.

A. SUMMARY OF QUESTIONS AND EPA'S RESPONSES FROM THE PUBLIC MEETING CONCERNING THE UNIMATIC MANUFACTURING CORPORATION SUPERFUND SITE

A public meeting was held on August 10, 2016, at 7:00 p.m. at the Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey. In addition to a brief presentation of the RI/FS, EPA presented the Proposed Plan and preferred alternative for the site, received comments from meeting participants, and responded to questions regarding the remedial alternatives under consideration. Attachment C includes the entire transcript of the public meeting.

A summary of oral comments raised by the public following EPA's presentation is presented below:

Comment #1: A commenter asked who makes the final decision as to which alternative is selected.

EPA Response: After reviewing all comments made on the Proposed Plan and the preferred alternative for addressing the soil contamination, EPA will select the OU1 remedial alternative. A Record of Decision will be issued which will document EPA’s final determination.

Comment #2: A commenter asked who decides whether there should be a Remedial Action Objective (RAO) or if a no-further-action determination should be issued.

EPA Response: Before developing cleanup alternatives for a Superfund site, EPA conducts the RI which includes a base-line risk assessment. If unacceptable human or ecological risks exist resulting from the site contamination, EPA will develop RAOs that are protective of human health and the environment. These objectives are based on available information and standards, such as applicable or relevant and appropriate federal and/or state requirements (ARARS), to-be-considered (TBC) guidance, and site-specific, risk-based levels. Based on the RAOs for the site, EPA develops remediation goals which are the quantitative goals that will be used to meet those RAOs. If no unacceptable risk exists from the site, EPA would not develop RAOs.

Comment #3: A commenter asked that since this is an EPA Superfund site, are the standards higher compared with NJDEP standards for PCBs or pesticides or are the standards the same.

EPA Response: To address contamination at the site under the Superfund program, EPA will evaluate both federal and state cleanup standards and then generally select the more stringent of the standards. Since this site is zoned light-industrial and the likely future land use will remain light-industrial, EPA selected the NJDEP Non-Residential Direct Contact Soil Remediation Standard (NJNRDCSRS) of 1 part per million to address PCB soil contamination. In addition, Table 1 of the Proposed Plan indicates the maximum concentration detected in soil for each site-related contaminant of concern and the screening criteria against which the preliminary remediation goal was selected.

Comment #4: A commenter asked if EPA will dispose of the contaminated soil at the Bay Shore facility, near Perth Amboy or a place south of Camden or some other location where the waste would be buried.

EPA Response: The exact location where contaminated soil will be disposed of will be determined during the remedial design and/or remedial action.

Comment #5: A commenter asked if there would be a consideration/concern about any future liability issues with burying the soil offsite versus burning it.

EPA Response: The selected disposal facility(ies) for the contaminated soil will be in compliance with all federal and state laws and regulations. EPA does not anticipate any future liability issues.

Comment #6: A commenter asked if there were any underground storage tanks (UST) located at the Unimatic property and if the tanks were leaking.

EPA Response: There were several USTs located at the Unimatic property. Between 2003 and 2011, GZA GeoEnvironmental, Inc. (GZA), a contractor for Unimatic, removed all USTs from the site. Soil samples collected from the former USTs areas indicated that the USTs were leaking PCBs into the soil and groundwater.

Comment #7: A commenter asked where the pesticides originated from.

EPA Response: It is unclear from the data and the history of Unimatic's operations what the exact origin of the pesticides was. However, since high concentrations of pesticides are co-located with the PCBs, EPA believes that pesticides were once used/disposed of at the site.

Comment #8: Prior to 1955, were there any other buildings on the site that might have contributed to contamination of the site prior to Unimatic's operations.

EPA Response: Aerial photographs of the area that were examined by EPA did not show any evidence of any other building prior to Unimatic's operations at the site. The aerial photographs before 1955 indicate that the land was either undeveloped or was being used for agricultural purposes.

Comment #9: A commenter asked when the site aerial photographs were taken.

EPA Response: Aerial photographs of the site that EPA reviewed were taken between 1931 and 1979.

Comment #10: Does one of the alternatives that was considered include removal of contaminated soil, then treating it, and then putting it back into the excavated area of the site?

EPA Response: Alternative 5 includes removal of contaminated soil, thermal treatment and placement of the treated soil back into the excavation.

Comment #11: A commenter asked what the benefit is of treating the soil in place with injections or letting natural attenuation occur versus removing it, treating it, and placing it back, and then topping it off with clean soil?

EPA Response: EPA does not believe that the PCBs and pesticides contamination will benefit significantly from natural attenuation at this site.

Alternatives 2 and 3 involve treatment of contaminated soil in place with injections. Alternative 3 would use in-situ stabilization/in-situ solidification (ISIS) mix to treat all soils with contaminant levels above remediation goals. The impact of an increase in volume caused by the ISS treatment process would be greater under Alternative 3 than Alternative 2 since Alternative 2 is more of a hot spot approach. The ISIS may cause an unacceptably large change to site elevations. Alternatives 3 and 2, respectively, would leave the largest and second largest amount of contaminants behind and the presence of the stabilized material, particularly for Alternative 3, would limit options for future re-use of the site. Both Alternatives 2 and 3 would require ongoing inspection, maintenance, and monitoring activities of the soil cap placed over the ISS-treated soils. Alternatives 2 and 3, respectively, would provide moderate and low to moderate long-term effectiveness and permanence. While ISS has been successfully implemented at many sites and is considered a reliable technology to immobilize organic contaminants such as PCBs, toxicity would not be reduced and volume would increase. Alternative 3 would leave the largest amount of residual contamination, including the principal threat waste, behind; while Alternative 2 would leave the second largest amount of residual contamination behind, but all principal threat waste would be removed under Alternative 2. As a result, placement and long-term inspection, monitoring and maintenance of a soil cap to eliminate or minimize residual risks from the treated soil would be required as part of the alternatives. Alternative 2 would leave the second largest amount of residual contamination behind, but all principal threat waste would be removed. With regard to short-term impacts, Alternatives 2 and 3 may provide some slight benefits compared with Alternative 4 but these impacts are short-lived and not expected to be significant in any case. Removing, treating and putting back the soil does not provide any additional long term benefits compared with removal and off-site disposal.

Comment #12: Several commenters asked how long before construction would start. How will EPA select the contractor to do the work? Will there be competitive bidding? Is CDM-Smith going to put the remediation plan together and submit it to EPA?

EPA Response: Prior to construction, EPA will issue a Record of Decision to document the selected remedy to clean up the site. A remedial design (RD) is the next step which should take up to 18-24 months to complete. Work plans will be developed during the RD. The next step is construction of the Remedial Action (RA). EPA may choose to enter into an Interagency Agreement with the U.S. Army Corps of Engineers (USACE) as the general contractor. From a pool of their construction contractors a competitive bidding process will occur and the construction contractor will be selected to complete the cleanup.

Comment #13: In the Proposed Plan it indicates that a deed notice would be required for the Unimatic property and that the goal of the soil cleanup for the adjacent properties located at 21 and 30 Sherwood Lane and the JCMUA property would be cleaned up to residential standards but a deed notice would also be required at these properties if the residential numbers cannot be attained.

EPA Response: EPA expects that the soil cleanup for the contaminated soils at 21 Sherwood Lane, the JCMUA property and 30 Sherwood Lane resulting from the activities at Unimatic may attain the NJRDCSCS and would not require a deed notice. The limited extent and small volume of contaminated soil present on those properties may allow for attainment of the NJRDCSCS. A deed notice will be recorded for the JCMUA property, 21 Sherwood Lane or 30 Sherwood Lane if the NJRDCSCS cannot be attained. The deed notice would be required if it's determined that the extent and volume of soil above the NJRDCSCS is larger than indicated by current soil data. The deed notice would limit the properties for non-residential use only and provide a description of contamination remaining on-site, the use restrictions, and a map to show the area for restricted use.

Comment #14: A commenter asked that in the event the NJRDCSCS cannot be attained will EPA negotiate directly with the property owners about accepting the deed notice.

EPA Response: EPA would deal directly with the property owners regarding the deed notice.

Comment #15: A commenter asked if this will be an EPA-funded cleanup versus funded by potentially responsible parties.

EPA Response: EPA anticipates this will be an EPA-funded cleanup. EPA will continue its search for potentially responsible parties to pay for the cleanup.

Part II – Written Comments

Comment #1: Several commenters wrote asking how to get on a list of contractors able to bid on any contracts relating to the cleanup of the site.

EPA Response: In order to receive a contract directly from the federal government, you must be registered to do business on the System for Award Management (SAM) website. You can register your Entity (business, individual, or government agency) to do business with the federal government. If you are interested in registering to do business with the government you must first create a user account at the following https://www.sam.gov/portal/public/SAM/.

Comment #2: A commenter wrote of an interest in learning about the data being used for decision-making at the site and who performed the data validation at the site; was data validation performed by EPA or a third party (i.e., not by the sampling consultant).

EPA Response: The data validation for the RI was performed by EPA.

Comment #3: A commenter wrote that the presentation from the public meeting was not posted.

EPA Response: The presentation slides were uploaded to EPA's Unimatic website. https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0206578

Comment #3: A commenter expressed concerns that although both Alternative 3 and 4 met the 7 technical evaluation criteria, Alternative 4 was selected instead of Alternative 3. The concern is that Alternative 4 is $11.7 million more than Alternative 3, the least expensive alternative (besides the no action alternative).

EPA Response: EPA expects that the selected remedy will satisfy the statutory requirements of CERCLA Section 121(b): 1) be protective of human health and the environment; 2) comply with ARARs; 3) be cost effective over the long-term; and 4) utilize treatment technologies or resource recovery technologies to the maximum extent practicable. The selected remedy will satisfy the preference for treatment as a principal element for those soils sent off-site and treated to meet land disposal regulations.

Alternative 3 would require meeting chemical-specific ARARs. This would be dependent on developing an effective ISIS mix. This would require testing the long-term effectiveness of in-situ treated PCB and pesticide contaminated soils in contact with groundwater highly contaminated with volatile organic compounds (VOCs). VOCs negatively impact curing, material physical properties and long-term permanence of the ISIS matrix. This could require extensive treatability testing that likely would delay implementation of the remedy and if unsuccessful require remedy revision. Alternative 4 will meet chemical-specific ARARs since all soils above remediation goals will be removed from the site.

Alternative 4 provides the highest degree of long-term protectiveness and permanence. All contaminated building debris and contaminated soil associated with the principal threat waste will be removed from the site and the excavated area will be backfilled with clean soil. Although Alternative 3 would prevent further migration of contaminants of concern to groundwater and off-site surface water by minimizing the availability of contaminants to the environment if a suitable matrix could be developed, there is less uncertainty with Alternative 4 since all contaminated soil would be removed from contact with volatile organic contaminated groundwater which may act to destabilize treated soils or interfere with curing of the ISIS process and result in establishment of a potential long-term source of PCB and/or pesticide groundwater contamination.

Alternative 4 eliminates the potential for mobility of contaminants since all contaminated soils above the remediation goals will be removed. The soils will be sent to regulated facilities in compliance with federal and state statutes and regulations and therefore will not pose a risk due to toxicity or volume. Alternative 3 would reduce the mobility of contaminants if a successful ISIS matrix can be developed but the volume of contaminated material would increase and toxicity of the contamination will not change. Alternative 3 would result in the largest amount of waste left on-site including the principal threat waste of all alternatives (except the no action alternative).

Both Alternatives 3 and 4 have some short term impacts to the community. Alternative 4 will require more short-term truck traffic but this results in the most permanent long-term remedy, while Alternative 3 would have impacts and result in a less certain long-term remedy. Vibration, noise and potentially dust generation could occur with both Alternatives 3 and 4 but are manageable with proper monitoring.

Both Alternatives 3 and 4 are implementable. However, Alternative 3 would require extensive bench and pilot testing to develop a suitable ISIS matrix that will have demonstrated long-term acceptable performance to ensure the waste does not return as a source of PCB and pesticide groundwater contamination. Alternative 3 would be much less implementable if subsurface structures or large subsurface rocks or boulders are present. They would present significant implementation challenges and might require significant excavation, impact effectiveness and increase cost. Both the increase in volume and the physical nature of the material (ISIS will change the chemical physical properties of the soil matrix and a potentially successful treatment matrix might render the material unsuitable for future building) might impact future beneficial uses of the site.

Attachment A: Proposed Plan

Superfund Program
Proposed Plan

U.S. Environmental Protection Agency
Region 2

Unimatic Manufacturing Corporation Superfund Site

Fairfield, New Jersey

July 2016

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan describes the remedial alternatives that the United States Environmental Protection Agency (EPA) considered to remediate the contaminated soils and building at the Unimatic Manufacturing Corporation Superfund site, and identifies EPA's preferred alternative along with the reasons for this preference.

This is the first of two operable units or cleanup phases planned for the site. The first operable unit (OU1), which is the subject of this Proposed Plan, will address the contaminated building, debris, and soil associated with the site. The second operable (OU2) will address groundwater and sediment. The preferred alternative for OU1 calls for the demolition of the Unimatic Manufacturing Corporation (Unimatic) building located at 25 Sherwood Lane in Fairfield, New Jersey, and excavation of soil above preliminary remediation goals at the Unimatic, 30 Sherwood Lane, 21 Sherwood Lane and Jersey City Municipal Utilities Authority (JCMUA) properties. After excavation, the contaminated soils will be sent for treatment/off-site disposal at an EPA approved/permitted facility. The excavated areas would then be backfilled with imported clean uncontaminated soils and the areas graded for positive drainage.

This document is issued by EPA, the lead agency for site activities, and the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select the final remedy for the site after reviewing and considering all information submitted during a 30-day public comment period. EPA, in consultation with NJDEP, may modify the preferred alternative or select another action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all alternatives presented in this document.

MARK YOUR CALENDARS

Public Comment Period

July 22, 2016 to August 22, 2016
EPA will accept written comments on the Proposed Plan during the public comment period.

Public Meeting

August 10, 2016 at 7:00 P.M.
EPA will hold a public meeting to explain the Proposed Plan and all of the alternatives presented in the Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held at the Fairfield Municipal Building, 230 Fairfield Road, Fairfield, N.J.

The Administrative Record files are available for public review at the following information repositories:

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

Fairfield Municipal Building
230 Fairfield Road, Fairfield, New Jersey
(973) 882-2700

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 Remedial Investigation (RI) Report – Unimatic Manufacturing Corporation Superfund Site and the Feasibility Study (FS) Report - Unimatic Manufacturing Corporation Superfund Site, as well as in other documents contained in the Administrative Record for this site. The location of the Administrative Record is provided in the "Mark Your Calendars" text box on Page 1.

SITE DESCRIPTION

The site is located at 25 Sherwood Lane, in a primarily light industrial area of Fairfield, with residential subdivisions located approximately 800 feet to the northeast (Figure 1). The property covers approximately 1.23 acres and contains a centrally located 22,000-square-foot building and a partially paved parking lot. The site is bounded to the northwest by 21 Sherwood Lane, to the northeast by 30 Sherwood Lane, and to the north by the JCMUA property (Figure 2).

An underground storm water drain to the north of the site feeds an unnamed tributary of Deepavaal Brook. The storm drain, which collects nearly all surficial runoff from the site, flows west to the unnamed tributary and into Deepavaal Brook, which flows for 1.5 miles and empties into the Passaic River. A 2003 NJDEP groundwater classification exception area (CEA) not associated with the site restricts the use of groundwater in the vicinity of the site to non-potable uses.

SITE HISTORY

Unimatic operated an aluminum die casting manufacturing process from 1955 until 2001. The original building was constructed at the center of the property in 1955 and was expanded twice by 1970, resulting in its current size of 22,000 square feet.

The high pressure aluminum die casting process required an aluminum alloy to be heated to approximately 1,200°F in a natural gas-powered kiln. The molten aluminum alloy was then injected into a mold under high pressure. Prior to injecting the molten alloy into the mold, the heated mold was coated with mineral spirits mixed with a semi-solid product to create a mold spray called a mold releasing agent. This releasing agent prevented the aluminum from adhering to the molds. In 1987, Unimatic began using commercially-made lubricants instead of mineral spirits to pre-coat the molds.

Reportedly, the lubricating oil contained polychlorinated biphenyls (PCBs). The lubricating oil was sprayed throughout the shop area and overspray covered the floor and walls to a height of approximately 8 feet. Unimatic washed the PCB-contaminated oil from the floor and walls into floor trenches, which subsequently conveyed the PCB-contaminated wash water to the wastewater pipes located on the northeastern side of the building. The wastewater pipes consisted of both cast concrete and corrugated perforated steel that leaked contaminated wastewater into the underlying soil and groundwater prior to discharging at the northeast corner of the property. The perforated wastewater pipe resulted in PCB-contaminated water discharging onto 30 Sherwood Lane and the JCMUA property. Reportedly, active PCB use at the site ended in approximately 1979 when PCBs were banned nationwide. The wastewater was discharged under a NJDEP National Pollutant Discharge Elimination System (NPDES) permit.

