RECORD OF DECISION

Operable Unit Two
Matteo and Sons, Inc. Superfund Site
West Deptford, Gloucester County, New Jersey

United States Environmental Protection Agency
Region 2
New York, New York
September 2017

528267

DECLARATION STATEMENT
RECORD OF DECISION

SITE NAME AND LOCATION

Matteo and Sons, Inc. Superfund Site
West Deptford Township, Gloucester County, New Jersey.

Superfund Site Identification Number: NJD000565531
Operable Unit 2

STATEMENT OF BASIS AND PURPOSE

This Record of Decision (ROD) documents the U.S. Environmental Protection Agency's (EPA's) selection of a remedy for Operable Unit 2 (OU2) at the Matteo and Sons, Inc., Superfund site (Site) located in West Deptford Township, Gloucester County, New Jersey, which was selected in accordance with the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, 42 U.S.C. §§ 9601-9675 and the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 C.F.R. Part 300. This decision document explains the factual and legal basis for selecting a remedy to address contamination at OU2 for the Site. The attached index (see Appendix III) identifies the items that comprise the administrative record upon which the selected remedy is based.

The New Jersey Department of Environmental Protection (NJDEP) was consulted on the proposed remedy in accordance with CERCLA Section 121(f), 42 U.S.C. § 9621(f), and concurs with the selected remedy (see Appendix IV).

ASSESSMENT OF THE SITE

Actual or threatened releases of hazardous substances from OU2 for the Site, if not addressed by implementing the response action selected in this ROD, may present an imminent and substantial endangerment to public health, welfare or the environment.

DESCRIPTION OF THE SELECTED REMEDY

The selected remedy described in this document addresses a discrete portion of the Matteo and Sons, Inc. Superfund Site involving battery casing waste and contaminated soil at residential properties in and adjacent to the Tempo Development on Woodlane Drive, Birchly Court, Oakmont Court, Hessian Avenue, and Crown Point Road in West Deptford, New Jersey. This is the second of at least three planned remedial phases, or operable units, for the Site. EPA anticipates that an operable unit will address contaminated soil on the Matteo and Sons, Inc. facility (Operable Unit 1), and operable units will address contaminated surface water and sediment along Hessian Run and Woodbury Creek (Operable Unit 3) and groundwater (Operable Unit 4), as necessary, based on the results of ongoing investigations.

The major components of the remedy selected for OU2 include the following:

- Temporary relocation of residents (as needed);
- Excavation, transportation, and disposal of battery casing waste and soil contaminated with lead, antimony, and polychlorinated biphenyls from approximately 25 residential properties in and near the Tempo Development, as well as excavation and removal of obstructed battery waste and contaminated soils underlying potentially impacted residential houses/structures;
- Restoration of the affected properties; and,
- Institutional controls, such as a deed notice, to prevent exposure to contaminated soil under roadways that exceed levels that allow for unrestricted use.

Excavation activities associated with remediation may require the demolition and replacement of temporary structures such as sheds and garages, and the removal and replacement of concrete sidewalks, asphalt and driveways. Excavation of battery casing waste and contaminated soil may also be required under residential structures and public facilities (e.g. roadways and utilities). Remedial activities may require the temporary relocation of residents. Institutional controls are not anticipated for residential properties.

Additionally, the battery casing waste is considered a principal threat waste. *In-situ* and *ex-situ* treatment options were evaluated in the FFS but were eliminated due to spatial limitations on residential properties for *ex-situ* treatment and significant engineering controls requirements for *in-situ* treatment. Treatment may occur off site at the disposal facility, if needed, to meet the facility's disposal requirements.

DECLARATION OF STATUTORY DETERMINATIONS

The selected remedy meets the requirements for remedial actions set forth in CERCLA Section 121, 42 U.S.C. § 9621, because it: 1) is protective of human health and the environment; 2) meets a level or standard of control of the hazardous substances, pollutants and contaminants which at least attains the legally applicable or relevant and appropriate requirements under federal and state laws; 3) is cost-effective; and 4) utilizes permanent solutions and alternative treatments (or resource recovery) technologies to the maximum extent practicable. In addition, Section 121 of CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduce the volume, toxicity or mobility of hazardous substances as a principal element (or requires a justification for not satisfying the preference). Treatment is not a principal element of the remedy selected herein because it is anticipated that the excavated soil and battery casing waste will not require treatment to meet the requirements of off-site disposal. However, treatment may occur off-site if needed to meet land disposal restriction standards prior to disposal. Off-site treatment, if required, would reduce the toxicity of the contaminated soil prior to land disposal.

A five-year review will be required because the selected remedy will result in hazardous substances, pollutants, or contaminants remaining under roadways above levels that allow for unlimited use and unrestricted exposure. A statutory review will be conducted within five years of initiation of remedial activities to ensure the remedial action is, 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 as follows:

- chemicals of concern and their respective concentrations may be found in the "Summary of Remedial Investigation" 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 principal threat waste 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 Remedial Alternatives" section; and,
- 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.

AUTHORIZING SIGNATURE

A Carpenter

Angela Carpenter, Acting Director
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9.19.17
Date

DECISION SUMMARY

Operable Unit 2
Matteo and Sons, Inc. Site
West Deptford, Gloucester County, New Jersey

United States Environmental Protection Agency
Region 2
New York, New York
September 2017

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APPENDICES

SITE NAME AND LOCATION

The Matteo and Sons, Inc., (Matteo) site (Site), U.S. Environmental Protection Agency (EPA) Superfund Site Identification Number NJD000565531, is located in West Deptford Township, Gloucester County, New Jersey. The selected remedy described herein addresses a discrete portion of the Matteo and Sons, Inc. Superfund Site involving contaminated soil at residential properties in and around the Tempo Development, Operable Unit (OU) 2 (OU2) (see Appendix I, Figures 1 and 2). EPA is the lead agency and the New Jersey Department of Environmental Protection (NJDEP) is the support agency.

OU2 DESCRIPTION

OU2 includes 36 single-family, residential properties located in and adjacent to the Tempo Development on Woodlane Drive, Birchly Court, Oakmont Court, Hessian Avenue, and Crown Point Road in West Deptford, New Jersey. OU2 for the Site is located in a residential neighborhood with some industrial and municipal properties located within one-half mile.

The topography of OU2 slopes down from northwest to south and southeast. The elevation of the Site at its highest in the northeast is approximately 33 feet above mean sea level (AMSL) and averages approximately 20 feet AMSL in the southern and southeastern extents. Based on the limited groundwater investigation, groundwater elevations ranged from 18.65 to 5.5 feet AMSL with groundwater flow to the southwest. Residential properties are serviced by a public water utility.

Surface water bodies located in the area of OU2 include the east-to-west flowing Hessian Run, as well as Woodbury Creek, which are tributaries of the Delaware River. Hessian Run borders OU2 area to the south and east. Crown Point Road bounds OU2 to the west and Hessian Avenue borders to the Site to the north.

SITE HISTORY AND ENFORCEMENT ACTIVITIES

OU2 is located within one mile of Operable Unit 1 (OU1). OU1 consists of an 80-acre area which includes an active scrap metal recycling facility, a junkyard, and an inactive landfill. Hessian Run is located on the northern border of OU1. The Matteo family operated an unregistered landfill, junkyard, and a metals recycling facility at the OU1 since 1961. In 1968, the NJDEP identified an inactive incinerator at OU1. In 1971, NJDEP approved Matteo's request to operate the incinerator to burn copper wire and Matteo submitted a plan to operate a "sweating fire box" to melt lead battery terminals for lead reclamation. This lead melting operation continued until approximately 1985. In 1972, NJDEP observed landfilling of crushed battery casings and household waste in an area of wetlands adjacent to Hessian Run. This operation was apparently performed in conjunction with the lead melting operation, as there were several reports of battery waste incineration and subsequent on-site ash disposal. These land uses resulted in the contamination of soil, sediment, surface water, and groundwater with lead, antimony, and polychlorinated biphenyls (PCBs). EPA placed the Matteo Site on the National Priorities List (NPL) in September 2006.