The permit indicated that Unimatic discharged production waste and wastewater through the leaking wastewater pipes from at least 1980 until 1988 at volumes ranging from 16,000 to 86,400 gallons per day. EPA and the NJDEP issued numerous noncompliance and violation notices to Unimatic beginning in 1982; however, Unimatic continued to discharge large volumes of contaminated water through more than 200 feet of leaking wastewater pipe until at least 1988.

In December 2001, GZA Environmental, Inc., (GZA), a contractor for Unimatic, conducted an investigation to determine if the area around the wastewater pipe was contaminated with PCBs. The results of this investigation indicated the presence of PCBs, above the NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NJNRDCSRS), to depths of at least 21 feet below ground surface (bgs) and in the water table, which was encountered at a depth of 18 bgs. In 2001, Unimatic ceased operations and GZA removed the wastewater pipe and purportedly excavated the PCB-contaminated soil down to the water table in the vicinity of the former wastewater pipe.

In April 2002, Unimatic sold the property to Cardean, LLC. Cardean, LLC leased the property to Frameware, Inc.

Between 2003 and 2011, GZA conducted several other soil investigations at the site which resulted in the removal of three above-ground storage tanks and one underground storage tank. In addition, approximately 4,800 tons of PCB- contaminated soil were purportedly excavated and removed from the site during various stages of remediation.

In response to a May 9, 2012 request from NJDEP for a removal action assessment, EPA initiated a removal site evaluation (RSE) to determine if a removal action was warranted at the site. EPA investigations included an extensive surficial soil sampling event and a building interior sampling event for PCBs including sampling of air, concrete chips, building surfaces (walls and floor), dust, and materials from items within the facility. The results of the investigation indicated a release of PCBs to the environment from the building and confirmed that past cleanup efforts at the site had not adequately addressed the PCBs in surface soils. The results of the interior sampling event indicated that the building interior, including the walls and floors, were contaminated with high levels of PCBs.

On March 8, 2013, based on the EPA's data, the New Jersey Department of Health (NJDOH) issued a letter to NJDEP categorizing the current and future use of the site as a public health hazard and recommended the relocation of the workers. In July 2013, in response to the NJDOH recommendation, Frameware, Inc., vacated the building and moved its operation to a new facility.

Based on the data collected as part of the EPA RSE, along with the site history and the GZA data, a hazard ranking system package was prepared and the site was added to the National Priorities List (NPL) on May 8, 2014.

In April 2015, NJDEP installed a chain link fence around the site to secure the site from trespassers.

In June 2015, EPA initiated a RI/FS at the site to determine and fully define the nature and extent of contaminated soil, the contamination found in the building structures/materials, and in the soil beneath the building. A limited groundwater investigation was conducted for the purpose of obtaining preliminary geological and hydrogeological data and to estimate the costs required to remediate the contaminated soil and the building. However, a comprehensive groundwater investigation (OU2) is planned to determine the full extent and nature of the groundwater contamination at the site.

SITE CHARACTERISTICS

Physical Setting of the Site

The Unimatic property sits at a higher elevation than surrounding properties; topography generally grades from the front (southwest) to the back (northeast), sloping away from the facility in all directions. Most of the runoff on the property flows north, northwest, and northeast toward the adjacent properties at 21 and 30 Sherwood Lane and toward the JCMUA property, which is 6 to 8 feet lower in elevation than the Unimatic Property. During heavy rainfall conditions, runoff from the site drains to the JCMUA property and then to a stormwater basin adjacent to the parking lot to the north, which directs stormwater runoff from the site and the adjacent parking lot to the west, discharging to one of the unnamed tributaries of Deepavaal Brook which feeds the Passaic River.

Site Geology and Hydrogeology

Soils at the site are made up of three distinct layers, with a total depth of approximately 30 to 40 feet. From oldest to youngest (bottom to top), the layers encountered include 10 to 12 feet of stratified coarse sands and gravels of glacial origin. Overlying the coarse glacial deposits on the northern half of the site is a 10- to 12-foot thick silty clay unit, which appears to pinch out at the northern edge of the Unimatic building. The youngest and most shallow facies observed on the site consists of 15 to 20 feet of silty sands. Above the silty sand at the site, approximately 2 to 10 feet of sandy fill appears to have been used to level the surface of the property. In several areas, the fill is similar to native materials, likely a result of being reworked during site development.

During previous response actions, the site purportedly underwent extensive excavation of PCB-contaminated soils and eventual backfill. Gravelly fill was reportedly brought to the site, but it is likely excavated soils were backfilled into the excavations as well. Underlying the unconsolidated soils is the Preakness Mountain Basalt Formation, which was encountered between approximately 34 to 50 feet bgs.

In the site vicinity, groundwater occurs in both the overlying unconsolidated soils and the underlying Preakness Basalt bedrock. During the investigation, groundwater was encountered between 7 and 15 feet bgs within the unconsolidated soils. Groundwater in both the overburden and bedrock in the area generally flows in a northerly direction toward the Passaic River. Overburden aquifers in the study area are hydraulically connected with the underlying bedrock aquifers. The presence of a shallow clay layer in the northern portion of the site acts as an aquitard, complicating localized groundwater flow.

Nature and Extent of Contamination

The contaminants of concern in the soil at the site are PCBs and pesticides. PCBs were detected in the Unimatic building materials/structures, soil beneath the Unimatic building, soil on the Unimatic property, soil at the JCMUA property, and in soil at 21 and 30 Sherwood Lane. Pesticides were detected mostly in the soil beneath the Unimatic building and on the northeastern side of the building and are collocated with PCBs.

PCBs were found throughout the Unimatic building with high levels of PCBs encountered in the concrete floors, walls, and on surfaces in rooms where active manufacturing processes took place. The highest concentration of PCBs detected in the building materials, which includes the floor surface, walls, and concrete cores, was 1,900 parts per million (ppm).

Under the building, PCB concentrations exceeding 50 ppm were found in soils ranging from ground surface to just above the water table, primarily in the northeastern portion of the building (the former casting room and the former receiving room). This area includes the primary production areas of the building where several floor trenches and pits were located. The highest concentration of PCBs (7,000 ppm) was detected in soil borings beneath the building between 2 and 6 feet bgs.

The former wastewater pipe located in the northeast portion of the site was used to convey PCB-contaminated wastewater from the Unimatic building to the storm water drain located on the JCMUA property. The perforated pipe also leaked PCB-contaminated wastewater into the soil at 30 Sherwood Lane. Soils near the former wastewater pipe contained some of the highest concentrations of total PCBs. The highest PCB concentration in surface soils in the former wastewater pipe area from 0 to 2 feet bgs at 2,300 ppm. The highest PCB concentration in subsurface soils in this area was observed from 6 to 10 feet bgs at 970 ppm.

The 21 Sherwood Lane property is located on the western side of the Unimatic Property. PCB contamination potentially traveled to this property through surface water runoff and PCB particulate deposition from the facility fan vents on the western side of the Unimatic building. Five soil borings were advanced at the 21 Sherwood Lane property to delineate the western extent of contamination from the Unimatic Property. PCBs were detected in 21 of the 28 soil samples collected, with total concentrations up to 10 ppm. Only one sample (0 to 2 feet bgs) on the 21 Sherwood Lane property exceeded the NJNRDCSR of 1 ppm.

Aldrin and dieldrin were the two main pesticides detected above NJNRDCSRS criteria of 0.2 ppm in surface soils (0 to 2 feet bgs) throughout the site and in a third of the samples from 2 to 6 feet bgs. Elevated concentrations include: areas below the northern portion of the facility; the entire eastern side of the site, including previously excavated areas adjacent to the property at 30 Sherwood Lane; and north of the building, generally decreasing in concentration moving north. Only dieldrin exceeded the NJNRDCSRS criteria on the JCMUA property. No pesticides exceeded the NJNRDCSRS criteria on the 21 Sherwood Lane property. Although unassociated with elevated risk, several additional pesticides (4,4'-DDE, 4,4'-DDT, alpha- and gamma-chlordane, and lindane) were found in soils at concentrations exceeding New Jersey Impact to Groundwater (IGW) default screening levels and were generally collocated with PCB detections.

Other contaminants detected in the soil of the site include: Semi-volatile compounds and volatile organic compounds. No volatile organic compounds detected exceeded the NJNRDCSRS. Only three polycyclic aromatic hydrocarbons (PAHs) were detected above the NJNRDCSRS. Nearly all were detected on either 21 Sherwood Lane property or the JCMUA property suggesting that PAHs are not related to the Unimatic property. Manganese (248 ppm) was the only metal detection exceeding the NJNRDCSRS at one location at the site. At the Unimatic property these contaminants are co-located with the PCBs and pesticides so the remediation of the PCBs and pesticides should remediate the other contaminants.

Groundwater samples were collected from 11 previously installed on-site wells. Total PCBs exceeded the groundwater RI screening criterion of 0.039 parts per billion in all monitoring wells, with the exception of monitoring well MW-1.

Further remedial investigations are needed before a remedy can be selected for groundwater and sediment. A comprehensive groundwater and sediment investigation is planned to determine the full extent and nature of the groundwater contamination at the site as part of a separate operable unit.

Figure 2 summarizes the extent of the soils contamination delineated during the RI.

SCOPE AND ROLE OF ACTION

The overall strategy for the Unimatic site is to remove principal threat waste and prevent human exposure to the PCB and pesticide contamination. EPA is addressing the cleanup in two phases, called operable units. This Proposed Plan addresses OU1: the Unimatic building, PCB and pesticide-contaminated soil on the Unimatic property, the JCMUA property, and on the two adjacent properties (21 and 30 Sherwood Lane).

The soil is a continuing source of groundwater contamination and is allowing PCBs and other contaminants to migrate from the site. The contaminated groundwater and sediment will be addressed in OU2; however, removing the contaminated soil will remove the source of the groundwater contamination.

PRINCIPAL THREAT WASTE

The areas of the site, with the highest soil contamination are located under the Unimatic building, along the eastern side of the property and on the adjacent 30 Sherwood Lane property. The highest detected PCB concentration of 7,000 ppm, is an order of magnitude above the principal threat waste guidance value discussed in the inset box on this page. This highly contaminated soil poses direct contact risks to human health (risks for current and future workers are greater than EPA's target cancer risk range under the reasonable maximum exposure (RME) scenario, and risks for current and future workers, construction workers and trespassers exceed EPA's target noncancer risk under the RME scenario) and also acts as a continuous source of groundwater contamination.

WHAT IS A "PRINCIPAL THREAT"?

The National Oil and Hazardous Substances Contingency Plan (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 groundwater, surface water or air, or acts as a source for direct exposure. 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. EPA's August 1990 guidance, entitled: "A Guide on Remedial Actions at Superfund Sites with PCB Contamination," states that principal threats will include soils contaminated at industrial sites at concentrations greater than or equal to 500 ppm total PCBs. 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. In accordance with the EPA guidance, treatment alternatives are considered for the principal threat wastes at the site. In instances where treatment is not implementable, other methods such as removal or containment that significantly reduce or eliminate the risks due to principal threat wastes are considered.

SUMMARY OF SITE RISKS

As part of the RI/FS, a baseline human health risk assessment (HHRA) was conducted to estimate the risks and hazards associated with the current and future effects of contaminants on human health and the environment. A screening-level ecological risk assessment (SLERA) was also conducted to assess the risk posed to ecological receptors due to site-related contamination. The purpose of the baseline risk assessment is to identify potential cancer risks and noncancer health hazards 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.

In the HHRA, cancer risk and noncancer health hazard estimates are based on current reasonable RME scenarios. The estimates 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 potential concerns (CPOCs), as well as the toxicity of these contaminants.

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").

Contaminants of potential concern (CPOCs) were selected by comparing the maximum detected concentrations of each analyses with state and federal risk-based screening values. Risks and hazards from groundwater and sediment are not presented in this Proposed Plan and are being evaluated separately and will be part of future decisions regarding the site. The current and future land use scenarios included the following exposure pathways and populations based on data collected at the Unimatic property, 21 Sherwood Lane, 30 Sherwood Lane, and the JCMUA properties:

- Site Worker (adult): ingestion, dermal contact, and inhalation of soil particles and vapors from surface soils and inhalation of indoor air via vapor intrusion

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 chemicals of potential concern (COPCs) 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 noncancer 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 noncancer 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 COPCs. Exposures are evaluated based on the potential risk of developing cancer and the potential for noncancer 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 noncancer health effects, a "hazard index" (HI) is calculated. The key concept for a noncancer HI is that a "threshold" (measured as an HI of less than or equal to 1) exists below which noncancer health hazards are not expected to occur. The goal of protection is 10^{-6} for cancer risk and an HI of 1 for a noncancer 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.

- Trespassers (adult): ingestion, dermal contact and inhalation of soil particles and vapors from surface soil
- Construction/Utility Workers (adult): ingestion, dermal contact and inhalation of soil particles and vapors from both surface and subsurface soil (0-10 feet)

In this assessment, exposure point concentrations were estimated using either the maximum detected concentration of a contaminant or the 95% upper-confidence limit (UCL) of the average concentration. Chronic daily intakes were calculated based on the (reasonable maximum exposure) RME, which is the highest exposure reasonably anticipated to occur at the site. The RME is intended to estimate a conservative exposure scenario that is still within the range of possible exposures.

Adult exposure scenarios were solely evaluated in the HHRA since the site and immediately adjacent properties are industrial. Therefore, child or adolescent receptors are not assumed to be present. In addition, exposure assumptions used to calculate hazard and risk to the adult site worker are more conservative than the adolescent trespasser scenario. It is, therefore, understood that the preferred alternative proposed to limit health risks to the adult site worker would also be protective of an adolescent trespasser. A complete summary of all exposure scenarios can be found in the baseline human health risk assessment.

Summary of the Human Health Risk Assessment

Soil

Risks and hazards were evaluated for current and future exposure to surface and subsurface soil on-site. The populations of interest included adult site workers and adult trespassers for surface soil and adult construction/utility workers for surface and subsurface soil. The cancer risks for each of the receptor populations evaluated were within the acceptable EPA risk range of 1.0×10^{-6} to 1.0E-04 with the exception of the adult site worker, which was slightly above the acceptable cancer risk range (Table A). The primary contaminant associated with the elevated cancer risk is Aroclor 1248 via the ingestion and dermal contact pathway, although pesticides, including aldrin, dieldrin, heptachlor and heptachlor epoxide, contributed as well.

Although unassociated with elevated risk, several additional pesticides (4,4’-DDE, 4,4’-DDT, alpha- and gamma-chlordane, and lindane) were found in soils at concentrations exceeding New Jersey Impact to Groundwater (IGW) default screening levels and were generally collocated with PCB detections. The non-cancer hazards were above the EPA acceptable value of 1 due to Aroclor 1248 for each receptor population evaluated via ingestion and dermal contact.

Table A. Summary of hazards and risks associated with soil*.

Receptor	Hazard Index	Cancer Risk
Site Worker – current	**27**	**5E-04**
Site Worker – future	**18**	**3E-04**
Trespasser – current	**18**	9E-05
Trespasser – future	**12**	6E-05
Construction Worker – current	**27**	2E-05
Construction Worker – future	**27**	2E-05

*Bold indicates value above the acceptable risk range or value.

Vapor Intrusion

Indoor air samples analyzed for PCB Aroclors were compared to vapor intrusion screening levels (VISLs) based on a cancer risk of 1.0E-06 and hazard quotient of 1 for commercial buildings. Aroclor 1242 was the only detected Aroclor exceeding the respective VISL and was further identified at levels exceeding a cancer risk of 1.0E-04, thus indicating that current and future workers may be exposed via inhalation of vapor emanating into ambient air via vaporization from contaminated building materials.

Ecological Risk Assessment

As a part of the RI, a SLERA was conducted to evaluate the potential for risk to ecological receptors from the contaminated soil. As part of this assessment, an ecological reconnaissance was performed at the site to characterize and identify potential habitat and biota. Also, the maximum concentrations of the contaminants in surface soil at the site were compared to ecological screening levels (ESLs) to derive a screening level hazard quotient (HQ). If resultant HQs are greater than unity (1), risk is implied. An HQ less than 1suggests there is a high degree of confidence that minimal risk exists and, therefore, are considered insignificant.

The comparisons of maximum detected concentrations of chemicals in surface soil to conservative ESLs resulted in potential ecological risk. Specifically, HQs greater than unity were calculated for PCBs, SVOCs, pesticides, and metals. However, the ecological reconnaissance conducted at the site concluded that the site has limited vegetation and wildlife and little to no viable habitat to support ecological receptors.

The site and the surrounding area are primarily light-industrial, and based on observations made during the ecological reconnaissance, no ecological function is expected. Additionally, the site is not managed for ecological use and does not appear to offer any appreciable ecological attractiveness. All of these findings indicate that ecological risks at the site are negligible. Thus, it is recommended that no further ecological investigation is warranted to evaluate the potential for risks to ecological receptors from exposure to contaminants at the site.

Risk Assessment Summary

It is EPA's judgment that the Preferred Alternative identified in this Proposed Plan is necessary to limit potential human health risks from actual or threatened releases of hazardous substances into the environment.

REMEDIAL ACTION OBJECTIVES

Before developing cleanup alternatives for a Superfund site, EPA establishes remedial action objectives (RAOs) to protect human health and the environment. RAOs are specific goals to protect human health and the environment. These objectives are based on available information and standards, such as applicable or relevant and appropriate requirements (ARARS), to-be-considered (TBC) guidance, and site-specific, risk-based levels.

The human health risk assessment showed that the contaminants of concern (COCs) at the site are PCBs and pesticides. PCBs and pesticides pose a risk to human health through ingestion of and dermal contact with the soil and inhalation of soil particulates. The following RAOs address the human health risks posed by contaminated soil at the site:

- Reduce or eliminate human exposure via inhalation, incidental ingestion, and dermal absorption to contamination present within the site building.
- Reduce or eliminate the human exposure threat via inhalation, incidental ingestion, and dermal adsorption to contaminated site soils to levels protective of current land and anticipated future use.
- Prevent/minimize the migration of site contaminants off site through surface runoff and storm sewer discharge
- Prevent/minimize the migration of contamination in soil to groundwater and sediment.

In order to meet the RAOs, the Unimatic building will need to be demolished. The building is unusable due to the presence of PCBs inside the building and the risks of inhalation by future workers or other occupants.

Although the building is currently unoccupied, there is a threat of release to the environment posed by the uncontrolled PCBs inside the building due to fire or other outside causes. Left unattended, the building will deteriorate and fall into disrepair increasing the likelihood of a release to the environment. In addition, the building covers approximately 40% of the 1.23-acre Unimatic property. A significant portion of the soils contamination, including principal threat waste, is located underneath the building and could not be remediated without demolition of the building.

The lack of space on the Unimatic property without demolition of the building would make implementation of any of the potential remedial alternatives very difficult or impossible. In order to mitigate these risks, address the contamination including the principal threat waste beneath the building, and meet RAOs identified for the site, it will be necessary to demolish the building.

Demolition of the building will prevent human exposure to building contaminants and will prevent the migration of contamination sources to the environment through off-site disposal of the contaminated building materials.

To achieve the remediation of the site, EPA has established Preliminary Remediation Goals (PRGs) which it will use to clean-up the site. The PRGs for the site are shown in Table 1. PRGs are developed for the COCs identified in this document to aid in defining the extent of the contaminated media requiring remedial action. PRGs are generally chemical-specific remediation goals for each medium and/or exposure route that are established to protect human health and the environment. They can be derived from ARARs, risk-based levels (human health and ecological), and from comparison to background concentrations, where available.

Consideration can also be given to analytical detection limits, guidance values, and other pertinent information. At the site, PCBs are identified as one of the primary COCs in the soil. The PRGs for the PCB contamination is the NJDEP Non-Residential Direct Contact Soil Remediation Standard (NJNRDCSRS) of 1 ppm.

Other contaminants detected in the soil are co-located with the PCBs; therefore, remediating PCBs to meet the PRG will also remediate the other contaminants that were detected in the soil to their respective PRGs.

SUMMARY OF REMEDIAL ALTERNATIVES

CERCLA Section 121(b)(1), 42 U.S.C. Section 9621(b)(1) requires that each selected site 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 practicable. In addition, the statute includes a preference for the use of treatment as a principal element for the reduction of toxicity, mobility, or volume of the hazardous substances.

Potentially applicable technologies were identified and screened with emphasis on the effectiveness of the remedial action. Those technologies that passed the initial screening were then assembled into five remedial alternatives. In addition, the no-action alternative was evaluated. The timeframes below for construction do not include the time for designing the remedy or the time to procure necessary contracts.

Common Elements for Alternatives 2, 3, 4, 5, and 6

Demolition of Unimatic building -To prevent exposure to PCBs from the building and to remediate soil contamination including the principal threat waste located beneath the building, the building would be demolished, including the building slab and foundation. The debris would be segregated based on the level of PCB contamination. PCB concentration greater than 50 ppm is considered Toxic Substances Control Act (TSCA) PCB waste and will be managed in accordance with TSCA regulations. Therefore, building materials with PCB concentrations > 50 ppm would be disposed of in a Toxic Substances Control Act (TSCA) landfill; building materials with PCB concentrations < 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill.

30 Sherwood Lane, JCMUA property, and 21 Sherwood Lane soils remediation - For the 30 Sherwood Lane, JCMUA and 21 Sherwood Lane properties, contaminated soil resulting from Unimatic activities that exceed PRGs would be removed to eliminate the direct contact risks, and the excavated area would be backfilled with imported clean fill. Removal of the soil contamination within the JCMUA pipeline easement would also prevent contaminant migration through surface runoff to the stormwater inlet.

Institutional Controls – A deed notice would be required for the Unimatic property. The goal of the soil cleanup for the contaminated soils at 21 Sherwood Lane, the JCMUA property and 30 Sherwood Lane resulting from the activities at the Unimatic site is to attain the New Jersey Residential Direct Contact Soil Cleanup Standards

(NJRDCSCS). A deed notice would be recorded for the JCMUA property, 21 or 30 Sherwood Lanes if the NJRDCSCS cannot be attained. The deed notice would limit the properties for non-residential use only and provide a description of contamination remaining on site, the use restrictions, and a map to show the area for restricted use if a cap is installed on site.

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

For the cost estimates of each alternative, EPA assumed that it would take 30 years to implement the remedy. However, the time required to achieve the soil remediation and meet RAOs is less than 30 years for all of the alternatives and only monitoring costs for the alternative that require long-term monitoring would have a cost estimate beyond the time required to achieve the soil remediation standard.

Alternative 1 - No Action

No work would be conducted under the No Action alternative. The No Action alternative was retained in accordance with the NCP to serve as a baseline for comparison with the other alternatives.

Total Capital Cost: $0
Operation and Maintenance: $0
Total Present Net Worth: $0
Estimated Construction Timeframe: 0 year

Alternative 2 – Excavation of Soils above 10 ppm PCBs to Water Table and Off-site Disposal, and In Situ Solidification/Stabilization (ISS) and Capping of Remaining Soils above PRGs

This alternative includes excavation of vadose zone contaminated soils. The contaminated soils exceeding 10 mg/kg of PCBs would be excavated to the water table (15 feet bgs). The value of 10 ppm was selected in accordance with EPA PCB guidance and is at the lower commercial/industrial PCB concentration recommended. It would represent a 'hot spot" approach and would leave PCB-contaminated soils above the NJNRDCSRS of 1 ppm for commercial/ industrial properties. Due to the limited space and that the excavation would be conducted to neighboring property boundaries at depth, sheet piles would be used to support the excavation as necessary.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the toxicity characteristic leaching procedure (TCLP) test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TCSA regulated landfill; soil with PCB concentrations < 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet to meet land disposal requirements (LDRs).

For FS cost-estimating purposes and based on RI data, it is assumed that approximately 1,000 cubic yards (cy) or 1,400 tons of the excavated soils would be considered hazardous waste. The remaining contaminated soil exceeding the PRGs (PCB concentrations between 1 and 10 mg/kg and pesticides exceeding the PRGs) would be consolidated into the excavation areas to level the excavated areas and prepare the areas for ISS.

Based on the volume estimates, approximately 10,000 cy of contaminated soil would be excavated for off-site disposal, and approximately 8,000 cy of contaminated soil would be consolidated into the excavated areas for treatment.

ISS is implemented either through soil mixing with an auger or jet grouting. The soil mixing with an auger is usually performed by a crane-mounted drill attachment that turns an auger with mixing blades. The treated column is generally 6 to 12 feet in diameter.

Soil volume will generally increase during treatment through expansion of ISS additives. As a result, the excavated/consolidated areas would need to be a few or several feet below grade prior to the ISS treatment. After consolidation, post-excavation samples would be collected as necessary to verify that the PRGs have been met for areas that would not be treated with ISS. After completion of ISS, a 1-foot compacted soil cap would be placed on top of the ISS treated area to eliminate the direct contact risks.

Annual inspection of the soil cap would be performed to ensure continued protection of human health from direct contact risks. The soil cap would be maintained as necessary. Groundwater samples would be collected from monitoring wells periodically to monitor if contaminants would leach over time.

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

Total Capital Cost: $13.9 million
Operation and Maintenance: $668,000
Total Present Net Worth: $14.3 million
Estimated Construction Timeframe: 1 year

Alternative 3 – In Situ Solidification/Stabilization and Capping of Soils above PRGs

Under this alternative, no soils would be excavated from the site for off-site disposal. All soils with COC concentrations exceeding PRGs of 1 ppm would be treated using ISS technology. Different equipment may be used for ISS of soil at different depths. The operation of ISS would be as described under Alternative 2. After completion of ISS, a 1-foot compacted soil cap would be placed on top of the ISS treated area to eliminate the direct contact risks. It should be noted that after ISS treatment, the soil volume would increase, and the final grade at the treated area would be higher than the original grade. The site would be graded for positive drainage. As necessary, the building debris would be treated off-site to meet to meet LDRs.

Annual inspection of the soil cap would be performed to ensure continued protection of human health from direct contact risks. The soil cap would be maintained as necessary. Groundwater samples would be collected from monitoring wells periodically to monitor if contaminants would leach over time.

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

Total Capital Cost: *$6.1 million*
Operation and Maintenance: *$668,000*
Total Present Net Worth: *$6.4 million*
Estimated Construction Timeframe: *1 year*

Alternative 4 –Excavation of Soils above PRGs, and Off-site Disposal

Under this alternative, contaminated soils exceeding the PRGs would be excavated. Dewatering would be necessary for excavation below the water table; sheet piling would be used for deep excavation support. Water generated from dewatering of excavation areas would be treated on site and discharged to the stormwater system. An NJDEP pollution discharge elimination system/discharge to surface water permit equivalent would be obtained.

Post-excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the toxicity characteristic leaching procedure (TCLP) test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TCSA regulated landfill; soil with PCB concentrations < 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet to meet LDRs.

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

Total Capital Cost: $ 18.1 million
Operation and Maintenance: $0
Total Present Net Worth: $18.1 million
Estimated Construction Timeframe: 1.5 years

Alternative 5 – Excavation and Onsite Treatment of Soils above PRGs, and Backfill of Treated Material

Implementation of this alternative would be similar to Alternative 4 except that excavated soils would be treated on site using a low temperature thermal desorption (LTTD) system. The treatment is expected to reduce contamination concentrations to meet the PRGs. Following treatment, soils would be backfilled on site in accordance with EPA and NJDEP site remediation regulations. Additional imported clean fill would be brought on site to complete the remedial action as necessary. Due to the limited space, excavation, thermal desorption, and backfill would need to be sequenced in several phases in order to treat all the soils above the PRGs. For the operation of the on-site low thermal desorption units, permit equivalents for air emission and for liquid waste disposal would be obtained as necessary.

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

Total Capital Cost: *$15.1 million*
Operation and Maintenance: *$0*
Total Present Net Worth: *$15.1 million*
Estimated Construction Timeframe: *2 years*

Alternative 6 –Targeted Excavation, and Offsite Disposal

This alternative is very similar to Alternative 4 except that excavation of contaminated soils below the water table would only be targeted to 10 times the PRGs and would represent a "hot spot" cleanup approach as discussed for Alternative 2.

Under this alternative, contaminated soils above the water table that exceed the PRGs would be excavated. Below the water table, excavation would be limited to those soils with COC concentrations exceeding 10 times the PRGs (*e.g.*, above 10 ppm PCBs). Dewatering would be necessary for excavation below the water table; sheet piling would be used for deep excavation support. Water generated from dewatering of excavation areas would be treated on site and discharged to the stormwater system. An NJDEP pollution discharge elimination system/discharge to surface water permit equivalent would be obtained.

Post excavation samples would be collected as necessary to verify that the cleanup standards are met. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas.

The excavated soils would be segregated into three categories for proper off-site disposal: hazardous waste due to failing the toxicity characteristic leaching procedure (TCLP) test, PCBs exceeding 50 ppm but did not fail TCLP, and non-hazardous waste with PCB concentrations between 1 and 50 ppm. Soil with PCB concentrations greater than 50 ppm is considered TSCA PCB waste and will be disposed of in a TCSA regulated landfill; soil with PCB concentrations < 50 ppm would be disposed of in a non-hazardous waste landfill, an industrial landfill, or a municipal landfill. As necessary, the excavated soil and debris would be treated off-site to meet to meet LDRs.

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

Total Capital Cost: $ 16.4 million
Operation and Maintenance: $0
Total Present Net Worth: $16.4 million
Estimated Construction Timeframe: 1 year

EVALUATION OF ALTERNATIVES

EPA uses nine criteria to assess remedial alternatives individually and compare them in order to select a remedy. The criteria are described in the box on the following page. 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. A detailed analysis of each of the alternatives is in the FS report. A summary of those analyses follows:

Overall Protection of Human Health and the Environment

Alternative 1 would not provide protection of human health and the environment. Alternative 6 would address direct contact and surface water runoff RAOs but would not address the impact to groundwater RAO as residual contaminated soil would continue to impact the groundwater quality.

Alternatives 2 to 5 would provide overall protection of human health and the environment. Alternatives 2, 3, and 4 would prevent further migration of COCs to groundwater, offsite surface water, and sediment by minimizing the availability of contaminants to the environment through ISS or removal and off-site disposal. Alternative 5 would prevent further migration of COCs to groundwater and offsite surface water by removing contaminants from soil via LTTD, with additional treatment implemented to address contaminants in the gas being released from the thermal treatment of the soil (off-gas). Since the off-gas would contain hazardous chemicals, residuals from off-gas treatment would be treated or disposed of at a permitted waste disposal facility. Under Alternative 6, some soils exceeding PRG concentrations would remain below the water table and would continue to impact the groundwater quality due to leaching of the contaminants.

Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)

Because no action would be taken under Alternative 1, the presence of unaddressed contaminated soil would not meet chemical-specific ARARs, and the presence of PCB contamination in the building would not meet TSCA requirements for re-using the building.

Alternatives 2, 3, and 4 would meet chemical-specific ARARs (TSCA [40 Code of Federal Regulations Part 761.61 – PCB Remediation Waste] and NJNRDCSRS through removal/off-site disposal and/or ISS of soils with COC concentrations exceeding PRGs. Alternative 5 would meet the chemical-specific ARARs for soils through LTTD treatment of excavated soils prior to backfilling the treated material on site. For Alternatives 2 and 3, meeting the chemical-specific ARARs would be dependent on developing an effective ISS mix for solidifying the COCs during treatability testing. For Alternative 6, soils with COC concentrations exceeding PRGs that remain below the water table would not meet the impact to groundwater PRGs (a "TBC" criterion).

Long-Term Effectiveness and Permanence

Alternative 1 would provide no long-term effectiveness and permanence because no action would be taken. Risks from the site contaminants would remain the same.

Alternative 4 would provide the highest degree of long-term protectiveness and permanence because contaminated building debris and soil above the PRGs, including the principal threat waste (concentrations greater than or equal to 500 ppm total PCBs), would be removed from the site. Alternative 5 would also provide a high degree of long-term effectiveness and permanence through the irreversible treatment of contaminated soil, including the principal threat waste to meet the PRGs prior to backfilling the treated material on site.

Alternatives 2 and 3, which both involve ISS of contaminated soil, would respectively provide moderate and low to moderate long-term effectiveness and permanence. While ISS has been successfully implemented at many sites and is considered a reliable technology to immobilize organic COCs such as PCBs, toxicity would not be reduced and volume would increase. Alternative 3 would leave the largest amount of residual contamination, including the principal threat waste, behind; while Alternative 2 would leave the second largest amount of residual contamination behind, but all principal threat waste would be removed under Alternative 2. As a result, placement and long-term inspection, monitoring and maintenance of a soil cap to eliminate or minimize residual risks from the treated soil would be required as part of the alternatives.

Long-term effectiveness and permanence of Alternatives 2 and 3 also would be dependent on the development of an effective ISS mix to address both

PCBs and pesticides. In addition, because groundwater is contaminated with VOCs and is likely to remain contaminated, the potential long-term impact of that groundwater on the stabilized materials would need to be assessed as part of the development of the ISS mix which creates uncertainty with respect to the long-term effectiveness and permanence.

Alternative 6 would not provide long-term effectiveness and permanence because untreated soil above PRGs would remain below the water table. Further remedial action would be required to address the residual contaminated soil that would remain under Alternative 6.