OU2 (Tempo Development) was discovered in November 2015 when crushed battery casing waste was uncovered during a sewer lateral repair in the front yard of a residential property located on Birchly Court. Local authorities from Gloucester County and West Deptford were the initial on-scene responders. The property was referred to the NJDEP, who subsequently referred it to the EPA in March 2016 for further assessment and characterization under CERCLA.

As part of a Removal Site Evaluation (RSE) and subsequent Remedial Investigation (RI) and Focused Feasibility Study (FFS) conducted in 2016 and 2017, EPA determined the relative nature and extent of the battery waste present and the associated soil contamination throughout OU2. Additionally, a Removal Action was conducted at two properties on Birchly Court and one property on Woodlane Drive between August and October 2016. The Removal Action included the excavation and off-site disposal of battery casing waste and associated contaminated soil. Approximately 1,936 tons of battery casing waste and contaminated soil was transported off-site for disposal. Approximately 1,386 tons of the battery casing waste/soil transported off-site for disposal were characterized as hazardous due to elevated concentrations of lead. As a result of the Removal Action, the average lead concentration within the top two feet across each of the residential properties was at or below 200 milligrams per kilogram (mg/kg). Management responsibility for the response action was transferred from the EPA Removal Program to the EPA Remedial Program in October 2016.

The results of the RSE/RI revealed that significant concentrations of battery waste were present in three areas of the OU2 with additional battery casing waste spread randomly throughout the neighborhood in lesser quantities. Battery casing waste is also present under public right-of-ways and may be present under several residential structures. Contaminants found at OU2 include lead, antimony, and PCB Aroclor 1254.

COMMUNITY PARTICIPATION

EPA has worked closely with local residents, public officials and other interested members of the community since residential sampling started at the Site in 2016. Work is occurring in a residential community and directly affects residential properties, so the level of community interest is high.

The Proposed Plan for OU2 for the Site was released for public comment on June 22, 2017. The Proposed Plan and other Site-related documents were made available to the public in the administrative record file maintained at the West Deptford Free Public Library, 420 Crown Point Road in West Deptford, New Jersey and at the EPA Region 2 Superfund Records Center located at 290 Broadway, New York, New York (see Appendix III). The administrative record file is also available online at https://www.epa.gov/superfund/matteo-and-sons.

The notice of availability of these documents was published in the *South Jersey Times* newspaper on June 22, 2017. The public comment period lasted 32 days and closed on July 24, 2017.

A public meeting was held on July 6, 2017, at the RiverWinds Community Center, 1000 RiverWinds Drive, West Deptford, New Jersey to discuss the findings of the RI/FFS and to present EPA's plan to the community. At this meeting, EPA representatives answered questions about the RI/FFS and the remedial alternatives. Comments that were received by EPA at the public meeting and in writing during the public comment period are addressed in the Responsiveness Summary (see Appendix V).

SCOPE AND ROLE OF THIS OPERABLE UNIT

Due to the large area, the different media affected by contamination, the complexity of multiple properties and varying land uses, EPA is addressing the cleanup of the Matteo Superfund site in several phases, or OUs. This Record of Decision (ROD) addresses the second operable unit which addresses battery casing waste and contaminated soils on residential properties in and near the Tempo Development only. Future OUs will address contamination at the Matteo and Sons, Inc. facility, potentially contaminated groundwater, surface water, and sediment. Investigations for these other OUs are either ongoing or will be initiated at a later date.

The number of properties referenced in this ROD that require a CERCLA response action is an estimate used to calculate the approximate costs of the cleanup alternatives. The precise number of residential properties that will require remediation under this remedy will be determined upon completion of additional soil sampling activities to be conducted during the remedial design and refined, as needed, during implementation of the remedial action.

RESULTS OF THE REMEDIAL INVESTIGATION

OU2 Geology and Hydrogeology

OU2 is located within the Inner Coastal Plain Physiographic Province of New Jersey. Soil found throughout OU2 primarily consists of silts and sandy silts for the first three to four feet below ground surface (bgs), with some occurrences of clay, which are not uniform in distribution. Construction fill (e.g., brick, block, and concrete) is randomly encountered across OU2 at various depths. Battery casing waste was identified across OU2 at depths to seven feet bgs, with quantities encountered ranging from one or two pieces to layers more than one-foot thick, and spanning large portions of an area.

Groundwater was not encountered at the maximum depth of the subsurface soil investigation of six feet bgs on the northern properties; however, soils were documented as saturated (or wet) as shallow as 1.5 feet bgs on the southern properties located adjacent to Hessian Run. Groundwater flow is generally to the south-southwest toward Hessian Run.

Nature and Extent of Contamination

Based on past ownership records of the property currently comprising OU2 and the contaminants of concern associated with the battery casing waste, it was concluded that the battery casing material originated from the OU1 area. The crushed battery casing waste observed at OU2 is believed to have been brought in from the OU1 area, and dumped in the OU2 area at the time of the battery recycling operation at OU1. Prior to the development of the Tempo neighborhood, the OU2 area was much lower in elevation than the current topography. When the developer began

preparations for construction (i.e., grading), a significant amount of fill was brought in to this area. It is likely that during pre-construction grading of the OU2 area, the fill material was mixed with the battery casing waste already existing in piles on the OU2 area and spread by heavy equipment. This redistribution created a heterogeneous spread of battery casing waste in a soil or construction debris matrix of fill, with the volume of battery casing waste depending on location within the development. The waste disposal likely did not take place through a "dig and bury" approach, as no waste has been discovered in native subsurface soil.

Lead and antimony exceeding regulatory limits are contained primarily to the first four feet of soil, with some exceedances at depths of seven feet bgs. The PCB exceedances in the OU2 area are collocated with lead exceedances and/or battery casing waste.

Concentrations of lead in soil ranged from non-detect to 68,000 milligrams per kilogram (mg/kg). Concentrations of antimony ranged from non-detect to 4,720 mg/kg and concentrations of PCBs ranged from non-detect to 32 mg/kg.

The analytical results for soil and battery casing waste samples indicate that the highest concentrations of contamination are collocated with the subsurface battery casing waste; that the significant contaminant of concern (COC), lead (by concentration, presence and distribution), is not readily miscible or organic in nature; and the physical transport of the waste is likely the only potential route of migration. However, some of the lead concentrations in the soil and battery casing waste indicate that the concentrations should be deemed hazardous for disposal purposes. None of the COCs found in the OU2 area degrade or reduce further, and are expected to persist if left in place.

A limited groundwater investigation conducted as part of the RI indicated that lead concentrations in the unfiltered groundwater were detected in four sample locations at concentrations ranging from 1.8 to 46 micrograms per liter (µg/L). Corresponding filtered samples were non-detect for lead except for one sample, which had a lead concentration of 6.1 µg/L which exceeded the NJDEP Groundwater Quality Standards (GWQS) of 5 µg/L. The associated duplicate sample had a lead concentration of 4.5 µg/L.

The total lead exceedances of the NJDEP standards were generally found in the unfiltered groundwater samples (one exceedance of the NJDEP GWQS was detected in a filtered groundwater sample) indicating that the total lead is primarily contained in the particulates of the sample. It does not appear that there is significant dissolved phase total lead within the groundwater underlying the Site. Lead concentrations in unfiltered groundwater that exceed the NJDEP GWQS are correlated to historic battery casing waste stockpiles, as determined by soil borings, waste locations, Site history, groundwater flow direction, and aerial photography review. Additional investigation of groundwater will be required following soil remediation activities at the Site.

The RI report for OU2 was finalized in May 2017.

CURRENT AND POTENTIAL FUTURE SITE AND RESOURCE USES

The OU2 properties are zoned for residential use. Future land use is expected to remain the same. Future operable units for the Site will address other properties and environmental media. A discussion of their current and potential future site and resource use will be included in those decision documents, as appropriate.

SUMMARY OF OU2 RISKS

As part of the RI/FFS, 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 (HHRA) and an ecological risk assessment. 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 OU2.

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 (e.g., ingesting contaminated well-water) by which humans are potentially exposed;
- *Toxicity Assessment* - determines the types of adverse health effects associated with chemical exposures, and the relationship between magnitude of exposure (dose) and severity of adverse effects (response); and,
- *Risk Characterization* - summarizes and combines outputs of the exposure and toxicity assessments to provide a quantitative assessment of site-related risks. The risk characterization also identifies contamination with concentrations which exceed acceptable levels, defined by the National Contingency Plan (NCP) as an excess lifetime cancer risk greater than $1 \times 10^{-6} - 1 \times 10^{-4}$ or a Hazard Index greater than 1; contaminants at these concentrations are considered 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.