EVALUATION CRITERIA FOR SUPERFUND REMEDIAL ALTERNATIVES

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.

Compliance with ARARs evaluates whether the alternative meets federal and state environmental statutes, regulations, and other requirements that are legally applicable, or relevant and appropriate to the site, or whether a waiver is justified.

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

Reduction of Toxicity, Mobility, or Volume 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.

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.

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

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.

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.

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.

Reduction in Toxicity, Mobility, or Volume (T/M/V) through Treatment

Because no action would be taken, Alternative 1 would not address this criterion.

Alternative 5 would be rated high for this criterion. Thermal desorption is an irreversible treatment process, and there would be high reductions in toxicity, mobility, and volume of contaminated soil treated thermally. Alternative 5 satisfies the statutory preference for treatment as a principal element of the remedial action and uses treatment to address soils exceeding PRGs, including those soils defined as principal threat waste.

Alternatives 2, 3 and 4 would all be rated moderate for this criterion. Like Alternative 5, Alternative 3 satisfies the statutory preference for treatment as a principal element of the remedial action and uses treatment to address soils exceeding PRGs, including those soils defined as principal threat waste.

Under Alternative 3, the mobility of COCs in the treated soil would be greatly reduced, however, toxicity would not change and the volume of the ISS-treated soils would likely be greater than the pre-treated soils due to the addition of the stabilization agent. In addition, the irreversibility of the ISS treatment process would be dependent on developing an effective ISS mix for stabilizing the COCs and withstanding the potential long-term impact of VOC-contaminated groundwater (if any) on the stabilized materials.

Alternative 2 uses ISS to treat those soils with PCB concentrations above 1 mg/kg that remain after excavation of soils above the water table with PCB concentrations greater than 10 mg/kg. Hence, relative to Alternatives 3 and 5, Alternative 2 would only partially meet the statutory preference for treatment. In addition, all the soils defined as principal threat waste would be addressed by excavation and off-site disposal, not treatment.

Under Alternative 2, 4, and 6 for debris and soils removed for offsite disposal that are deemed hazardous under these alternatives, reduction of toxicity and mobility would occur through treatment at a Resource Conservation and Recovery Act (RCRA)-permitted treatment/disposal facility to meet RCRA treatment standards. However, it is anticipated only a small volume of contaminated soil would exceed the hazardous waste criterion; the majority of the wastes would be disposed of in an EPA approved off-site landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills, municipal landfills). This would reduce the mobility of the waste, including the soil defined as principal threat waste through containment. Toxicity and volume would not be changed.

Alternative 6 would not achieve the same level of reduction in mobility as Alternative 4 because it would leave approximately 5,000 CY of untreated contaminated soil behind at the site.

Short-Term Effectiveness

Short-term effectiveness includes an evaluation of the adverse effects a remedy may pose to the community, workers, and the environment during implementation.

Alternative 1 would not have any impacts to the community and workers because no action would be taken. The remaining alternatives, to varying degrees, would result in short-term risks to the community and potential impact on workers carrying out the remedial action. This is due in part not only to the nature of the activities that would be conducted for each alternative, but also because those activities in some cases would be required in a very small footprint (approximately 1.23 acres) that would present significant implementation challenges.

Alternative 5 would require the largest amount of space to effectively carry out all components of the alternative (i.e., excavation, dewatering operation, staging, treatment and backfill operations). As a result, Alternative 5 would likely cause the greatest level of short-term risk to the community and potential impact to workers due to the need to safely manage and conduct significant excavation, dewatering, ex situ treatment, and backfill operations in a very small space. Heavy construction activities would require implementation of dust control measures and stormwater runoff control. Excavation below the water table would pose significant challenges because of dewatering requirements and water treatment operations.

Vibration from installation of sheet piling to support deep excavation needs to be very carefully conducted so that there is no impact to the integrity of the nearby JCMUA pipelines, which provides a drinking water supply. In addition, air monitoring would be required to reduce risks to workers and the community from fugitive emissions during construction and remediation. Potential risk to remediation workers associated with direct contact with contaminated material would be mitigated through the use of personal protective equipment and standard health and safety practices.

In addition to short-term risk to the community and potential impact to workers associated with construction activities, Alternative 5 also presents additional risks and impacts related to the use of thermal treatment. Thermal treatment has high energy demands, which would require additional power to be delivered to the site. Higher capacity and high voltage electrical power lines would likely need to be installed to supply the electrical needs of the thermal treatment system and would pose a short-term risk to workers. Off-gas releases from thermal treatment system also could occur and would need to be mitigated through air treatment and monitoring to reduce risks to workers and the community.

Alternatives 2, 3, 4, and 6 would have risks and impacts associated with heavy construction activities associated with excavation, ISS treatment, and/or offsite disposal. All four alternatives would temporarily increase particulate emissions and would require the implementation of dust control measures, stormwater runoff control, and air monitoring to reduce risks to the community and workers.

Alternative 4 would require the largest amount of soils to be excavated and shipped off-site and therefore would have the bigger impact to the community because of truck traffic associated with trucks hauling contaminated debris and soil away from the site and trucks hauling backfill material to the site. Because Alternative 6 would require the excavation of a smaller amount of contaminated soil than Alternative 4, it would be expected to pose slightly less of an impact to the community and workers; however, Alternative 6 leaves approximately 5,000 cy of contaminated soil in place. Like Alternative 5, both Alternatives 4 and 6 would require excavation below the water table.

Like Alternative 2, 4, and 5, vibration from installation of sheet piling to support deep excavation needs to be very carefully conducted so that there is no impact to the integrity of the nearby JCMUA pipelines, which provide a drinking water supply.

Alternatives 5, 4, and 6 would require dewatering of soils excavated from below the water table and, therefore, add an additional waste stream to manage within the compact site footprint. Water generated from dewatering of excavation areas would need to be treated on site and discharged to the stormwater system.

Alternatives 2 and 3 would have slightly less short-term impacts to the workers and the community, when compared to Alternatives 4 and 6. Alternative 2 would require less excavation and off-site disposal than Alternatives 4, 5 and 6; however, it includes an ISS component that would contribute to construction-related short-term risk.

Alternative 3 would likely have the smallest impact to the community because all contaminated soils would be addressed on the site via ISS meaning minimal truck traffic-related concerns relative to the alternatives that include significant excavation components. However, Alternative 3 could still require some excavation (or an alternate more expensive and time-consuming jet grouting process) if, after building demolition, any subsurface structures (e.g., foundations, column piers, concrete/steel pipes, or other obstructions) remain and must be removed before ISS can proceed.

Implementability

Alternative 1 would be the easiest to implement since it involves no action. Each of the remaining alternatives, will need to be conducted in a very small footprint (approximately 1.2 acres) and this would present significant implementation challenges. Alternative 5 would be the most difficult alternative to implement. This is because it would require excavation (of approximately 26,000 cy of soil), ex-situ treatment, and backfilling of treated soil and additional clean fill to occur almost concurrently within a footprint of less than 1.2 acres. In addition, Alternative 5 would also need to meet substantive requirements of permitting related to assembly and construction of the thermal treatment unit as well as permitting for the release of treated off-gas emissions. Administrative challenges in obtaining the required thermal treatment air permit could be prohibitively difficult.

Alternatives 4 and 6 would require the excavation of 26,000 CY, and 21,000 CY, respectively, of contaminated soil for off-site disposal. While these alternatives do not include an on-site treatment component, they would require dewatering of soils excavated from below the water table and onsite treatment of the water before discharge to the stormwater system. In addition, the excavated soils would need to be sufficiently segregated based on characterization data into different stockpiles based on the ultimate disposition of the different categories of soil. The need to undertake all these components in the small site footprint could make Alternatives 4 and 6 only slightly less challenging then Alternative 5. However, the advantage offered by Alternatives 4 and 6 over Alternative 5 is that they could be implemented in phases, sequentially, in small portions of the site, without the need to consider excavation rates and locations relative to the input and output rates of the thermal treatment unit employed under Alternative 5. Therefore, Alternatives 4 and 6 are considered more implementable than Alternative 5.

Alternative 2 would require sufficient space to segregate excavated soils for appropriate offsite disposal based on characterization data. In addition, the ISS component of the alternative would require the completion of a wide range of performance tests in conjunction with ISS treatability studies to determine the effectiveness of the process on site soils and evaluate the potential long-term impact of VOC-contaminated groundwater (if any) on the stabilized materials. Nonetheless, Alternative 2 would be easier to implement than Alternatives 4 and 6.

The performance tests and ISS treatability studies also would be required for Alternative 3. Because Alternative 3 would use ISS to treat all soils with contaminant levels above PRGs, the impact of an increase in volume caused by the ISS treatment process would be greater under Alternative 3 than Alternative 2 and may cause an unacceptably large change to site elevations. Alternatives 3 and 2, respectively, would leave the largest and second largest amount of contaminants behind and the presence of the stabilized material, particularly for Alternative 3, would limit options for future re-use of the site. Both Alternatives 2 and 3 would require ongoing inspection, maintenance, and monitoring activities of the soil cap placed over the ISS-treated soils. These activities could be easily implemented using available materials, equipment, and labor resources

Costs

A 7% discount rate was used.to estimate the costs for each alternatives. Alternative 1 costs $0 and Alternative 2 costs $14.3 million. Alternative 3 is the least expensive of the active remedial alternatives at $6.4 million. The cost of Alternatives 4 is $18.1 million. Alternative 5 will cost $15.1 million. The cost of Alternative 6 is $16.4 million.

State/Support Agency Acceptance

The State of New Jersey concurs with EPA's preferred alternative as presented in this Proposed Plan.

Community Acceptance

Community acceptance of the preferred alternative will be evaluated after the public comment period ends and will be described in the Record of Decision, the document in which EPA formally selects the remedy for the site.

PREFERRED ALTERNATIVE

The preferred alternative for cleaning up the OU1 soil/building contamination at the site is Alternative 4:

- Demolition of the Unimatic building including the building slab and foundation. The building debris would be segregated based on the level of PCB contamination and disposed of at an EPA approved offsite landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills, municipal landfills
- Soils - Contaminated soils exceeding the PRGs would be excavated. The excavated area would be backfilled with imported clean fill. The ground surface would be restored to the original grade consistent with the surrounding areas. The excavated soil would be segregated in accordance with waste characteristics and properly treated off-site to meet LDR requirements and disposed at an EPA approved off-site landfills (i.e., TSCA landfills, RCRA Subtitle C landfills, RCRA Subtitle D landfills, municipal landfills).

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

Alternative 4 was selected as the Preferred Alternative for contaminated soil because it would provide the highest degree of long-term protectiveness and permanence. All contaminated building debris and all contaminated soil associated with the principal threat waste would be removed from the site and the excavated area would be backfilled with clean soil. Although Alternatives 2, 3, and 4 would prevent further migration of COCs to groundwater and off-site surface water by minimizing the availability of contaminants to the environment there is less uncertainty with

Alternative 4 since contaminated soil would be completely removed from contact with groundwater. The long-term effectiveness and permanence of Alternatives 2 and 3 would be dependent on the development of an effective ISS mix to address the organic contaminants in groundwater and continued inspection, monitoring, and maintenance of the cap over the treated material would be required.

Under Alternative 4 all soil exceeding PRGs would be excavated and removed from the site. Alternative 3 would use ISS to treat all soils with contaminant levels above PRGs, the impact of an increase in volume caused by the ISS treatment process would be greater under Alternative 3 than Alternative 2 and may cause an unacceptably large change to site elevations. Alternatives 3 and 2, respectively, would leave the largest and second largest amount of contaminants behind and the presence of the stabilized material, particularly for Alternative 3, would limit options for future re-use of the site. Alternative 6 would result in soil remaining at the site above levels protective for groundwater. Given the serious space constraints as well as technical and substantive permit issues Alternative 5 presents many implementation challenges.

EPA expects that the Preferred Alternative will satisfy the statutory requirements of CERCLA §121(b): 1) be protective of human health and the environment; 2) comply with ARARs; 3) be cost effective over the long-term, and 4) utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. The Preferred Alternative will satisfy the preference for treatment as a principal element for those soils sent off-site and treated to meet LDRs. However, all contaminated soil exceeding PRGs will be sent off-site for disposal.

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 the selected remedy.

COMMUNITY PARTICIPATION

EPA and NJDEP provided information regarding the cleanup of the Unimatic Manufacturing Corporation Superfund site to the public through meetings, the Administrative Record file for the site, and announcements published in the local newspaper. EPA and NJDEP encourage the public to gain a more comprehensive understanding of the site and the Superfund activities that have been conducted there.

The dates for the public comment period; the date, location, and time of the public meeting; and the locations of the Administrative Record files are provided on the front page of this Proposed Plan.

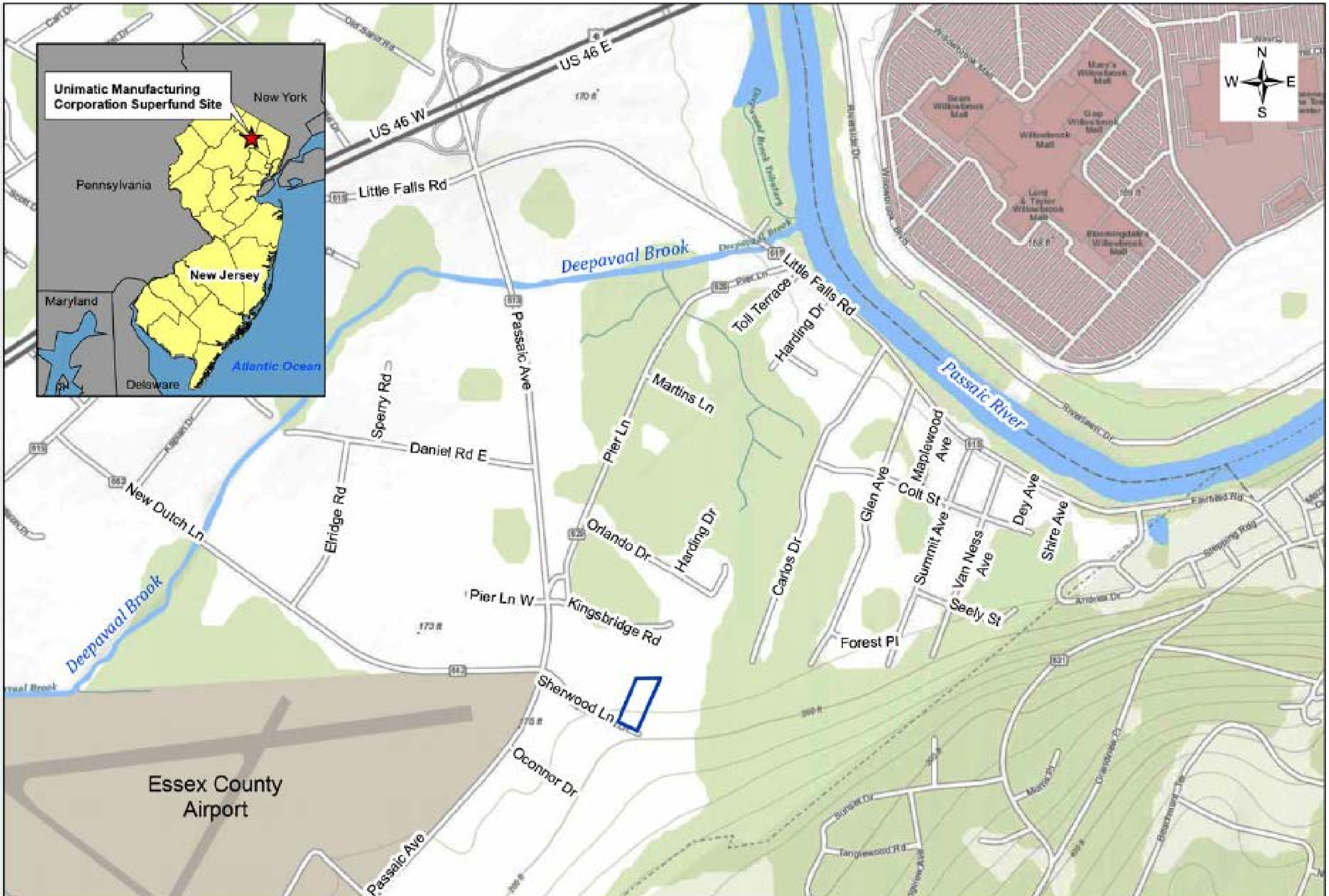
For additional information on EPA's Preferred Alternative for the Unimatic Manufacturing Corporation Superfund site contact:

Trevor Anderson
Remedial Project Manager
(212) 637-4425

Natalie Loney
Community Liaison
(212) 637-3639

U.S. EPA
290 Broadway, 19th Floor
New York, New York 10007-1866

On the Web at: www.epa.gov/superfund/unimatic



Legend

Unimatic Property Boundary

0 500 1,000 2,000 Feet

Figure 1
Site Location Map
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey

CDM Smith

Document Path: F:\Unimatic\GIS\MXD\RIWP\Site Location Map_rev.mxd

CDM Smith

Figure 2
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey

Table 1. Preliminary Remediation Goals

Chemicals of Concern	Maximum Detected Soil Concentrations (ppm)	EPA Toxic Substances Control Act (TSCA) High Occupancy Area (HOA) Cleanup Level (ppm)		NJDEP Non-Residential Direct Contact Soil Remediation Standard (NJNRDCSRS) (ppm)	Calculated Impact to Groundwater Pathway Remediation Standard* (ppm)	Preliminary Remediation Goal (PRG)** (ppm)
		Unrestricted Use	Cap and Deed Notice			
Total PCBs (incl. Aroclor 1248 and Aroclor 1254)	7,000	≤1	>1 - ≤10	1	6.2	1
4,4'-DDE	62	NA		9	17.9	9
4,4'-DDT	29	NA		8	10.5	8
Aldrin	92	NA		0.2	3.9	0.2
Chlordane	43	NA		1	2.4	1
Dieldrin	99	NA		0.2	0.03	0.03
Heptachlor	65	NA		0.7	2.82	0.7
Heptachlor epoxide	2.9	NA		0.3	0.67	0.3
Lindane	1.8	NA		2	0.002	0.002

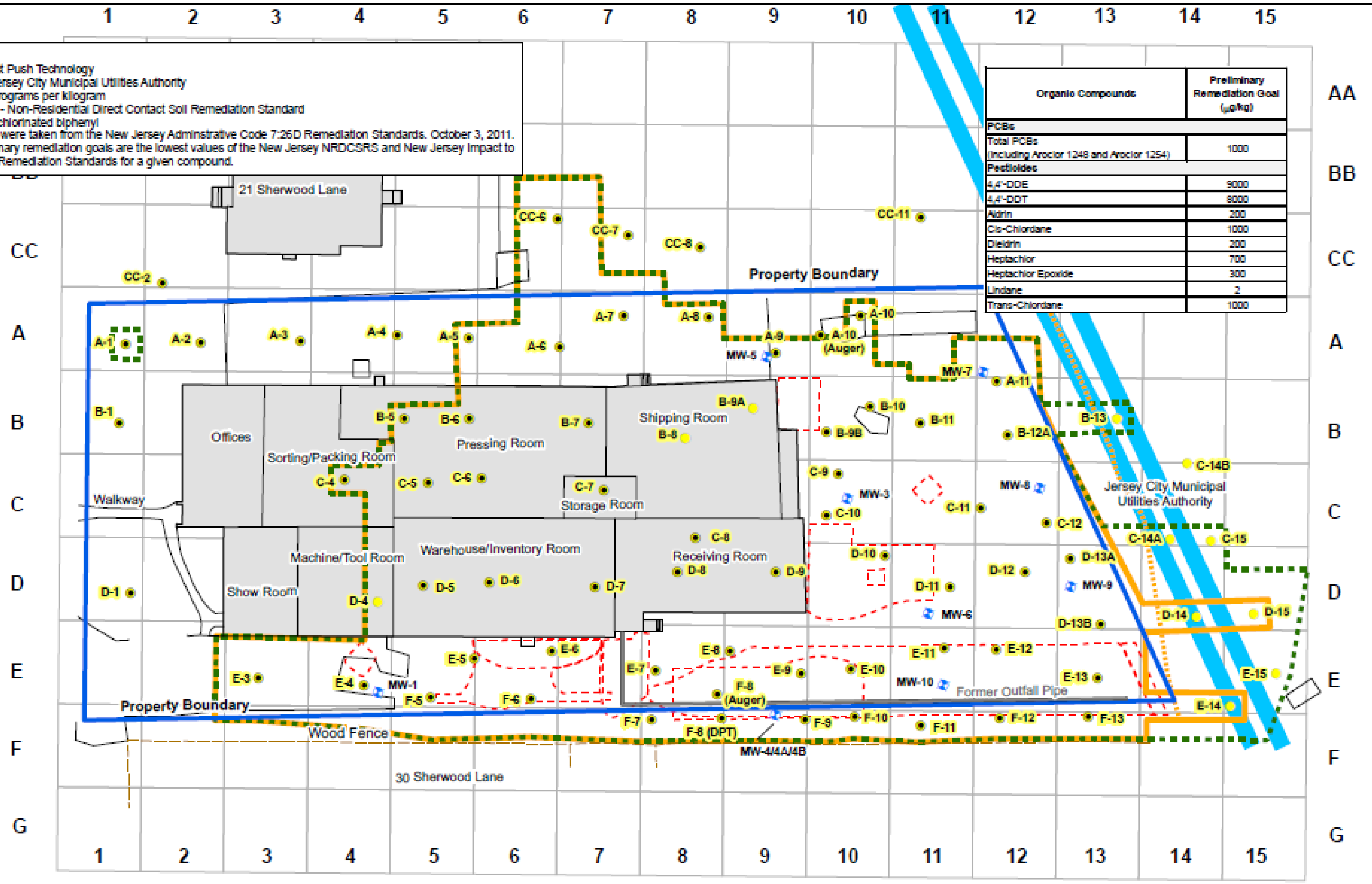
Notes
* Impact to groundwater pathway concentrations were calculated using the soil partition equation included in "Development of Impact to Groundwater Soil Remediation.
Standards using the Soil-Water Partition Equation, Version 2.0 – November 2013" (NJDEP 2013). NJDEP groundwater quality standards were used as the input parameters for the calculations. See FS Report for details.
** PRG is the lowest of TSCA HOA cleanup level, NJNRDCSRS, or Impact to Groundwater Remediation Standard.

NA – not applicable

ppm – parts per million

Notes:
1. DPT - Direct Push Technology
2. JCMUA - Jersey City Municipal Utilities Authority
3. µg/kg - micrograms per kilogram
4. NRDCSRS - Non-Residential Direct Contact Soil Remediation Standard
5. PCB - Polychlorinated biphenyl
6. NRDCSRS were taken from the New Jersey Adminstrative Code 7:26D Remediation Standards. October 3, 2011.
7. The preliminary remediation goals are the lowest values of the New Jersey NRDCSRS and New Jersey Impact to Groundwater Remediation Standards for a given compound.

Organic Compounds	Preliminary Remediation Goal (µg/kg)
PCBs	
Total PCBs (Including Aroclor 1248 and Aroclor 1254)	1000
Pesticides	
4,4'-DDE	9000
4,4'-DDT	8000
Aldrin	200
Cis-Chlordane	1000
Dieldrin	200
Heptachlor	700
Heptachlor Epoxide	300
Lindane	2
Trans-Chlordane	1000



Legend
- Monitoring Well
- Soil Boring
- Soil Boring/Hand Auger
- Former Outfall Pipe
- Property Boundary
- Approximate Toe of Slope
- Target Treatment Area - Total PCBs Exceeding Preliminary Remediation Goal
- Target Treatment Area - Pesticides Exceeding Preliminary Remediation Goals
- JCMUA Pipeline
- Previous Excavation Area

0 20 40 80 Feet

CDM Smith

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Figure 3
Target Treatment Areas for PCBs and Pesticides
Unimatic Manufacturing Corporation Superfund Site
Fairfield, Essex County, New Jersey

Attachment B: Public Notice

CLASSIFIED

MERCHANDISE AUTOS REAL ESTATE CAREERS PETS

Garage & Estate Sales

Town	Date	Time	Search ID
MONTGOMERY	07/21	9-3	188409

Estate Sale 41 Hills Drive Montgomery, NJ 08502 7/22&7/23 9-3 HighEnd Furn Home Decor Henredon Baker Hekman Hancock&Moore www.NJGarageAndEstateSales.com

NEWARK	7/23	11-5	189234

Estate Sale July 23, 11a-5p. 267 Vassar Ave, Newark NJ, 07112. Household Items, Furniture, Appliances, Etc. 732-910-8194.

SHORT HILLS	07/22 07/23 07/24	10-2	189104

SALE SALE SALE

Short Hills 7 Taylor Rd 7/22 Fri 7/23 Sat & 7/24 Sun 10a-2p. 1 king & 2 qn beds, Stark large rug, beautiful hi-end furn, (4) bar stools, raw iron outdoor furn, cast iron planters, Custom inlaid 60 round table & so much more!

SOUTH ORANGE	07/22,2-3	9-6	188591

Garage Sale: Friday 7/22 and Saturday 7/23 9am-6pm.329 Academy St. NJ.Rain Date: Friday 7/29 and Saturday 7/30 9am- 6pm.

SPRINGFIELD	07/22 07/23	9:30a-3:00p	186812

SALE SALE SALE

Springfield 48 Evergreen Rd 7/22 Fri and 7/23 Sat 9:30a-3:00p. Vintage furn, collectibles, Tools, car manuals, BR, DR sets, Lots of books, (3) 1960 VINTAGE CONVERTIBLES LOTS LOTS MORE!

SPRINGFIELD	7/22,23		188164

MUST SEE!

Springfield- Contents of House. 18 Redwood Rd. Fri 7/22 10am-2pm. Sat 7/23 10am-3pm. Beautiful Henredon mid century DR set, Widdicomb BR set, collectibles galore, good artwork, scupiture, handbags, jewelry, crystal & more!

SUMMIT	7/22,23	9-3	188070

Estate Sale-227 Oak Ridge Ave Summit, NJ Friday 7/22 9AM - 3PM Saturday 7/23 9AM - 3PM Parcel content, furniture, paintings, beds, lamps, oriental China and much more!

Garage & Estate Sales

Town	Date	Time	Search ID
WATCHING	07/24	9-12	188507

ESTATE SALE

Estate Liquidation.. Many sizes of upholstered sofas. Great quality to recover. Pool table. Bric a brac. Best offers accepted. 131 High Oaks Drive Watchung NJ 07069. Sunday July 24, 2016. 9am-12 noon.

WATCHING	7/22 7/23	9-3	188337

ESTATE SALE

Watchung Moving Sale 105 High Oaks Dr. Fri 7/22 Sat 7/23 9am-3pm Antiques & Other Furniture, China & Glass, Paintings & Prints, String Instruments, Stereo & Albums, Collectibles, Sporting Goods, Household & Garage, & Much More!

WATCHING	7/22 7/23	9:30-4	188465

ESTATE SALE

Estate Sale Fri 7/22 Sat 7/23 9:30-4 131 High Oaks Dr. Watchung 07069 Antq & Vntg Indoor & Outdoor Furn, Accent Pcs, Lamps, Area Rugs, Jordan Brown Outdoor Chairs& Loungers, Bric-A-Brac, Tools, HH, & Loads More Treasures treasureevermore.com

WATCHING	7/22, 7/23	9:30-3:00	188688

ESTATE SALE

Watchung 94 Deer Run, Fri & Sat 7/22 & 7/23, 9:30-3:00. Lthr sofa & loveseat, slot machine, game table, home gym, king canopy BR set, Qn BR set, patio sets, compressor, generator, lamps, mirrors, rugs & much more.

WESTFIELD	07/23	9:00	187308

SALE SALE SALE

Westfield 301 Orenda Circle 7/23 Sat 9am- Baseball equip, all NEW mitts & memorabilia, clothes, microwave, toys, HH goods & More! No early birds

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

EPA Invites Public Comment on a Proposal to Clean Up The Unimatic Superfund Site in Fairfield, New Jersey

The U.S. Environmental Protection Agency has issued a Proposed Plan to demolish a building and remove contaminated soil from the Unimatic Manufacturing Corporation Superfund site located at 25 Sherwood Lane in Fairfield, New Jersey. A 30-day public comment period on the Proposed Plan, which identifies the EPA's preferred cleanup plan and other cleanup options that were considered by the EPA, is open through August 22, 2016.

The EPA's preferred cleanup plan consists of: 1) demolishing the building located at 25 Sherwood Lane; 2) removing and disposing of contaminated soil from portions of the site; 3) backfilling excavated areas with clean soil; and 4) sampling and monitoring during cleanup to ensure the effectiveness of the cleanup and protection of the public.

During the public comment period, the EPA will hold a public meeting in Fairfield, New Jersey to receive comments on the preferred cleanup plan and other options that were considered. The meeting will be held on August 10, 2016 at 7:00 PM in the Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey.

The Proposed Plan is available at www.epa.gov/superfund/unimatic or by calling Natalie Loney, EPA's Community Involvement Coordinator, at (212) 637-3639 and requesting a copy by mail.

Written comments on the Proposed Plan, postmarked no later than August 22, 2016, may be mailed to Trevor Anderson, EPA Project Manager, U.S. EPA, 290 Broadway, 19th floor, New York, NY 10007-1866 or emailed no later than August 22, 2016 to anderson.trevor@epa.gov.

The Administrative Record file containing the documents used or relied on in developing the alternatives and preferred cleanup plan is available for public review at the following information repositories:

Fairfield Municipal Building, 230 Fairfield Road, Fairfield, New Jersey, 07004 (973) 882-2700
EPA Region 2 Superfund Records Center, 290 Broadway, 18th Floor, New York, New York, 10007 (212) 637-4308

Garage & Estate Sales

Town	Date	Time	Search ID
WESTFIELD	07/22 07/23	8-3	188020

ESTATE SALE

Westfield 07090 229 E. Dudley Ave 7/22 Fri & 7/23 Sat 8a-3p. Old Westfield home. Antique furn, Murano glass chandelier & matching sconces, Henredon king sleigh bed & chest, pottery barn sofas, club chairs, lamps, clothes, A nice sale & PC's

Pets & Animals

Species	Type	Search ID

DOG	GOLDEN RETRIEVER		188661

GOLDEN RETRIEVER Pups - AKC, Vet checked, 1st shots & wormed, warranty, parents & grandparents on site. Ready now. $1300 + tax. 607-387-5012, Ethica, NY. famndamilyfarm.com PD #00708

DOG	GOLDENDOODLE		187555

MINI GOLDENDOODLE - ADORABLE PUPS 1st shots & wormed. $1500Call (973) 876-1680

DOG	MALTESE		189247

MALTESE PUPS Beautiful Males and Females, Baby Doll Faces. Call: 718-259-2295 OR Email: mia8758@aol.com

DOG	SHIH-TZU		187410

SHIH-TZU PUPPIES Beautiful Boys & Girls. All Colors & Sizes.Call: 718-256-4915 OR Email: mia8758@aol.com

DOG	YORKIE		187413

YORKIE PUPPIES Adorable, Toy, Teacup Sizes,Home Raised. Call: 718-259-2295 OR Email: mia8758@aol.com

Autos for Sale

Make	Model	Year	Search ID
			178683

Acura 2005 MDX 119k miles asking $6,999 VIN 2HNYD18244H506767 973-703-5510 firm price.

LINCOLN	CONTINENTAL	1997	188657

1997 Lincoln Continental - 1 owner, garage kept, like new. Call 973-541-2260

TOYOTA	HONDA		187253

CASH FOR ALL TOYOTAS, HONDAS, & ALL OTHER MAKES! Running or not. Damaged OK! Free towing! 973-204-7869 or 732-600-0033

Adult Services

Type	Search ID
TALK LINES	174777

HOT LOCAL SINGLESBrowse Ads & Reply FREE!Straight 973-679-3333Gay/Bi 973-679-2020Use FREE Code 3269, 18+

Bids Wanted

ADVERTISEMENT FOR BIDS
CITY OF HOBOKEN
HUDSON COUNTY, NEW JERSEY

NOTICE IS HEREBY GIVEN that sealed bids will be received by the representative of the Division of Purchasing, for the City of Hoboken, in the County of Hudson, State of New Jersey ("Owner") on August 2, 2016 at 1:00 p.m. prevailing time at City Hall, Office of the City Clerk, 94 Washington Street, Hoboken, New Jersey 07030 at which time and place bids will be opened and read in public for:

BID NO. 16-19
ENERGY STRONG ROADWAY
STRIPING REHABILITATION

The work to be performed under this contract includes the installation of traffic striping and markings, high friction safety surfacing, raised pavement markers, and pedestrian crossing signage.

Principal items of work in the project include:

· 45,500 L.F. Traffic Stripes, 4", Thermoplastic

The work contemplated under this Contract shall be completed by September 15, 2016.

Copies of plans, specification, and contract documents will be on file for public inspection and may be obtained upon payment of $14.45, said sum not refundable, at Boswell McClave Engineering, 330 Phillips Avenue, South Hackensack, New Jersey 07606, between the hours of 9:00 a.m. and 4:00 p.m. prevailing time, Monday through Friday, excluding legal holidays.