<u>Hazard Identification</u>

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. OU2 includes 36 residential properties located within a primarily residential area. Future land use is expected to remain the same. Therefore, surface soil (0-2 feet) was the only media quantitatively evaluated in the HHRA.

The HHRA began with selecting COPCs in surface soil that could potentially cause adverse health effects in exposed populations. COPCs were determined for each exposure area and medium by comparing the available analytical data to appropriate risked-based screening criteria. Analytical data collected to determine the nature and extent of contamination at OU2 indicated the presence of metals, polycyclic aromatic hydrocarbons (PAHs), and PCBs above screening criteria.

Only the COCs, or those chemicals requiring a response, are listed in Appendix II, Table 1. Lead is also considered the primary COC; the relevant subset of information for lead is summarized in Table 7 of Appendix II. However, a full list of all COPCs identified in the risk assessment (entitled "Human Health Risk Assessment Matteo & Sons, Inc. Site Operable Unit 2" dated May 2017), is available in the administrative record for OU2 for the Site.

Exposure Assessment

Consistent with Superfund policy and guidance, the HHRA 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 HHRA evaluated potential risks to populations associated with both current and potential future land uses. Since the OU2 area is currently zoned for residential use, which is not expected to change, exposure to surface soil by a child and adult resident were the only receptors and media of interest considered in the HHRA. Two exposure areas consisting of three residential properties were subsequently chosen to represent the high-end of potential exposures to all nearby residences at OU2. The first exposure area consists of a residence containing elevated lead concentrations and battery casing material across the majority of the yard. The other two properties were combined into a second exposure area to illustrate potential risks and hazards posed by exposure to a hotspot area (*i.e*. used for play or gardening) where a localized compilation of casing material traverses both residences. The exposure pathways assessed included incidental ingestion of and dermal contact with impacted soil, as well as the inhalation of particulates containing COCs potentially released from soil.

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

Toxicity Assessment

In this step, the types of adverse health effects associated with contaminant exposures and the relationship between magnitude of exposure and severity of adverse health effects were determined. Potential health effects are contaminant-specific and may include the risk of

developing cancer over a lifetime or other noncancer health effects, such as changes in the normal functions of organs within the body (*e.g.*, changes in the effectiveness of the immune system). Some contaminants are capable of causing both cancer and noncancer health effects.

Under current EPA guidelines, the likelihood of carcinogenic risks and non-carcinogenic 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 non-carcinogens, 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 guidance. This information is presented in Appendix II, Table 3 (Noncancer Toxicity Data Summary) and Table 4 (Cancer Toxicity Data Summary). Additional toxicity information for all COPCs is presented in the HHRA.

Risk Characterization

This step summarized and combined outputs of the exposure and toxicity assessments to provide a quantitative assessment of site risks. Exposures were evaluated based on the potential risk of developing cancer and the potential for noncancer health hazards. Exposure from lead was evaluated using blood lead modeling and is discussed in more detail later in this section.

Non-carcinogenic risks were assessed using a hazard index (HI) approach, based on a comparison of expected contaminant intakes and benchmark comparison levels of intake (reference doses, reference concentrations). Reference doses (RfDs) and reference concentrations (RfCs) are estimates of daily exposure levels for humans (including sensitive individuals) which are thought to be safe over a lifetime of exposure. The key concept for a noncancer HI is that a "threshold level" (measured as an HI of less than 1) exists at which noncancer health effects are not expected to occur. The estimated intake of chemicals identified in environmental media (*e.g.*, the amount of a chemical ingested from contaminated 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 indicates that the potential exists for non-carcinogenic health effects to occur as a result of site-related exposures, with the potential for health effects increasing as the HI increases. When the HI calculated for all chemicals for a specific population exceeds 1, separate HI values are then calculated for those chemicals which are known to act on the same target organ. These discrete HI values are then compared to the acceptable limit of 1 to evaluate the potential for non-carcinogenic 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 presented in Table 5 of Appendix II.

As seen in Table 5, the noncancer HIs exceed EPA's threshold value of 1 for the child resident in each exposure area. The hotspot exposure area also exceeds the noncancer threshold of 1 for the adult resident. The hazard estimates were driven by exposure to antimony and PCB Aroclor 1254.

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 *Exposure Assessment*. Current Superfund guidance identify the range for determining whether a remedial action is necessary as an individual lifetime excess cancer risk of 1×10^{-4} to 1×10^{-6} (corresponding to a one-in-ten-thousand to a one-in-a-million excess cancer risk), with 1×10^{-6} being the point of departure.

As summarized in Table 6 of Appendix II, the estimated cancer risk for the future resident within each exposure area was within EPA's target risk range of 1×10^{-6} to 1×10^{-4}. Consequently, excess lifetime cancer risks above the 1×10^{-4} benchmark are not expected at either of the exposure areas evaluated and, therefore, the OU2 area in general.

Lead was detected in OU2 media at elevated concentrations. Since there are no published quantitative toxicity values for lead, it is not possible to evaluate risks from lead exposure using the same methodology as for the other COCs. However, because the toxicokinetics (the absorption, distribution, metabolism, an excretion of toxins in the body) of lead are well

understood, lead is regulated based on blood lead level (BLL). In lieu of evaluating risk using typical intake calculations and toxicity criteria, EPA developed models which are used to predict blood lead concentration and the probability of a child's BLL exceeding specific target concentrations based on a given multimedia exposure scenario. The risk reduction goal for OU2 is to limit the probability of a typical child's (or that of a group of similarly exposed individual's) BLL exceeding 5 micrograms per deciliter (µg/dL) to 5 percent or less. For this HHRA, lead risks for were evaluated using EPA's Integrated Exposure Uptake Biokinetic (IEUBK) model for the child residents as the most conservative receptor.

As summarized in Table 7 of Appendix II, the predicted probabilities of a child's BLL exceeding 5 µg/dL surpassed EPA's risk reduction goal of 5 percent within each exposure area. More than 99 percent of children living on a property containing a hotspot area used for play, or with lead contamination exhibited throughout the yard, would have BLLs greater than 5 µg/dL. In addition, although individual fragments of the crushed battery casings are not expected to be ingested by a child, any exposure to this material should be limited due to the high concentrations of lead infused within.

The response action selected in the OU2 ROD 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 COCs, the period of time over which such exposure would occur, and in the models used to estimate the concentrations of the COCs at the point of exposure.

Uncertainties in toxicological data occur in extrapolating both from animals to humans and from high to low doses of exposure, as well as from the difficulties in assessing the toxicity of a mixture of chemicals. These uncertainties are addressed by making conservative assumptions concerning risk and exposure parameters throughout the assessment. As a result, the risk assessment provides upper-bound estimates of the risks to populations near OU2 and is highly unlikely to underestimate actual risks related to OU2.

In addition, due to a limited number of detections, a 95 percent upper confidence limit (UCL) could not be calculated for PCB Aroclor 1254 in the hotspot exposure area. The 95 percent UCLs calculated for antimony in both exposure areas exceeded the maximum concentrations due to variation within the dataset evaluated as well. Instead, the maximum detected concentration was used as the EPC for each of these COCs. Using the maximum concentration as the EPC is a conservative (i.e., health protective) assumption, which is likely to overestimate risks from exposure to these COCs in OU2 surface soil.

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

Since OU2 focuses on residential properties, no ecological risk assessment was conducted. An ecological risk assessment for Hessian Run will be performed as part of OU3.

Basis for Taking Action

Based on the results of the quantitative human health risk assessment, EPA has determined that actual or threatened releases of hazardous substances from OU2, if not addressed by the response action selected in this ROD, may present a current or potential threat to human health.

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 and background (i.e. reference area) concentrations. The following RAOs were established for OU2:

- Eliminate or reduce human exposure, via inhalation of, incidental ingestion of, and dermal contact with battery casing waste and contaminated soils exceeding remediation goals, to levels protective of current and anticipated future land use.
- Prevent transport and migration of Site contaminants to other areas via overland flow and/or air dispersion.

Remediation Goals

EPA has adopted the preliminary remediation goals identified in the Proposed Plan as the final Remediation Goals (RGs) for OU2. The soil remediation goals for COCs are consistent with New Jersey Residential Direct Contact Soil Remediation Standards (RDCSRS). The remediation goals for OU2 are as follows:

Constituent in Soil	Cleanup Goal (mg/kg)
Lead	400
Antimony	31
PCB Aroclor 1254	0.2

Note: mg/kg = milligrams per kilogram

Additionally, to achieve the risk reduction goal established for OU2, the average lead concentration within the top two feet across each residential property must be at or below 200 mg/kg once the selected remedial action targeting detections above 400 mg/kg is complete.

The impact to groundwater pathway was evaluated as part of the RI/FFS. It was determined that the proposed remedies are protective for this pathway. Lead and PCBs are considered immobile contaminants and there is greater than two feet of clean soil above the water table for the majority of the OU2 area. Dissolved lead concentrations in groundwater were not detected except in one temporary monitoring well where it is suspected that battery casing waste is in direct contact with the groundwater table. Additionally, since antimony impacts are collocated with lead impacted soil, it is anticipated that an excavation remedy would be protective for antimony as well.

DESCRIPTION OF REMEDIAL ALTERNATIVES

CERCLA Section 121(b)(1), 42 U.S.C. § 9621(b)(1), mandates that remedial actions be protective of human health and the environment, be cost-effective, and use permanent solutions, alternative treatment technologies, and resource recovery alternatives to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a principal element, treatment to reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants at a site permanently and significantly. CERCLA Section 121(d), 42 U.S.C. § 9621(d), further specifies that a remedial action must attain a level or standard of control of the hazardous substances, pollutants and contaminants, which at least attains ARARs under federal and state laws, unless a waiver can be justified.

Remedial alternatives for OU2 are summarized below. Capital costs are those expenditures that are required to construct a remedial alternative. Operation and maintenance (O&M) costs are those post-construction costs necessary to ensure or verify the continued effectiveness of a remedial alternative and are estimated on an annual basis. Present worth is the amount of money which, if invested in the current year, would be sufficient to cover all the costs over time associated with a project, calculated using a discount rate of seven percent and up to a 30-year time interval. Construction time is the time required to construct and implement the alternative and does not include the time required to design the remedy, negotiate performance of the remedy with the responsible parties, or procure contracts for design and construction. Detailed information regarding the alternatives can be found in the 2017 *Focused Feasibility Study Report* (FFS Report).

The remedial alternatives evaluated for OU2 were limited for several reasons. The affected residential properties are primarily located in a well-established neighborhood where the space to construct an on-site remedy is limited; consequently, on-site remedies that involve treatment were not considered.

Alternative 1 - No Action
The NCP requires that a "No Action" alternative be evaluated to establish a baseline for comparison with other remedial alternatives. Under this alternative, no action, including establishing institutional controls, would be taken to remediate the battery casing waste and associated contaminated soil at residential properties.

Since this alternative results in contaminants remaining on OU2 for the Site above acceptable levels, a review of the action at least every five years would be required.

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

Alternative 2 – Removal of Contaminated Soil and Areas of Concentrated Battery Waste in Accessible Areas
Alternative 2 includes excavation and removal of battery waste and contaminated soils above RGs within readily accessible areas. Obstructed battery waste and contaminated soils underlying potentially impacted residential houses/structures and public facilities (roads/utilities) would not be addressed under this alternative. Certified clean backfill soil would be placed in the open excavations to restore surface grade. Institutional controls (IC), such as deed restrictions, would be required for the footprints of residential houses/structures and public facilities (roads/utilities) overlying concentrated battery wastes and/or contaminated soils to prevent exposure to potential contamination.

Excavated soils would be managed and disposed of depending on waste classification based on historical information and sampling/analysis for disposal purposes. A resident relocation plan would be established for temporary relocation of residents that require significant excavation activities at their impacted property. Implementation of this alternative would entail the following major steps:

- Site preparation;
- Temporary relocation of residents (as needed);
- Tree and vegetation removal, as necessary, to excavate contaminated soil;
- Demolition and replacement of temporary structures, as necessary, to excavate contaminated soil;
- Removal and replacement of asphalt and concrete paved driveways, as necessary, to excavate contaminated soil;
- Excavation;
- Particulate monitoring and dust suppression (as needed);
- Waste characterization sampling;
- Transportation;
- Off-site disposal;
- Confirmatory sampling;
- Site restoration; and;
- Institutional controls for permanent structures and public facilities with battery casing waste or contaminated soil not remediated.

Since this alternative results in contaminants remaining on OU2 for the Site above acceptable levels, a review of the action at least every five years would be required.

Total Capital Cost:	*$6,600,000*
Annual O&M:	*$0*
Present Worth Cost:	*$6,600,000*
Construction Time Frame:	*2 years*

Alternative 3 – Removal of Contaminated Soil and Areas of Concentrated Battery Waste Accessible Areas and Areas Beneath Residential Structures

Alternative 3 includes excavation and removal of battery waste and contaminated soils above RGs within the readily accessible areas, as well as excavation and removal of obstructed battery waste and contaminated soils underlying potentially impacted residential houses/structures. Certified clean backfill soil would be placed in the open excavation to restore surface grade.

A pre-design investigation will be conducted to determine the extent of battery casing waste and contaminated soil under public facilities (roads and utilities). Battery casing waste identified under public facilities will be remediated (e.g., excavated/removed) and ICs (e.g., land use controls) would be implemented for contaminated soils beneath public facilities (roads and utilities).

Excavated soils would be managed and disposed of depending on waste classification based on historical information and sampling/analysis for disposal purposes. A resident relocation plan would be established for temporary relocation of residents that require significant removal activities at their impacted properties. Implementation of this alternative would entail the following major components:

- Site preparation;
- Temporary relocation of residents (as needed);
- Tree and vegetation removal, as necessary, to excavate contaminated soil;
- Demolition and replacement of temporary structures, as necessary, to excavate contaminated soil;
- Removal and replacement of asphalt and concrete paved driveways and sidewalks, as necessary, to excavate contaminated soil;
- Excavation;
- Particulate monitoring and dust suppression;
- Waste characterization sampling;
- Transportation;
- Off-site disposal;
- Confirmatory sampling;
- Site restoration; and,
- Institutional controls to prevent exposure to potential contamination for public facilities with contaminated material not remediated.

Since this alternative results in contaminants remaining on OU2 for the Site above acceptable levels, a review of the action at least every five years would be required.

Total Capital Cost:	*$9,400,000*
Annual O&M:	*$0*
Present Worth Cost:	*$9,400,000*
Construction Time Frame:	*2 years*

COMPARATIVE ANALYSIS OF ALTERNATIVES

In selecting a remedy for a site, EPA considers the factors set forth in Section 121 of CERCLA 42 U.S.C. § 9621, and conducts a detailed analysis of the viable remedial alternatives pursuant to Section 300.430(e)(9) of the NCP, 40 C.F.R § 300.430(e)(9), EPA's Guidance for Conducting Remedial Investigations and Feasibility Studies, OSWER Directive 9355.3-01, and EPA's A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents, OSWER 9200.1-23.P. The detailed analysis consists of an assessment of the individual alternatives against each of the nine evaluation criteria at 40 C.F.R. § 300.430(e)(9)(iii) and a comparative analysis focusing upon the relative performance of each alternative against those criteria.

A comparative analysis of these alternatives based upon the nine evaluation criteria noted below follows.

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 determines whether an alternative eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

Alternative 1, the no action alternative, is not protective of human health and the environment because it does not eliminate, reduce, or control risk of exposure to contaminated soils and battery casing waste through treatment, off-site disposal, engineering controls, or institutional controls.

Alternative 2 would provide protection of human health by removing battery casing waste and contaminated soils above remediation goals through excavation and by preventing exposure to any obstructed or remaining wastes and contaminants through institutional controls, such as land use restrictions. There would be no local human health impacts associated with off-site disposal because those contaminants most likely to result in a human health exposure would be removed from the most readily accessible areas of the impacted properties, to a secure, appropriate location. However, battery casing waste and contaminated soils would remain in place under residential structures and public facilities, such as roads, above the remediation goals.