Each bid must be made upon the prescribed forms, furnished with the Contract Drawings and Specifications, including the non-collusion affidavit and ownership statement compliance form and must be accompanied by a Consent of Surety and a certified check, cashier's check, or Bid Bond of not less than ten (10%) percent of the amount bid and not to exceed $20,000.00. Such checks and Bonds shall be made payable to the Owner and will be held as a Guarantee that in the event the Bid is accepted and a Contract awarded to the bidder, the Contract shall be duly executed and its performance properly secured. The successful bidder shall furnish and deliver to the Owner a performance and payment bond in the amount of 100 percent of the accepted bid amount as security for the faithful performance and payment of the Contract. Further, the successful bidder must furnish the policies or Certificates of Insurance required by the Contract. In default thereof, said checks and the amount represented thereby will be forfeited to the aforesaid Owner as liquidated damages. Bids must be accompanied, in the case of corporations not chartered in New Jersey, by proper certificate that such corporation is authorized to do business in the State of New Jersey.

Bidders are required to comply with the requirements of N.J.S.A. 10:5-31 et seq. and N.J.A.C. 17:27 regarding equal employment opportunity, as amended. All corporations and partnerships must comply with Chapter 33, of the P.L. of 1977, regarding disclosure of partners and stockholders. Each bid must be enclosed in a sealed envelope bearing the name and address of the bidder, addressed to the Owner and labeled for the ENERGY STRONG ROADWAY STRIPING REHABILITATION BID NO. 16-19.

All bids shall be irrevocable, not subject to withdrawal and shall stand available for a period of sixty (60) days.

The successful bidder shall be required to comply with the provisions of the New Jersey Prevailing Wage Act, N.J.S.A. 34:11-56.25 et seq Chapter 150 of the Laws of 1963, effective January 1, 1964 and the Public Works Contractor Registration Act (NJSA 34:11-56.48).

The City reserves the right to reject any or all bids or to waive any informality in accordance with N.J.S.A. 40A:11-13.2 and/or N.J.S.A. 40A:11-23.2.

BY ORDER OF THE CITY OF HOBOKEN

Al B. Dineros, QPA
Purchasing Agent
7/22/2016 $201.50

IRVINGTON BOARD OF EDUCATION
REQUEST FOR BID

CLEAR TOUCH INTERACTIVE PANELS
PURCHASE, DELIVERY, REMOVAL
AND INSTALLATION
Bid No. 17-206

The Irvington Board of Education is soliciting bids Clear Touch Interactive Panels - Purchase, Delivery, Removal and Installation, Bid# 17-206, in accordance with bid specifications, for School Year 2016-2017.

Proposals are to be sealed and clearly marked on the outermost packaging or envelope with the name of bidder, name of project, Bid No., and Proposal opening date and time. Submissions will be accepted prior to the proposal opening date in person or they may be submitted by registered mail, certified mail, or special delivery, in advance of the proposal openings date. Proposals forwarded by facsimile or e-mail are not valid and will not be accepted. All proposals will be publicly opened and read beginning at 10:00 A.M. on Thursday, August 11, 2016, in the Irvington Board of Education's meeting room, 1 University Place, 4th Floor, Irvington, New Jersey, 07111.

The Irvington Board of Education reserves the right to reject any and all proposals in compliance with Public School Contract Law and other applicable laws. Submissions not fully responsive to the requirements of this proposal will not be considered.

No bidder may withdraw bid for a period of sixty (60) calendar days after the date set for the opening thereof.

All Bids and contracts will be subject to the provisions of P.L. 1977, c.33 (C.52:25-24.2) requiring submission of a Statement of Corporate Ownership Regarding Disclosure of Partners and Stockholders. Non Collusion Affidavit, State of New Jersey Business Registration Certificate and the provisions of N.J.S.A. 10:5-31 et seq. N.J.A.C. 17:27 concerning Equal Employment Opportunity and Affirmative Action.

Bids can be obtained and related questions can be directed to Rosie Crombie, Purchasing Manager at (973) 399-6800, Ext. 2143, or rcrombie@irvington.k12.nj.us.

Submit all responses to:
Rosie Crombie, Purchasing Manager
1 University Place, 4th Floor
Irvington, NJ 07111
7/22/16 $113.15

NEW JERSEY WATER SUPPLY AUTHORITY
CLINTON, NJ 08809

INVITATION FOR BID

Notice is hereby given that sealed bids will be received at the New Jersey Water Supply Authority, 1851 Route 31, Clinton, New Jersey 08809 until **10:00 a.m. on Tuesday, August 16, 2016** and will be publicly opened and read immediately thereafter for the following:

WSA B17004M

Refurbishing of a Single Stage Vertical Pump, Intake Pump Station, Manasquan Water Supply System

The Contractor shall furnish all labor, materials and equipment required per requirements and specifications of the bid.

The Contractor will be required to complete and offer Final Acceptance of the entire project within ninety (90) days of Notice to Proceed.

Bidding documents and technical specifications for this procurement can be found at NJWSA webpage: http://www.njwsa.org/html/procurement.html. The Authority will not be responsible for full or partial sets of Bidding Documents, including any Addenda, obtained from any other source.

Contractors are required to comply with the Equal Employment Opportunity Compliance Requirements of P.L. 1975, Chapter 127 (N.J.A.C. 17:27).

Contractors are advised that the Public Law 2005, Chapter 51 (Executive Order 134) and Executive Order 117 Certification and Disclosure Forms must be executed by the intended awardee only.
7/22/2016 $86.80

NORTH HUDSON
SEWERAGE AUTHORITY
BID ADVERTISEMENT

Sealed Bids for construction of the PURAC System Upgrades, Phase 2, Clearwell Access Project, addressed to North Hudson Sewerage Authority (Owner), 1600 Adams Street, Hoboken, New Jersey 07030, will be received at the office of the Authority, City of Hoboken, State of New Jersey, until 11:00 a.m. local time, on the 24th day of August 2016. Any Bids received after the specified time will not be considered. Bids will then be publicly opened and read.

A Pre-bid Conference will be held at the Owner's office, 1600 Adams Street, Hoboken, New Jersey, on the 3rd day of August 2016, at 10:00 a.m. The Project Scope of Work consists of:

The PURAC Clearwell Access work includes furnishing of all labor, materials, and equipment necessary to complete the Work as shown on Drawings and as described in the Specifications. The Work generally consists of installing a cast-in-place concrete access chimney with metal stairs and platform for the PURAC clearwell and replacement of select sludge piping and valves for the PURAC unit process. The upgrades must be performed while the PURAC unit process remains in operation, except as noted in Section 01040, Coordination. Duration of the construction Work from Notice to Proceed to Substantial Completion is expected to be 220 calendar days. From Substantial Completion to Final Completion is expected to be 60 calendar days. The entire construction schedule from NTP to Final Completion is expected to be 280 calendar days.

Bidding Documents may be examined in Owner's office, North Hudson Sewerage Authority, 1600 Adams Street, Hoboken, New Jersey 07030, on business days between the hours of 9:00 a.m. and 4:00 p.m. Return of the documents is not required, and the amount paid for the documents is non-refundable. Copies may be obtained by applying to the Owner's office.

Send requests for Bidding Documents to the attention of Ms. Belissa Vega, at the office of the North Hudson Sewerage Authority, 1600 Adams Street, Hoboken, NJ 07030. Requests may also be made by email at bvega@nhudsonsa.com or by fax at 201-963-3907. Requests shall include street address for delivery of documents. Any questions please call 201-963-6043 ext 210

A $150.00 non-refundable payment, checks only payable to North Hudson Sewerage Authority, will be charged for each set of Bidding Documents. To obtain Bidding Documents by mail submit a $25.00 non-refundable check for shipping and handling for each set of documents. (Two separate checks are required.) in the Bidding Documents.

In order to perform public work, the successful Bidder and subcontractors prior to contract award shall hold or obtain such licenses as required by State Statutes, and federal and local Laws and Regulations. This Contract or Subcontract is expected to be funded in part with funds fromthe New Jersey Department of Environmental Protection, and the New Jersey Environmental Infrastructure Trust. Neither the State of New Jersey nor any of its departments, agencies, or employees is, or will be, a party to this Contract or Subcontract, or any lower tier contract or subcontract. This Contract or Subcontract is subject to the provisions of NJAC 7:22-3, 4, 5, 9, and 10. The proposed Project is funded in part by the New Jersey Wastewater Treatment Financing Program, and the Successful Bidder shall comply with all of the provisions of NJAC 7:22-9.1 et seq.

The New Jersey Department of Environmental Protection (NJDEP) has set a minimum goal for SED individual utilization on New Jersey Department of Environmental-assisted projects of 10 percent for all SED businesses.

The Owner has set a minimum goal for SED utilization on New Jersey Department of Environmental-assisted Projects of 10 percent for all SED businesses. Prior to Notice of Award, the Successful Bidders historic degree of compliance with the above goals will be reviewed. A Bidder who has not historically achieved these goals must demonstrate why the goals are not attainable on the proposed work. Pursuant to NJSA 10:5-33, Bidders are required to comply with the requirements of P.L. 1975, c.127, concerning discrimination in employment. Pursuant to N.J.A.C. 7.22-3.17 (g) the required Surety Bond must be written by a Surety Company listed on the Federal Treasury List (Department Circular 570 â€" Surety Companies Acceptable on Federal Bonds). For information concerning the proposed Work or an appointment to visit the Site, contact Mr. Jason Pancoast, Greeley and Hansen, telephone: 212-693-9558.

All inquiries/questions must be provided in written format to the attention of Ms. Belissa Vega at the North Hudson Sewerage Authority, with a copy to the attention of Mr. Jason Pancoast at Greeley and Hansen, 111 Broadway, Suite 2101, New York, NY 10006, by 12:00 p.m., the 10th day of August 2016. Any inquiries /questions received after this specified day and time will not be considered. Owner's right is reserved to reject all Bids or any Bid not conforming to the intent and purpose of the Bidding Documents.

North Hudson Sewerage Authority
Belissa Vega, QPA
7/22/2016 $243.35

NOTICE OF NJSTART BID SOLICITATION

CONTAINS SMALL BUSINESS SET-ASIDE SUBCONTRACTING PROVISIONS

NOTICE IS HEREBY GIVEN THAT SEALED QUOTES (PROPOSALS) WILL BE RECEIVED IN THE PROCUREMENT BUREAU RECEPTION ROOM, 9TH FLOOR, 33 WEST STATE STREET, P.O. BOX 230, TRENTON, N.J., 08625-0230, UNTIL 2:00 P.M. ON **September 2, 2016** AND WILL BE PUBLICLY OPENED AND ANNOUNCED FOR THE FOLLOWING NJSTART PROCUREMENT PROGRAM SOLICITATION:

16DPP00021 (T3065) - Scheduling and Timekeeping System for Multi-Shift Operations for Department of Human Services

NOTE: Bid Amendment {Addendum} 1 e-Mailed: July 19, 2016
Original Quote {Proposal} Submission: August 3, 2016
REVISED Quote {Proposal} Submission: SEPTEMBER 2, 2016

NOTE: SET-ASIDE SUBCONTRACTING WILL BE CONDUCTED IN ACCORDANCE WITH THE PROVISIONS OF N.J.A.C. 17:13. VENDORS SEEKING TO ESTABLISH OR VERIFY ELIGIBILITY FOR SMALL BUSINESS SUBCONTRACTING SHOULD CONTACT THE NEW JERSEY DEPARTMENT OF THE TREASURY'S DIVISION OF REVENUE AT 609/292-2146.

BIDDERS ARE ALSO REQUIRED TO COMPLY WITH THE STANDARD TERMS AND CONDITIONS CONTAINED IN THE BID SOLICITATION.

INFORMATION ON THE NJSTART PROCUREMENT PROGRAM AND BID SOLICITATION DOCUMENTS ARE AVAILABLE AT:
http://www.njstart.gov AND ON THE DIVISION'S WEBSITE AT:
http://www.state.nj.us/treasury/purchase/

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF PURCHASE AND PROPERTY
7/22/2016 $96.10

Attachment C: Public Meeting Transcript

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2

- -x

UNIMATIC MANUFACTURING CORP. SUPERFUND SITE

PUBLIC MEETING

- -x

Fairfield Municipal Building
230 Fairfield Road
Fairfield, New Jersey

August 10, 2016
7:00 p.m.

P R E S E N T:

NATALIE LONEY,
Community Involvement Coordinator

TREVOR ANDERSON,
Remedial Project Manager

JEFF JOSEPHSON,
Section Chief

NICK MAZZIOTTA,
Human Health Risk Assessor

GERARD BURKE,
Site Attorney

MS. LONEY: Good evening, everyone. My name is Natalie Loney. I'm the Community Involvement Coordinator for the Unimatic site. I'm actually filling in for Sophia Kelly. She's out on maternity, so I'm stepping in in her stead. So moving forward, you may see her instead of me.

Anyway, the purpose of tonight's meeting is to present EPA's Proposed Plan.for cleanup of the Unimatic site. And tonight with me are some of my EPA colleagues: Trevor Anderson, the remedial project manager for the site; next to Trevor, Nick Mazziotta, he is the human health risk assessor; and we have Jeff Josephson, the Section Chief for the New Jersey site; and Jerry Burke, Jerry is the site attorney.

And in the back of the room is Joe Button and Thomas Matthews, they're the CDN contractors who worked on a lot of the work at the site.

So the way the evening goes, since this is a public meeting and we're presenting our remedy and asking for comments, we do have a stenographer present. And, so, if you'd like to make a comment for the record, at the end of our presentation, during the question-and-answer, you can make your comment. The only thing that we ask is that you state your name clearly so it can being captured by the stenographer.

So, the way the evening is going to move forward, Trevor is going to come forward and do his presentation, at the end of which we will take question-and-answer.

There are copies of the proposed remedy on the table at the front of the room. In addition, there is a sign-in sheet. And we ask that if you'd like to receive e-mail or regular U.S. Mail notifications about activities at the site to please place your name on our mailing list so you can be updated.

In addition, much of the site-related information is available on the Unimatic web page. That web address is on the bottom of this particular slide and is also on the copies of the Proposed Plan.

Tonight's Powerpoint presentation will be uploaded to the web page, so you'll get another opportunity to take a look at it after this evening.

Let me just start by kind of bringing you through the life cycle of a Superfund site and how did we get to where we are today. This schematic kind of lays out how a Superfund site progresses from site discovery until deletion and reuse.

The first thing that happens is that if a site is nominated, we go through an assessment and investigation. And if it scores well enough, it's placed on the NPL, the National Priorities List, otherwise known as the Superfund list. And in order for a site to be eligible for Superfund dollars to clean it up, it has to be placed on that list. So, Unimatic went through that process and it was placed on the list.

Once it's on our Superfund list, we do something called a Remedial Investigation and Feasibility Study. That means we look at the nature and extent of contamination at the site and look at feasible options to address it. So, we've already completed that phase at the Unimatic site.

Once we've determine the nature and extent of contamination and what are possible options for addressing it, we come up with something called our Proposed Remedial Action Plan. Basically, that is EPA's plan to address the contamination.

And, so, what's happening tonight is we are presenting to you what the alternatives are and what our preferred remedy is.

And at this point in the life cycle of the Superfund site, here's where the community can weigh in. You can ask questions -- I mean, you can ask questions at any point, but you can weigh in on what you think of the remedy, if you have issues with it, concerns. All of those are recorded and then EPA captures all of the comments that we receive both tonight and if you decide to e-mail them to us later, and we respond to all of those comments in a document called a Responsiveness Summary.

You have until the 22nd of August to submit your comments to us. Once all of the comments are submitted and that comment period closes, we respond to all of the things that you've written to us and we make our final decision as to what the remedy would be. That's what we call the Record of Decision or the ROD.

So, we haven't gotten to that point yet. We're looking to move in that direction. Once the remedy is selected, we then go through the process of designing it, implementing it, and cleaning up the site.

So, I'm going to turn the floor over to Trevor now. And I ask if you have any questions, hold them to the end, take a note or two, and then we will come back and respond to all of your questions and comments.

Thank you.

MR. ANDERSON: Thank you, Natalie.

As Natalie indicated, my name is Trevor Anderson. I'm Project Manager for Unimatic Manufacturing Corporation's Superfund site, located here in Fairfield, New Jersey.

Now, let me give you a brief history and a description of the site itself.

The Unimatic Manufacturing Corporation Superfund site is located at 25 Sherwood Lane and it occupies approximately 1.23 acres of land.

There are also three adjacent properties: The first one is 30 Sherwood Lane, which is located to the east; and we also have 21 Sherwood Lane to the west; and on the JCMUA property, which is located to the north. All these three properties became contaminated by the activities on Unimatic itself.

That site is also located in an industrial area, where residential properties are located about 800 feet to the northeast of the site.

So, this gives you a perspective of where the site is located within New Jersey itself.

And this is approximate -- the blue line outlines Unimatic itself, and you can also see the three adjacent properties; JCMUA, 30 Sherwood Lane, and 21 Sherwood Lane.