Alternative 3 would provide protection of human health by removing areas of concentrated battery casing waste and contaminated soils with concentrations above the remediation goals from both readily accessible as well as obstructed areas from residential properties. Areas of

concentrated battery casing waste under public facilities would be investigated as part of a pre-remedial design phase and would be excavated for off-site disposal. Contaminated soils would remain in place under public facilities, such as roads, above the remediation goals. There would be no local human health impacts associated with off-site disposal because those contaminants most likely to result in a human health exposure would be removed from the impacted properties, to a secure, appropriate location.

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

2. Compliance with applicable or relevant and appropriate requirements (ARARs)
Section 121 (d) of CERCLA, 42 U.S.C. § 9621(d), and Section 300.430(f)(1)(ii)(B) of the NCP, 40 CFR §300.430(f)(1)(ii)(B), require that remedial actions at CERCLA sites at least attain legally applicable or relevant and appropriate Federal and State requirements, standards, criteria and limitations which are collectively referred to as "ARARs," unless such ARARs are waived under Section 121(d)(4) of CERCLA.

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

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

Alternatives 2 and 3 would both assure that remedial measures taken at OU2 would meet ARARs, which include residential soil RGs for the COCs, construction standards for erosion control and storm water runoff, waste characterization and management requirements for Resource Conservation and Recovery Act (RCRA) hazardous waste, treatment and disposal requirements for RCRA hazardous waste, and transportation requirements for hazardous waste.

The alternatives would achieve chemical-specific ARARs by excavating battery waste and contaminated soil and ensuring confirmation samples are in compliance with RGs. The IC (e.g., deed restrictions) would be effective in preventing exposure to potential contamination underlying structures and/or public facilities, such as roads, sidewalks, utilities, etc.

Location-specific ARARs (wetlands, floodplains, stream encroachment), if required, would be addressed to the extent possible during design and construction of the remedy. Pre-design investigations are needed to determine whether any historical or cultural resources would be impacted and whether the construction project would need to address migratory birds, fish and wildlife or bald eagle preservation requirements.

Action-specific ARARs would be met for the construction phase by proper design and implementation of the remedial action and engineering controls for erosion and storm water, and for the disposal phase by proper selection of the disposal facility.

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 considers the ability of an alternative to maintain protection of human health and the environment over time.

For both Alternatives 2 and 3, the battery casing waste and COCs would be removed and transported off-site and properly disposed of at a permitted landfill. Confirmation sampling would be conducted to ensure residential soil remedial goals for the COCs are met.

Long-term ICs (e.g., deed restrictions) would be implemented to prevent direct contact exposure of human receptors to potential obstructed contaminated soils underlying public facilities, such as roads and utilities, at OU2. Alternative 2 would also require long-term ICs for residential properties with battery casing waste and contaminated soil beneath structures.

While both alternatives are expected to be effective in the long term, Alternative 3 would be more effective because ICs on residential properties in Alternative 2 are complicated by the lack of direct control of the residential property. Application of a deed notice requires that the property owner place a deed notice on their property. Consent to place a deed notice on residential properties may be difficult to obtain partly because, notwithstanding the presence of contamination on their properties, some residential homeowners may perceive that deed notices may affect property values.

Additionally, Alternative 3 would more effective because it would provide for the removal of a greater volume of battery casing waste and contaminated soil from residential properties and battery casing waste under public facilities. CERCLA Five-Year Reviews would be required for both alternatives, and long-term effectiveness and permanence would continue to be evaluated.

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

Reduction in 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.

Alternatives 2, and 3 do not provide reduction of toxicity, mobility or volume of OU2 contamination through treatment. However, treatment may occur off site at the disposal facility, if needed, to meet land disposal restriction treatment standards prior to disposal for Alternatives 2 and 3. If treatment is needed, Alternative 3 would provide a greater reduction in the volume of material than Alternative 2 since a larger volume of battery casing waste and soil would require treatment.

5. Short-Term Effectiveness

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

Alternatives 2 and 3 would have some risk in the short term due to potential exposure to excavated material that would be transported through the community. Traffic control for off-site disposal, engineering controls for dust generation and storm water runoff during excavation would minimize exposures during remedial activities. Alternatives 2 and 3 are expected to be effective in the short term. Completion of both Alternative 2 and Alternative 3 is estimated at approximately 2 years.

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 2 is implementable since soil excavation uses readily available techniques and conventional earth-moving equipment. Some ancillary construction of a staging area for loading and unloading, soil erosion control, dust and noise control, construction vehicle control, additional clearing and grubbing, tree removal, garage and shed removal and replacement, and concrete and asphalt pavement removal and replacement may be necessary, and can be readily implemented. Excavating in close proximity to structures and utility lines would require structural evaluation and shoring to mitigate the potential for damage to those structures.

The development of protective institutional controls that would be both enforceable and acceptable to the residential property owners is uncertain. Administrative implementation of Alternative 2 may be significantly impacted by the need to impose deed notices on residential properties to prevent human exposure by restricting future use of contaminated areas within the properties. Consent to place a deed notice on residential properties may be difficult to obtain because these notices would restrict the owners' use of the property and would not likely be viewed favorably by the owners.

Implementability for removal of readily accessible waste/soil for Alternative 3 is similar to Alternative 2 with regard to concerns about potential structure damage and construction access for excavation in close vicinity of houses/structures.

With regard to Alternative 3, removal of battery waste and contaminated soils beneath residential houses/structures is more complex. However, required specialized equipment and properly trained personnel are readily available in the market. EPA Region 2 personnel are experienced in managing and overseeing projects involving remediation activities to remove contaminated soil beneath residential houses/structures. It would take a longer time to remediate properties that require removal of obstructed battery waste and/or contaminated soil than would be required to remediate those properties only involving removal of readily accessible waste/soil. Consequently, a longer temporary relocation would be required for the residents of those properties affected.

Deed restrictions would not be necessary for residential houses/structures for Alternative 3, but would still be required for roadways within the neighborhood. Overall, Alternative 3 is as implementable as Alternative 2 with proper planning and design.

7. Cost

Cost includes estimated capital and annual operation 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 (This is a standard assumption in accordance with EPA guidance).

The estimated capital cost, operation and maintenance (O&M), and present worth costs are discussed in detail in EPA's FFS. The cost estimates are based on the best available information. Alternative 1 has no cost because no activities are implemented. Alternatives 2 and 3 would include no operational and maintenance costs. The estimated capital, O&M present-worth cost over a thirty-year period, and total present-worth costs for each of the alternatives are as follows:

Alternative	Capital Cost	O&M	Present Worth Cost
1	$0	$0	$0
2	$6,600,000	$0	$6,600,000
3	$9,400,000	$0	$9,400,000

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

State Agency acceptance considers whether the State and/or Support Agency agrees with EPA's analyses and recommendations.

NJDEP concurs with the selected remedy. A letter of concurrence is attached in Appendix IV.

9. Community Acceptance

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.

On July 6, 2017, EPA held a formal public meeting on the proposed plan for OU2 for the Site. All written and oral comments are addressed in detail in Appendix V, which is the Responsiveness Summary for this ROD.

No comments received during the comment period for the proposed plan expressed disagreement with EPA's preferred alternative for OU2. West Deptford Township and Congressman Norcross, New Jersey 1st Congressional District, agreed with the preferred alternative, but expressed

concern regarding leaving battery casing waste and contaminated soil beneath public facilities. They requested that the preferred alternative be modified to include the remediation of battery casing waste and contaminated soil beneath public facilities.

PRINCIPAL THREAT WASTE

The NCP establishes an expectation that EPA will use treatment to address the principal threats posed by a site wherever practicable (40 CFR §300.430(a)(1)(iii)(A)). Identifying principal threat wastes combines concepts of both hazard and risk. In general, principal threat wastes are those source materials considered to be highly toxic or highly mobile which generally cannot be contained in a reliable manner or would present a significant risk to human health or the environment should exposure occur. Non-principal threat wastes are those source materials that generally can be reliably contained and that would present only a low risk in the event of exposure.

The waste battery casings contain elevated concentrations of lead and are characteristically hazardous for lead. The casing material also contains elevated concentrations of antimony and PCB Aroclor-1254. The waste battery casings act as a continued source of the contaminants to soil and potentially groundwater and are considered a principal threat waste.