Now, a brief site history. From 1955 to about 2001, Unimatic operated a high-pressure aluminum die casting facility, the process of which involved melting aluminum down to -- at high temperature. The molten aluminum would be injected into molds, which formed the basis of their product. In addition, lubricating oil would be sprayed on these molds to allow for the aluminum product to easily be removed from the molds.

We later determined that the lubricant oil contained PCB in a mixture of naphtha or mineral spirits. They dissolve off the PCB, and this mixture allow it to be easily sprayable.

Now, the reason why the site became contaminated is from the wastewater from their processing. And what they on would do, they would wash down their equipment, wash down their floors, an all that PCB-contaminated water would enter into, I guess, trenches within the building, which eventually flows up into perforated pipes which is located in the northeast end of the site.

And we also have determined that these pipes leak the wastewater and the PCB-contaminated water into not only the soil but also the groundwater and also the adjacent property.

In 2001, Unimatic ceased operations. It sold the property to Cardean in 2002. And Frameware, a tenant of Cardean, occupied the site until 2013.

So, between 2001 and 2011, the New Jersey Department of Environmental Protection provided oversight as Unimatic enlist the service of their consultant GZA to conduct numerous investigations at the site.

Some of these investigations resulted in the removal of several aboveground tanks, underground storage tanks, and about 4,800 tons of PCB-contaminated soil were also removed.

In 2012, EPA's removal action branch did an investigation at the site. And their investigation -- they investigated the building, they investigated the soil, the surrounding soil, and they determined that the soil was, indeed, contaminated with PCBs. And they also concluded that the efforts by Unimatic did not fully address the PCB contamination of the surface soil itself.

So, based upon the result of the

what the Removal Action Branch did, the New Jersey Department of Health issued a letter to the facility -- at that time, it was Frameware -- characterizing the current and future use of the site as a public health hazard and recommended relocation of the property.

This letter prompted Frameware to relocate their facilities, and that was done in 2013.

In 2014, the site was added to the National Priority List, or NPL. As Natalie indicated, this allowed EPA to obtain the funding needed to investigate the property and the contamination that was determined there.

So, in 2015, June and July, EPA conducted a very extensive soil investigation. And the purpose of this investigation was not only to determine the nature and extent of the contamination found at the building and soil at Unimatic, but also in those three adjacent properties.

We also plan to do an extensive

ground water investigation at a later date because we detected some contamination within the groundwater at the site.

So, let me talk a little bit about the result of the Remedial Investigation and the Risk Assessment itself.

So, for the soil investigation, we did it in the two phases.

Phase 1, we collected about 447 samples from 75 locations. We analyzed most of those samples for PCBs, VOCs, and pesticides.

Phase 2, we went out and collected 66 soil samples from six soil boring locations at 30 Sherwood Lane. We did a limited ground water investigation, where we collected samples from 11 monitoring wells.

We also investigated the building, and we collected samples from the floor, from leftover equipment that were in the building. All those samples were analyzed for PCBs. We also completed a building material survey to determine whether or not we had asbestos or lead in the building itself.

Based upon the results of the RI investigation, the soil, the building, and also the building survey, we were able to assess the health. We conducted an assessment and also an ecological characterization of the site. And, basically, we wanted to determine whether or not the soil contamination poses a threat to human health and the environment.

So, I'm not quite sure if everybody can see this, but this is a layout of our sampling grid and the amount of samples that we collected at the site.

So, following the RI investigation, we concluded that there was a widespread PCB and pesticides contamination, the soil contaminated with PCBs and pesticides.

We detected PCBs in the floor, we detected it in the building, we detected PCBs in the walls, soil beneath the building, and also soil on the Unimatic property.

We also detected PCBs in those three adjacent properties that I mentioned before.

The thing that is important to us is that PCBs were detected in the same -- it was pretty much co-located with the pesticides. Both of them were detected in the same area.

We also detected some PCBs in one of the monitoring wells, which is closer to 30 Sherwood Lane.

From the data, we did a human health risk assessment. We did one for the soil and we did one also for the building. And both results of the risk assessment indicate that the PCBs and the pesticides poses a threat to human health and the environment.

The ecologic assessment that we did at the site indicated that the site has very small ecological risks to wildlife, plants, and animals.

So let's look at a little

technical discussion and Feasibility Study. This portion is after we collect all the data. We then turn our attention to developing a Feasibility Study for addressing the site contamination.

In this case, the Feasibility Studdie focuses on addressing the contaminated soils not only at the Unimatic property but also the building, the Unimatic building, and also the three adjacent properties. And as stated before, groundwater investigation is planned in a separate operable unit, which will take a look at the sediment and, obviously, the ground water.

Now, PCBs at the site. We found high concentration, over 500 milligrams per kilogram of PCBs, at some locations. And we considered this -- when the concentration starts getting that high, we consider it as a principal threat waste. And as a principal threat waste we consider it to be a principal -- a significant risk to human health or the environment.

So, based upon the results of the Risk Assessment, and also looking at state and federal promulgated standards, the next step for us, we decided that PCBs and pesticides were the main contaminant of concern at the site.

So, these are -- from there, we were able to go ahead and develop remedial objectives. And our remedial objective overall is to reduce or to eliminate human exposure to the contamination; not only the building, but also on the property.

We also want to prevent the migration of the contaminants offsite to surface water runoff into the storm sewer discharge. And we also want to minimize the migration of the contaminants going from the soil into the groundwater.

After we establish our remedial objectives, we then turn and look at what we consider to be our preliminary remediation goals.

So, we look at the contaminants of concern, we also look at the state and federal promulgated standards, and from there we develop our preliminary remediation goals for cleanup of the soil contamination.

For this site, we plan to clean the soil to meet New Jersey industrial soil cleanup standard of one parts per million, or 1 ppm, for PCBs.

We also known that since the pesticides are co-located with the PCBs, that once we are able to clean the PCBs we should be able to clean up the pesticides and any other contaminants that we detect in the soil itself.

I don't know if you can see this, but this pretty much outlines the area that we've had to conduct our remediation. All the soil within this area is what we plan to excavate.

So, let's talk about the remedial action alternative selection process.

Based upon the contaminant of concern and state and federal promulgated standards, we then identified several potential technologies which we think would be able to address the contamination, to clean it up to the state cleanup level of 1 ppm.

From the list of all of these technologies, we then narrow it down to about a few technologies that we feel would be able to meet remedial action objectives and also our PRGs. For this site, we are able to identify at least six possible alternatives for addressing the soil contamination.

Now, all of the alternatives have one thing in common and what would be considered to be the common elements, and that involves demolishing the Unimatic building, offsite disposal of the debris. We also want to remove soil from all those three properties; JCMUA, 21 Sherwood, and 30 Sherwood Lane. We want to remove all that soil and backfill it with clean imported soil. We also might require some form of deed notice.

So, our first alternative, which is Alternative 1, is the no-action alternative. And we retain this in accordance with the NCP. It serves as a baseline to compare to all the alternatives to this one, Alternative 1.

It will cost us no money, it will take no time to accomplish since we're not going to be doing anything.

We also looked at, considered, Alternative 2. And Alternative 2 involved excavation of soils above 10 ppm PCBs down all the way in the water table, offsite disposal of the soil, and in situ solidification, stabilization, and capping of remaining soils above PRGs.

The cost is $14.3 million and we estimate it would take about one year for us to complete.

Alternative 3, we're looking at in situ solidification, stabilization, and capping of the soils above PRGs.

Now, remember the common elements

amongst all the alternatives, which is demolish the building, excavating soil from the three surrounding properties.

So, Alternative 3 is going to cost us $6.4 million. It will take about one year for us to achieve our RAOs, Remedial Action Objectives.

Alternative 4 involves excavation of soils above PRGs, offsite disposal, and backfilling the excavated area with imported soil.

This is going to cost us about $18.1 million. We expect to achieve our RAOs in about a year and a half.

The next alternative, Alternative 5, it involves excavation, offsite treatment of soils above PRGs with thermal desorption and backfilling. After we treat the soil through the thermal desorption, we're going to take the treated soil and put it back into the excavated area and add additional soil, if needed, to bring it up to grade.

This is going to cost us

$15.1 million. It's going to take about two years for us to complete.

The final alternative is Alternative 6, and that involves targeted excavation of contaminated soils above the water table exceeding PRGss and the excavation of contaminated soils below the water table exceeding ten times PRGs, offsite disposal, and, of course, backfill with imported soil.

This alternative will cost $16 million and it would take about a year and a half to complete. But at the same time, we believe that it would not achieve groundwater protection RAOs, which is one of our goals.

So, basically, Superfund requires us to look at, to evaluate, each of these alternatives against each other and also against these nine criteria that is listed here.

The first two, threshold criteria, is overall protection of human health and environment, compliance with environmental regulations.

Then we have these balancing criteria, which is long-term effectiveness and permanency; reduction of toxicity, mobility, and volume through treatment; short-term effectiveness, implementability, cost.

And, also, the modifying criteria which is state acceptance and also community acceptance.

And that's the reason why we're here: To present our plan and hope that the community will provide us comments to help us to move forward. So, we are expecting your comments, and I believe Natalie will talk a little bit more about that.

So, what we did after we established those six alternatives, we compared them not against each other but also against these nine criteria that we have here. And after our evaluation, we determined that the preferred alternative for cleanup of soil contamination at Unimatic is Alternative 4.

Alternative 4 involves excavation of soils above PRGs, offsite disposal; we believe that it will protect human health and the environment; provide -- also provide the highest degree of long-term protectiveness and permanency.

It complies with ARARS, which are compliance with environmental regulations. It also provides the best balance of all of the criteria. So, for us, Alternative 4 is our preferred alternative.

I believe at this point, Natalie might want to say something.

Thank you very much.

MS. LONEY: Just kind of to bring everything together, we selected a particular alternative but the information that Trevor presented, it is available online. I have the web address here.

We also have hard copies of all of these documents and reports and sampling results, the remedial investigation. It's available in this building, actually, as part of the administrative record. Or if you're in New York City at the time, you can come to our offices, and we have it available there.

So, this Proposed Plan, we have the document here, all of the background information is available online and in our offices.

Let me back up a little bit. I don't see it on the slide, but I'll add it. The comment period closes on August 22, and you can submit your comments to Trevor before that time. I'll provide you with his e-mail address. It's Trevor.Anderson@epa.gov, but I'll add that slide for you.

So, now we're going to open up the floor for questions. You can ask about what you heard today or if there are any things you need some clarification on.

MR. MARK: I have several questions.

MR. ANDERSON: Please state your name for our record.

MR. MARK: Kent Mark, spelled

M-A-R-K.

First question: Who makes -- when you look at all these alternatives you have here, who makes the final decision as to which alternative?

When you say you're suggesting that it be alternative number such and such, who makes the final decision on that?

MR. ANDERSON: I believe that it's EPA that makes that final decision, but it's also -- I mean, basically, we would need your comments if you have an objection to any of the alternatives that we're proposing here.

But the final decision, we would, I guess, summarize it into what we call a Record of Decision, and that will be signed by a regional administrator. And once that's signed, it now becomes the remedy.

Maybe Jeff would like to say something.

MR. JOSEPHSON: I'll just add that the technical investigation and the investigation was done by our contractor, CDM Smith. We work with them also to talk about technical aspects that are incorporated into their reports and how they go along with the criteria that we evaluate, each of those alternatives.

We, as a region, develop the preferred alternative and then we present it to technical people within the agency. So, it is reviewed fairly extensively in the agency to gain support, to make sure that that's the alternative we want to propose.

MR. MARK: So, somebody, for example, decides that it would be better to have an RAO or what used to be an NFA, I believe, rather than have something lesser than that.

MR. JOSEPHSON: Well, the RAOs are established both on regulatory requirements and protectiveness considerations, human health considerations. The RAOs are usually nonquantitative and they're statements that say we want to protect human health by preventing migration.

And then based on those, we'll come up with PRGs, which are the quantitative goals that will meet those RAOs.

MR. MARK: Okay.

MR. JOSEPHSON: Sure.

MR. MARK: The second question: Since this is an EPA site, a Superfund site, but the NJ DEP is involved, are the standards higher on any of the cleanup issues for PCBs or pesticides or anything else than they would be with the New Jersey DEP or are the standards still the same or are they controlled by state law rather than anything that might be federal?

MR. ANDERSON: As Jeff indicated we looked at various, you know, different regulations and laws. And one of the things that we did -- I believe one of the slides indicated we will be using the New Jersey soil cleanup standard for industrial property, which is one parts per million.

The more stringent would be for us to clean to residential. But since this property has historically been located in an industrial area, we figure that the standard we would use would be to 1 ppm, which is the state industrial cleanup standard for soil.

MR. MARK: Because it's zoned industrial.

MR. ANDERSON: It's zoned industrial, correct.

MR. MARK: And then I have some site-specific --

MR. JOSEPHSON: I'll just add in the copy of the Proposed Plan that's available, if you look at Table 1, it shows the concentrations that were detected at maximum and then the screening criteria against which the final PRG was selected. So, you can see the state versus the federal and then you can see what was selected.

MR. MARK: That table is in that package?

MR. JOSEPHSON: It is.

MR. MARK: Thank you.

And then some site-specific questions. You were talking about the removal of the soil, but I didn't understand whether you were sending the soil to a place such as -- I think it's called Bay Shore, down by Perth Amboy, where they actually burn the soil, versus a place maybe south of Camden or some other location where they might bury the soil based on future liability issues.

Has that all been considered?

MR. ANDERSON: Well, the next step after we write our decision is to do what we call a remedial design. Within that remedial design, we'd be able to look at alternatives for disposing the soil.

But since we're not selecting thermal desorption or any kind of burning, I believe that we're probably going to take the contaminated soil to a landfill site. I'm not quite sure where it is until we do our remedial design.

MR. MARK: Would there be a consideration about future liability issues with burying the soil and then there being some problem later on versus burning it and it being basically gone?

MR. ANDERSON: Liability -- well, everything will be considered, actually. We will consider liability, we will consider, you know, all facets of remediating the site when we go ahead and do -- during our remedial design phase of the project itself.

MR. MARK: Also, on USTs, I started reading the brochure that you handed out. I thought I read there was one UST on the property, but there it said multiple USTs, plural.

Whether it was one or multiple ones, was there any leakage or were there any USTs under the building or were they all outside of the building?

MR. ANDERSON: Well, there were some on the outside of the building and maybe one or two inside the building itself. And I believe one of the slides --

MS. LONEY: Sorry, could you explain what a UST is for those who may not know?

MR. ANDERSON: Underground storage tanks.

And what we found during our investigation, and our Removal Branch you know also confirmed it, was that after GZA, which is a Unimatic contractor underneath of the New Jersey Department of Environmental Protection oversight, after they went through and they removed all those tanks, what we found was that the soil was still contaminated, which means that there might have been some kind of leakage of those underground storage tanks.

And that could explain the widespread PCB contamination that we found primarily around the building. Some of the concentration was over 500 milligrams per kilogram.

MR. MARK: Now, I also didn't

understand -- a couple more questions.

Where did the pesticides originate from?

Maybe I missed that or I didn't quite get it or I didn't read far enough into the...

MR. ANDERSON: We're not fully sure, but we believe that because the PCBs is co-located -- I'm sorry, because the pesticide is co-located with the PCBs, we believe that at some point in time -- we have no way of proving this, but we believe at some point in time Unimatic used pesticides within their operation.

MR. MARK: And were there any prior buildings?

You went back to about 1955, but were there any prior buildings on this site where there might have been some contamination from something else prior to this company working there?

MR. ANDERSON: No, we didn't see any additional buildings.

Going back to aerial photographs

of the facility itself, it shows that it was like a farmland, you know, maybe an orchard or some kind of agricultural process on the property. That's as far as we go back.

Do you recall what year that was?

Back in 1930s, 1940s.

And everything got picked up in 1955 when Unimatic started their operation up. I mean, they started as a small building and then the building grew as their business grew also.

MR. MARK: And lastly, you talked about one of the alternatives being the removal of soil, then treating it, and then putting it back.

MR. ANDERSON: Correct.

MR. MARK: In any of those alternatives -- because I'm not necessarily familiar with all the environmental terms, in any of those alternatives, was there anything about natural attenuation or soil injection without physically removing the soil but treating it in place, number one; and, number two, what would be the benefit of removing it treating it, and putting it back versus attenuating it where it is in the ground?

MR. ANDERSON: Well, I believe that there's one alternative, Alternative 2, which indicated that...

Alternative 2 is that alternative (indicating).

We're going to excavate the soil above PRGs to the water table and we're going to use in situ -- "in situ" means that we're going to treat it in place -- in situ solidification and stabilization.

MR. MARK: So, what is the benefit of treating it in place with a natural attenuation or injections versus removing it, treating it, and putting it back; putting the same soil back and then topping it off with whatever is missing at that point?