In-situ and *ex-situ* treatment options were evaluated in the FFS but were eliminated due to spatial limitations on residential properties for *ex-situ* treatment and significant engineering controls requirements for in-situ treatment. Treatment may occur off site at the disposal facility, if needed, to meet the facilities disposal requirements.

SELECTED REMEDY

Based upon the requirements of CERCLA, the results of the remedial investigation, the detailed analysis of the alternatives, and public comments, EPA's selected remedy to address contaminated soil at the residential properties is Alternative 3. This alternative includes the following components:

- Temporary relocation of residents (as needed);
- Excavation, transportation, and disposal of battery casing waste and soil contaminated with lead, antimony, and PCBs exceeding RGs from approximately 25 residential properties in and near the Tempo Development, as well as excavation and removal of obstructed battery waste and contaminated soils underlying potentially impacted residential houses/structures;
- Restoration of the affected properties; and,
- Institutional controls, such as a deed notice, to prevent exposure to contaminated soil under roadways that exceed levels that allow for unrestricted use.

A pre-design investigation will be conducted to determine the extent of battery casing waste and contaminated soil under public facilities (roads and utilities). Battery casing waste identified under public facilities will be remediated and ICs (e.g., land use controls) would be implemented for contaminated soils.

Excavation activities associated with remediation may require the demolition and replacement of structures such as sheds and garages and the removal and replacement of asphalt and concrete driveways and sidewalks. Excavation of the battery casing waste and contaminated soil may also require the temporary relocation of residents.

The total estimated present-worth cost for the selected remedy is $9,400,000. A more detailed, itemized list of costs for the selected remedy may be found in Appendix A of the FFS. The cost estimates, which are based on available information, are order-of-magnitude engineering cost estimates that are expected to be within +50 to -30 percent of the actual cost of the project.

Expected Outcomes of the Selected Remedy
Implementation of Alternative 3 will protect human health and the environment through removal, off-site treatment, if necessary, and disposal of battery casing waste and contaminated soil. It will eliminate potential pathways of human exposure to contaminated soils present at the residential properties and will prevent migration of site contaminants from the OU2 properties.

Summary of the Rationale for the Selected Remedy
The selection of Alternative 3 provides the best balance of trade-offs among the alternatives with respect to the evaluation criteria. 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. NJDEP concurs with the selected remedy.

Although Alternative 2 is less expensive and would provide protection from the migration of and exposure to contaminated soils through the use of the residential structure as a cap, contaminated soil would remain in place requiring the implementation of institutional controls on the residential properties, the maintenance of which is uncertain. Alternative 3 will permanently remove the battery casing waste and contaminated soil from the residential properties. The implementation of this selected remedy will employ engineering controls and safe work practices to mitigate exposure to dust and to protect workers and the local community.

Although treatment is not a principal element of the remedy, based on sampling performed to date, some of the contaminated soil may require treatment prior to land disposal at an off-site facility. Therefore, Alternative 3 may meet the statutory preference for the use of remedies that employ treatment that reduces toxicity, mobility or volume as a principal element.

The environmental benefits of the selected remedy may be enhanced by consideration, during the design, of technologies and practices that are sustainable in accordance with EPA Region 2's Clean and Green Energy Policy. This will include consideration of green remediation technologies and practices.

STATUTORY DETERMINATIONS

EPA has determined that the selected remedy complies with the CERCLA and NCP provisions for remedy selection, meets the threshold criteria, and provides the best balance of tradeoffs among the alternatives with respect to the balancing and modifying criteria. These provisions require the selection of remedies that are protective of human health and the environment, comply with ARARs (or justify a waiver from such requirements), are cost-effective, and utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In addition, CERCLA includes a preference for remedies that employ treatment that permanently and significantly reduce the volume, toxicity, or mobility of hazardous substances as a principal element (or justify not satisfying the preference). For OU2, EPA does not believe that on-site treatment of the soils at the residential properties is practicable or cost-effective. The selected remedy will be more protective in the long-term, and is a permanent solution which will allow the residential properties to be returned to their beneficial re-use and does not require deed restrictions on the residential properties. The following sections discuss how the selected remedy meets these statutory requirements.

Protection of Human Health and the Environment

The selected remedy, Alternative 3, will protect human health and the environment through removal, off-site treatment, if necessary, and disposal. The selected remedy will eliminate significant direct-contact risks to human health and the environment associated with contaminated soil on the OU2 residential properties. This action will result in the reduction of exposure levels to risk levels within EPA's generally accepted risk range of 10^{-4} to 10^{-6} for carcinogens and below a HI of 1 for non-carcinogens. Implementation of the selected remedy will not pose short-term risks outside EPA's generally accepted risk ranges.

Compliance with ARARs

The selected remedy complies with Chemical-specific, Location-specific and Action-specific ARARs. A complete list of the ARARs, TBCs and other guidance that concern the selected remedy is presented in Appendix II, Table 8.

Cost-Effectiveness

EPA has determined that the selected remedy is cost-effective. A cost-effective remedy is defined as a remedy whose costs are proportional to its overall effectiveness (NCP § 300.4309f)(1)(ii)(D)). EPA evaluated the "overall effectiveness" of those alternatives that satisfied the threshold criteria (i.e. were both protective of human health and ARAR-compliant). Overall effectiveness is based on the evaluations of 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.

Each of the alternatives was subjected to a detailed cost analysis. In that analysis, capital and annual O&M costs were estimated and used to develop present-worth costs. The estimated present worth cost of the selected remedy for OU2 is $9,400,000. Although Alternative 2 is less expensive than the selected remedy, EPA concluded that the long-term effectiveness of excavating under residences is superior to capping when considering permanent solutions that allow the residential properties to be returned to full and unrestricted use. EPA believes that the

selected remedy's additional cost for excavation under residences provides greater protection of human health and is cost-effective. The selected remedy is cost-effective as it has been determined to provide the greatest overall protectiveness for its present-worth cost.

Utilization of Permanent Solutions and Alternative Treatment Technologies (or Resource Recovery) Technologies to Maximum Extent Practicable

EPA has determined that the selected remedy represents the maximum extent to which permanent solutions and treatment technologies can be utilized in a practicable manner for the OU2. Of those alternatives that are protective of human health and the environment and comply with ARARs (or provide a basis for invoking an ARAR waiver), 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, the bias against off-site disposal without treatment, and state/support agency and community acceptance. Implementation of the selected remedy will eliminate current residents' potential exposure to battery casing waste and contaminants at the residential properties and will remove contaminated soil from the residential properties thereby eliminating the risk to human receptors in the future.

Preference for Treatment as a Principal Element

The selected soil remedy results in the removal of battery casing waste and contaminated soil from the residential properties at OU2. Excavation activities will provide for an immediate reduction in the volume of battery casing waste and contaminated soil from the residential properties. Although treatment is not a principal element of the remedy, based on sampling performed to date, some of the contaminated soil may require treatment prior to land disposal at an off-site facility. Off-site treatment, if required, would reduce the toxicity of the battery casing waste and contaminated soil prior to land disposal. Based on the spatial limitations of the residential properties, treatment of the material on-site prior to off-site disposal would not be feasible. This remedy only addresses a portion of the Matteo Superfund site. Subsequent actions that are planned to identify and address fully the remaining threats posed may include treatment.