MR. ANDERSON: Well, it could be cost.

MR. MARK: Primarily cost?

MR. JOSEPHSON: If you look at Alternative 2 and Alternative 3, Alternative 3 is not removing any soil it would just be totally in situ stabilization. So, that's a matter of turning the soil and mixing it with a solidifying material, something like cement.

Now, some of the benefits would be cost might be one and it might be less disruption in terms of truck traffic going in and out. Some of the negative aspects of it might be that the volume change might be unacceptable because if you keep adding stabilizing material, it will increase the volume and you might end up with a topography that the property can't be used again in a productive manner.

MR. MARK: Okay.

MR. JOSEPHSON: So, that would be one thing that we would look at and consider.

There's other considerations. A lot of work has been done to show that stabilization can be done with PCBs successfully in the soil. There hasn't been a lot done with PCBs that are stabilized in contact over a long period of time with water that's contaminated with volatile organic contaminants, which there are some of those contaminants in the water in this area. So, that would be something that would be a negative in terms of the long-term --

MR. MARK: Because of the VOCs in the water.

MR. JOSEPHSON: That's right. It might have an adverse impact on the solidification of the soils. So, that's something that we consider.

So we have to look at each of them carefully and think about the pros and cons. And in the end, we just felt that removing all the soil completely out of the property, there's no longer an issue with it coming in contact with the groundwater, being a possible long-term source of groundwater contamination.

And disruption of the community, it will be for a short period of time and relatively minor; a matter of managing traffic.

MR. MARK: As opposed to how long it would take to attenuate, and then clear the groundwater, even if you were to cap it.

MR. JOSEPHSON: Right. It's not going to attenuate in any time short, that's for sure.

MR. MARK: Thank you very much.

MR. LoCASTRO: John LoCastro.

How long before this project starts?

How is it going to be -- how are they going to pick the contractor to do this?

Will there be competitive bidding or are they going to select?

Is CDM going to put the remediation plan together and submit it to you guys, to the DEP?

When is this going to get started, any idea?

MR. ANDERSON: Well, the next step after this public meeting is to write a Record of Decision. And depending on the comments, there might be requests for extensions, stuff like that. So, we're expecting to complete a Record of Decision, have a signed Record of Decision by the end of September.

From there, we're going to go through the process of attempting to obtain the funding to do the site.

And the contracting process, that's something that we probably have to talk more with our management and stuff like that.

MR. LoCASTRO: I'm just curious, you know what I mean?

I've done a lot of projects, remediation projects. I'm with the Operating Engineers. We represent the people that operate the equipment. We do a lot of haz-mat work. I've been tracking this job for a while, I've been out there a few times.

So, again, I just want an

opportunity for some of our contractors to bid it. I've done many remediation jobs; I've done in situ jobs, done a lot of dredging, dredging with PCBs, mixing with cement. So, I'm a little familiar with all these different ways of how to --

MR. ANDERSON: Once we sign the Record of Decision, the next step is to do the remedial design, and that might take a year or so.

And from there, construction is where you want to get involved, construction of the remedy itself, which is all digging and stuff like that.

MR. LoCASTRO: Is there going to be competitive building or is there going to be a selection of people, you know, you have to be qualified to do this type of work?

MR. ANDERSON: I'm not sure --

MR. JOSEPHSON: Normally what we do, EPA will normally hire the Army Corps of Engineers as our contractor.

MR. LoCASTRO: Okay.

MR. JOSEPHSON: And then they have
contracts that they routinely use in
construction work and they have been
prebid and have been preplaced
contracts. So, there is a range of
technical contractors that we can select
through a competitive process with the
Army Corps of Engineers.

MR. LoCASTRO: I've lived with
them before.

MR. JOSEPHSON: If you'd like the
name of contacts with them, we can
provide you with those contacts.

MR. LoCASTRO: I'd appreciate
that, thank you.

MR. JOSEPHSON: Sure.

MR. ANDERSON: So, it will be
about a year away after remedial design,
so you have time to --

MR. LoCASTRO: That's why I'm here
tonight, I want to see how far it's out.
This way, I have a good idea how to
approach this.

MR. ANDERSON: You'll have time to
find out --

MR. LoCASTRO: I know I will. A lot of layers to this type of work. Been there.

MS. MURPHY: Hi. I'm Kathleen Murphy.

You referred to institutional controls in your handout and that a deed notice would be required for Unimatic and that the goal of the soil cleanup for the adjacent properties, 21, 30, JCUM, it would be cleaned up to residential standards.

MR. ANDERSON: No, I believe it says industrial.

MS. MURPHY: That's what it says.

MR. JOSEPHSON: That's what the goal is. I'm going to tell you why it says that as compared to the industrial cleanup standard of one.

The contamination on those properties is much, much less than what is found on the Unimatic property itself. And it's in a limited area; the extent is not as deep, and it's not as high concentration and the aerial extent is not as great.

So, it might be that we can just go out and take those limited areas of contamination without significant additional cost to the government and can meet the residential cleanup numbers.

So, that's going to be a goal. We may not be able to do that on those properties, it might turn out that we find out there's more that's between the residential and the commercial standard than what we currently know, but that's going to be the goal and we'll work with the state to do that.

If we can't do that, we will clean it up to the PRGs, which are the industrial standard, since it is an industrial property. We put that in because we think it might be a very minimal cost to the government just to meet the residential standard.

And the only difference is it prevents the need to have a deed notice on those other property, which some of them already have environmental deed notices placed on them anyway.

MS. MURPHY: So, you've got a goal, but you don't know if you're going to achieve the goal?

MR. JOSEPHSON: Well, any goal -- it is a goal, that's right.

MS. MURPHY: And then would you negotiate directly with the property owners about accepting deed notices?

MR. JOSEPHSON: That's correct.

MR. O'DONNELL: My name is Bill O'Donnell.

My question is it sounds like this will be an EPA-funded cleanup and funded not by Unimatic; is that correct?

MR. ANDERSON: Correct.

MR. BURKE: Just for clarification, the investigation as to who is responsible for this is still ongoing. While the work so far has been funded by the federal government, and we'll continue to pace our work and proceed, we will attempt to get the money spent back from those determined to be responsible.

The goal of the program is to keep the work moving, and my job is to try to get the money back.

MS. LONEY: Are there any further questions?

MR. MARK: Let me ask one more questions, Kent Mark.

Based on what you're saying, is the responsible party Unimatic or we're not sure that they're totally the responsible party?

MR. BURKE: Unimatic has been identified as a potentially responsible party. Unimatic is no longer operating, the principals are deceased, so you can imagine the difficulty that we face. But, nevertheless, there may be assets that may be available to us, which we'll try to obtain.

MR. MARK: Are there any other potential RPs.

MR. BURKE: The investigation is ongoing.

MR. MARK: Thank you.

MR. BURKE: Just about the feasibility study, I think when you look at the slide presentations, it's boiled down to about 20 slides.

In response to your question about the alternatives, if you go back and look at the administrative record at the feasibility study, you'll see pages and pages of analysis of comparing these alternatives, maybe hundreds of pages comparing these alternatives.

So, there's more than enough information behind the recommendation if you want to go look.

MR. MARK: Thank you.

MR. ANDERSON: This is a web address to find all the documents. That goes into detail. Like I said, this presentation condenses a volume of information down to a few slides, and more detail can be found because within the website we will have the remedial investigation report that describes all the work that we did at the site; the sampling event is described, the data we collected, and it goes through.

We also have the human health risk assessment there, we have the ecological assessment there, and we also have the feasibility study. And that will go through how we went -- the process of coming up with these alternatives, these six alternatives.

MR. MARK: That's listed in here?

MR. ANDERSON: Yes, it's listed in there. I don't know if everyone has a copy.

MS. LONEY: There are a couple of copies left on the table.

MR. ANDERSON: And, also, my telephone number is on the Proposed Plan, so you can easily get in touch with me.

MR. MARK: Where is your telephone number?

MR. BURKE: Last couple pages.

MR. MARK: Oh, the 212 number at the EPA?

MS. LONEY: Yes.

That's the Records Center that's

if you want to get access.

UNIDENTIFIED SPEAKER: It's on Page 18.

MR. JOSEPHSON: Page 18, Trevor's telephone number.

MR. MARK: Thank you.

MS. LONEY: Are there any further questions?

MR. ANDERSON: And that's my e-mail address.

MS. LONEY: It was a lot of information to kind of glean in one evening. This presentation will be posted on the web page, the Unimatic web page.

And I'd like to encourage you to please submit comments to us by the 22d of August so that your voice can be heard in terms of your concerns about the remedy.

And I thank you all for coming out. Thank you.

(Time noted 7:53 p.m.)

C E R T I F I C A T E

STATE OF NEW JERSEY)
) ss.
COUNTY OF HUDSON)

I, LINDA A. MARINO, RPR, CCR, a Shorthand (Stenotype) Reporter and Notary Public of the State of New Jersey, do hereby certify that the foregoing transcription of the public meeting held at the time and place aforesaid is a true and correct transcription of my shorthand notes.

I further certify that I am neither counsel for nor related to any party to said action, nor in any way interested in the result or outcome thereof.

IN WITNESS WHEREOF, I have hereunto set my hand this 22nd day of August, 2016.

____

LINDA A. MARINO, RPR, CCR

Attachment D: Written Comments

BRACH | EICHLER LLC

Frances B. Stella
Direct Dial: 973-403-3149
Direct Fax: 973-618-5549
E-mail: fstella@bracheichler.com

August 16, 2016

VIA OVERNIGHT DELIVERY

Mr. Trevor Anderson
Remedial Project Manager
United States Environmental Protection Agency
290 Broadway
New York, New York 10007

Re: Unimatic Manufacturing Corporation
25 Sherwood Lane, Fairfield, New Jersey

Dear Mr. Anderson:

This firm represents Unimatic Manufacturing Corporation ("Unimatic"), the former owner of the property located at 25 Sherwood Lane, Fairfield, New Jersey known as the Unimatic Manufacturing Corporation Superfund Site ("Site"). A consultant on behalf Unimatic submits the following comments to the United States Environmental Protection Agency's Proposed Remedial Action Plan for the building and soils for the Site. EPA has divided the Site into two operable units (OUs). The first, OU1, includes the contaminated building, debris and soils. The second, OU2, will address groundwater and sediment. These comments are in response to the proposed plan which only addresses OU1.

EPA evaluated six remedial alternatives ranging in costs from $6.4 million dollars for Alternative 3 to $18.1 million dollars for Alternative 4 (note EPA did include a no action alternative as Alternative 1 but this was dismissed as it fails to provide protection of human health and the environment). The EPA compared Alternatives 2 through 6 to eight of the nine evaluation criterial used for Superfund remedial alternatives evaluation (the ninth criteria is public acceptance and is being evaluated through this public comment period). Based on EPA's evaluation of alternatives, EPA selected Alternative 4 as their preferred alternative. EPA concluded that Alternative 4 satisfactorily fulfilled eight of the evaluation criteria. EPA stated that Alternative 4 was selected because it would provide the highest degree of long-term protectiveness and performance. We noted that the estimated cost for Alternative 4 is $18.1 million dollars and is the most expensive alternative evaluated.

Alternative 3, by contrast was the least expensive alternative evaluated. The estimated cost for Alternative 3 is $6.4 million, $11.7 million dollars less than the EPA selected alternative. The cost differential is significant. Additionally, Alternative 3 meets the requirements of the seven technical criteria of the evaluation (setting aside for the moment regulatory and public acceptance). Alternative 3 prevents further migration of COCs to groundwater and offsite surface water by minimizing the availability of contaminants to the environment through in-situ soil stabilization, and is in compliance with applicable or relevant and appropriate requirements. Alternative 3 provides for the smallest short term impact to the community as all the soils will be managed on-site. As with all the alternatives, the Site will require long term management as contamination would remain above levels that allow for unlimited use and unrestricted exposure. EPA did not identify a fatal flaw in Alternative 3. In EPA's conclusion, a key point made against Alternative 3 was the potential for an unacceptable change to site elevations based on the addition of the stabilizing agent. The addition of the stabilizing agent will increase the overall volume of the treated soil and that may result in a final topography that could limit the future re-use of the Site. With the $11.7-million-dollar cost differential, there may be opportunity for grading and off-hauling some of the stabilized soil to eliminate any restrictions due to post remediation site topography and still have a significant cost saving over Alternative 4. As the cost of Alternative 4 is nearly three times that of Alternative 3 it would appear prudent to evaluate Alternative 3 with an option to off-haul and dispose stabilized soil to eliminate any potential restrictions from site topography and still meet the evaluation criteria and at a much lower cost as compared to Alternative 4.

Very truly yours,

Fran B Stella

Frances B. Stella
For BRACH EICHLER L.L.C.

FBS:ab

cc: Mr. John F. Glowacki, Jr.
Mrs. Caitlin White

From: Larry Kraft [mailto:larryk@highgroundind.com]
Sent: Tuesday, August 23, 2016 1:15 PM
To: Anderson, Trevor <Anderson.Trevor@epa.gov>
Subject: Unimatic Manufacturing Corp Demo/Contaminated Soil Project

Good afternoon Trevor:

I came across an article in DEMO-MEMO highlighting a potential demo/contaminated soil project at 25 Sherwood Lane in Fairfield, New Jersey.

You were listed as the point of contact and I wanted to see if an RFP was forthcoming on this project. I have included a Capabilities Statement from Highground for your review below.

Could you please give me a call at (914) 443-0353 or e-mail me at larryk@highgroundind.com with any information pertaining to this project.

Thank you very much for your assistance and I look forward to hearing back from you.

Best regards,

Larry Kraft
Director Business Development
High Ground Industrial, LLC
12 Industrial Drive
Florida, NY 10921
Tel: 201-252-8600
Fax: 845-651-1950
Cell: 914-443-0353
larryk@HighGroundind.com
www.HighGroundInd.com

From: Daddono, William [mailto:WDaddono@heritage-enviro.com]
Sent: Friday, August 12, 2016 9:35 AM
To: Anderson, Trevor <Anderson.Trevor@epa.gov>
Subject: Unimatic Superfund Site

Good morning Trevor,
I looked on the website for the presentation from the public meeting but did not see it posted. Am I missing it or is it not yet uploaded?

Thanks,
Bill

Bill Daddono
Strategic Account Manager
Heritage Environmental Services, LLC
732.299.7875
WDaddono@heritage-enviro.com
http://www.heritage-enviro.com/

From: Lydia Work [mailto:lwork@envstd.com]
Sent: Wednesday, August 03, 2016 2:22 PM
To: Anderson, Trevor <Anderson.Trevor@epa.gov>
Subject: Unimatic Superfund Site in Fairfield, N.J.

Hello Trevor,

I am interested in learning about the data being used for decision making at the Unimatic Superfund Site in Fairfield, N.J.

Are you able to advise me on who is performing the data validation? Is it being performed by the US EPA or a third party (i.e., not by the sampling consultant)?

Thank you,

Lydia M. Work, LRS
Senior Quality Assurance Chemist IV
Environmental Standards, Inc.
1140 Valley Forge Road • PO Box 810 • Valley Forge, PA 19482
(o) 610.935.5577 ext. 406 • (m) 304.552.1442 • www.envstd.com • lwork@envstd.com

Emergency Response Quality Assurance Hotline: 855.374.7272

From: Ludwig, Tim [mailto:tim.ludwig@veolia.com]
Sent: Friday, July 22, 2016 2:46 PM
To: Anderson, Trevor <Anderson.Trevor@epa.gov>
Subject: Veolia Environmental

Mr. Anderson, good afternoon.

I am writing to request information on whom the EPA will be hiring to manage the proper handling, transportation and disposal of the contaminated soil and debris at the Unimatic Superfund site in Fairfield NJ.

Veolia is interested in obtaining information on how we can help the EPA and whatever management company you hire to dispose of the PCB contaminated soil and debris.

Hope you have a great day!

Thank you.

Timothy Ludwig
Account Manager / New Jersey Branch
Industrial Business
VEOLIA NORTH AMERICA

tel
973-691-3965
/ cell
908-285-7465

1 Eden Lane Flanders, NJ 07836
tim.ludwig@veolia.com
www.veolianorthamerica.com

From: JMatonis@rhfs.com [mailto:JMatonis@rhfs.com]
Sent: Friday, July 22, 2016 2:16 PM
To: Anderson, Trevor <Anderson.Trevor@epa.gov>
Subject:

I was just reading this article and was wondering if their was a list available of sites currently being worked on. I handle Nyc, Orange and Rockland and all of long island. We service many companies that do remediation and they often purchase pipe and filters ect from us.Any help you could offer would be very much appreciated.
I attached our line card

(See attached file: rhfs line card 2015.pdf) Thank You, John Matonis District Sales Manager Ryan Herco Flow Solutions(www.rhfs.com)
908-434-4071 Direct
908-672 5948 Mobile
908-534-5287 fax