Five-Year Review Requirements

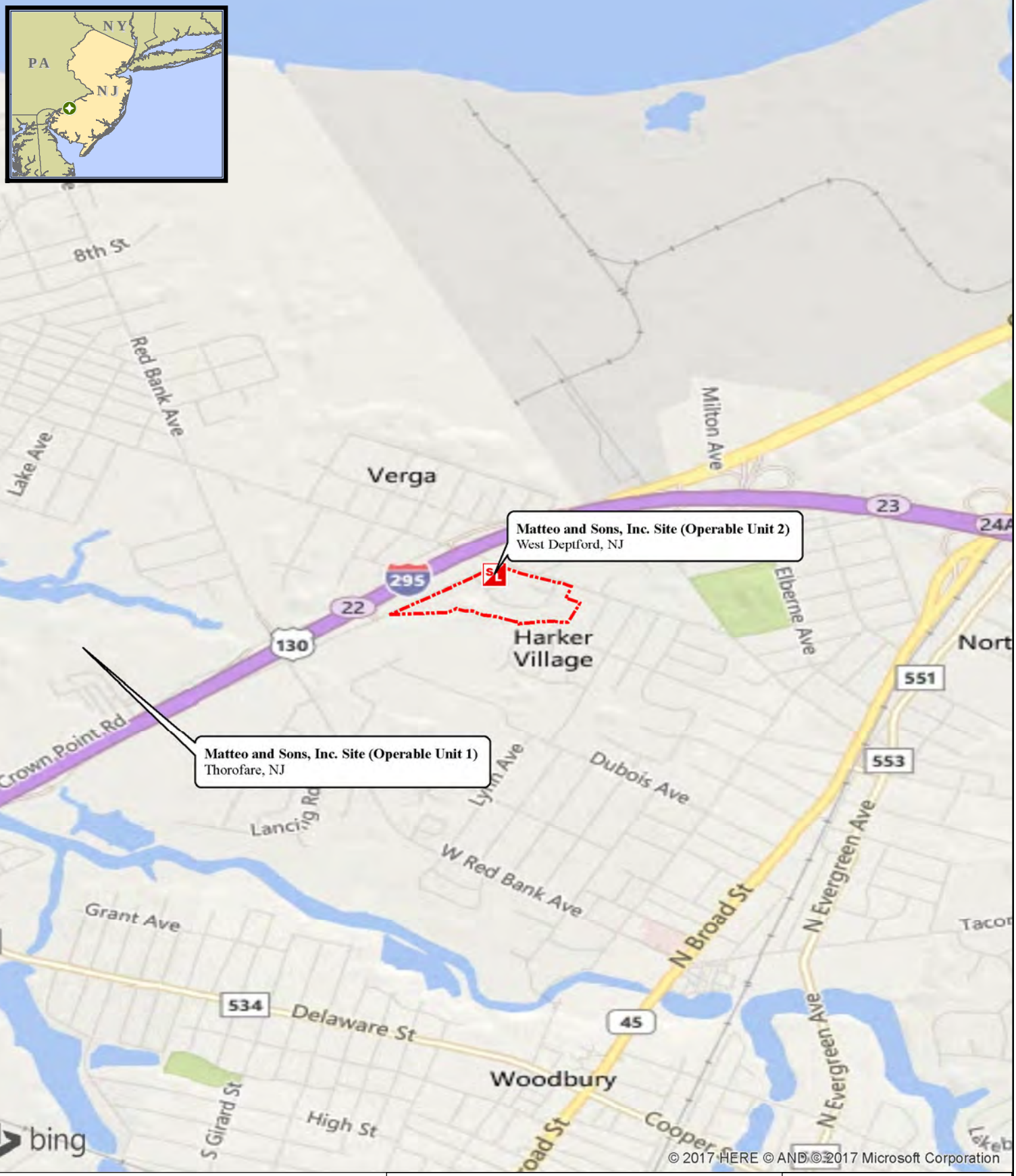
Because this remedy will result in hazardous substances, pollutants, or contaminants remaining at OU2 above health-based levels, the statutory requirement for a five-year review is triggered by the implementation of this action.

DOCUMENTATION OF SIGNIFICANT CHANGES

The Proposed Plan for OU2 of the Matteo Site was released for a public comment period on June 22, 2017. The public comment period ran until July 24, 2017. The Proposed Plan identified Alternative 3 as the preferred alternative for OU2. EPA reviewed all written (including electronic formats such as e-mail) and verbal comments submitted during the public comment period and has determined that no significant changes to the remedy, as it was originally identified in the Proposed Plan, are necessary or appropriate.

APPENDIX I

Figures



Legend

- Site Location
- Study Area

N

0 0.1 0.2 0.4 0.6 0.8 Miles

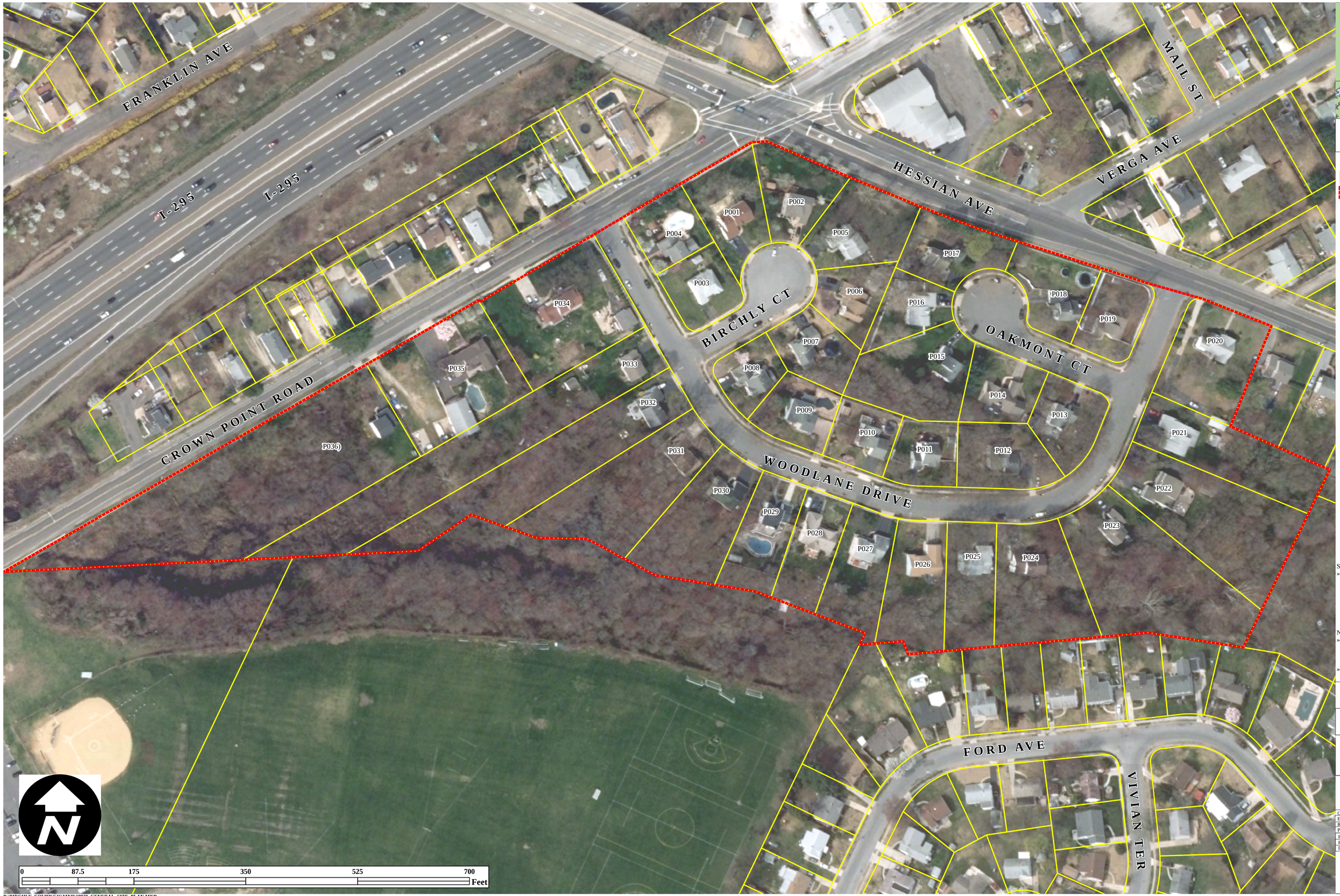
U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

Figure 1:
Site Location Map

MATTEO & SONS, INC. SITE (OPERABLE UNIT 2)
WEST DEPTFORD, NEW JERSEY

U.S. ENVIRONMENTAL PROTECTION AGENCY

GIS ANALYST:	
EPA OSC:	D. ROSOFF
RST SPM:	
FILENAME:	SITE_LOCATION_MAP.MXD



P:\BIRCHLY_COURT\GIS\MXD\19930_GENERAL_SITE_PLAN.MXD

SCALE
1:825

LEGEND

- Parcel Boundary
- Area of Concern

Source(s):

» New Jersey 2015 High Resolution Orthophotography, NAD83(2011) NJ State Plane Feet, MrSID Tiles. NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS). Publication Date: February 2016. Online Linkage: https://njgin.state.nj.us/NJ_NJGINExplorer/.

Note(s):

» The area of concern for the Site includes residential properties located along Birchly Court, Woodlane Drive, Oakmont Circle, Hessian Avenue, and Crown Point Road.

» There are a total of 36 residential properties located within the area of concern.

Figure 2: General Site Plan

MATTEO & SONS, INC. SITE (OU2)
WEST DEPTFORD, NEW JERSEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

GIS ANALYST:	
EPA OSC:	D. ROSOFF
RST SPM:	
PROJECT #:	NA
FIGURE	2
REVISION	0
DATE MODIFIED	5/24/2017

APPENDIX II

Tables

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

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

Exposure Point	Chemical of Concern[1]	Concentration Detected (Qualifier)		Concentration Units	Frequency of Detection	Exposure Point Concentration[2] (EPC)	EPC Units	Statistical Measure
		Min	Max					
Surface soil on Property P006	Antimony[3]	0.54 J	72.5 J	mg/kg	8/10	72.5	mg/kg	Maximum Concentration
Surface Soil on Properties P035/P036	Antimony[3]	0.83 J	496	mg/kg	4/10	496	mg/kg	Maximum Concentration
	Aroclor 1254[4]	0.052	2.6	mg/kg	3/10	2.6	mg/kg	Maximum Concentration

Footnotes:

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

(2) The UCLs were calculated using EPA's ProUCL software (Version 5.1); when available, UCLs were used as EPCs.

(3) The UCLs calculated for antimony in both exposure areas exceeded the corresponding maximum concentration; therefore, the maximum was used as the EPC in each exposure area.

(4) A UCL could not be calculated for Aroclor 1254 since there were less than 4 detected values available; therefore, the maximum concentration was used as the EPC.

Definitions:

COC = Contaminant of concern
EPC = Exposure point concentration
ft bgs = Feet below ground surface
J = Estimated value (qualifier)
mg/kg = Milligrams per kilogram
UCL = Upper confidence limit of the mean

Table 2
Selection of Exposure Pathways

Scenario Timeframe	Medium	Exposure Medium	Exposure Point	Receptor Population	Receptor (Age)	Exposure Route	Type of Analysis	Rationale for Selection or Exclusion of Exposure Pathway
Current/ Future	Soil	Surface Soil	Residence[1]	Resident	Adult	Dermal	Quantitative	Residents may come into contact with contaminants in surface soil via dermal contact.
						Ingestion	Quantitative	Residents may come into contact with contaminants in surface soil via incidental ingestion.
						Inhalation	Quantitative	Residents may come into contact with contaminants in surface soil via inhalation of fugitive dusts and volatile chemicals.
					Child (0-6)	Dermal	Quantitative	Residents may come into contact with contaminants in surface soil via dermal contact.
						Ingestion	Quantitative	Residents may come into contact with contaminants in surface soil via incidental ingestion.
						Inhalation	Quantitative	Residents may come into contact with contaminants in surface soil via inhalation of fugitive dusts and volatile chemicals.

Note:

[1]Three residential properties onsite (006, 035, 036) were selected to represent the high-end of potential exposures to all nearby residences onsite. Properties 035 and 036 were assessed collectively as a hotspot. Property 006 was evaluated separately.

Table 3
Noncancer Toxicity Data Summary

Pathway: Ingestion/Dermal

Chemicals of Concern	Chronic/ Subchronic	Oral RfD Value	Oral RfD Units	Absorp. Efficiency (Dermal)	Adjusted RfD for Dermal[1]	Adj. Dermal RfD Units	Primary Target Organ	Combined Uncertainty /Modifying Factors	Sources of RfD Target Organ	Dates of RfD
Antimony	Chronic	0.0004	mg/kg-day	0.15	0.00006	mg/kg-day	Longevity/Blood	1000	IRIS	1/31/1987
Lead[2]	Chronic	NA	mg/kg-day	1	NA	mg/kg-day	NA	NA	NA	NA
Aroclor 1254	Chronic	2.0E-05	mg/kg-day	1	2.0E-05	mg/kg-day	Eye/Finger/Toe Nail/Immune System	300	IRIS	10/1/1994

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
Antimony	Chronic	2.0E-04	mg/m^3	Lung	300	IRIS	9/1/1995
Lead[2]	Chronic	NA	mg/m^3	NA	NA	NA	NA
Aroclor 1254	NA	NA	NA	NA	NA	NA	NA

Footnotes:

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

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

Definitions:

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

NA = Not available

RfD = Reference dose

RfC = Reference concentration

mg/m^3 = Milligrams per cubic meter

mg/kg-day = Milligrams per kilogram per day

Table 4
Cancer Toxicity Data Summary

Pathway: Ingestion/ Dermal

Chemical of Concern	Oral Cancer Slope Factor	Units	Adjusted Cancer Slope Factor (for Dermal)	Slope Factor Units	Weight of Evidence/ Cancer Guideline	Source	Date
Antimony	NA	NA	NA	NA	NA	NA	NA
Lead[1]	NA	$(mg/kg\text{-}day)^{-1}$	NA	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	11/1/1993
Aroclor 1254	2.0E+00	$(mg/kg\text{-}day)^{-1}$	2.0E+00	$(mg/kg\text{-}day)^{-1}$	B2	IRIS	10/1/1996

Pathway: Inhalation

Chemical of Concern	Unit Risk	Units	Inhalation Cancer Slope Factor	Slope Factor Units	Weight of Evidence/ Cancer Guideline	Source	Date
Antimony	NA	NA	NA	NA	NA	NA	NA
Lead[1]	NA	$(\mu g/m^3)^{-1}$	NA	NA	NA	NA	NA
Aroclor 1254	1.0E-04	$(\mu g/m^3)^{-1}$	NA	NA	B2	IRIS	10/1/1996

Footnotes:

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

Definitions:

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

NA = Not available

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

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

EPA Weight of Evidence (EPA, 1986):

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

Table 5
Risk Characterization Summary - Noncarcinogens

Scenario Timeframe: Current/Future
Receptor Population: Resident at Property P006
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface Soil on Property P006	Antimony	Longevity/Blood	2.3	NA	0.00002	2.3
							Soil Hazard Index (HI) Total[1] =	**2.3**
							Receptor Hazard Index[1] =	**2.3**
							Blood HI=	**2.3**
							Longevity HI=	**2.3**

Scenario Timeframe: Current/Future
Receptor Population: Resident at Properties P0035/P036
Receptor Age: Child

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface Soil on Properties P035/P036	Antimony	Longevity/Blood	16	NA	0.0001	16
			Aroclor 1254	Eyes/Fingers/Toe Nail/Immune System	1.7	0.5	NA	2.2
							Soil Hazard Index Total[1] =	**21**
							Receptor Hazard Index[1] =	**21**
							Blood HI=	**16**
							Eyes HI=	**2.2**
							Fingers HI=	**2.2**
							Immune System HI=	**2.2**
							Longevity HI=	**16**
							Toe Nail HI=	**2.2**

Scenario Timeframe: Current/Future
Receptor Population: Resident at Properties P0035/P036
Receptor Age: Adult[2]

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Primary target Organ	Noncarcinogenic Hazard Quotient			
					Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface Soil on Properties P035/P036	Antimony	Longevity/Blood	1.5	NA	0.0001	1.5
							Soils Hazard Index Total[1] =	**1.5**
							Receptor Hazard Index[1] =	**1.5**
							Blood HI=	**1.5**
							Longevity HI=	**1.5**

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.
(2) Note that there were no noncancer hazards identified for the adult at property P006; therefore, this receptor is not included in the table.

Definitions:
NA = Not available

Table 6
Risk Characterization Summary - Carcinogens

Scenario Timeframe: Current/Future
Receptor Population: Resident at Properties P035/P036[1]
Receptor Age: Child/Adult

Medium	Exposure Medium	Exposure Point	Chemical Of Concern	Carcinogenic Risk			
				Ingestion	Dermal	Inhalation	Exposure Routes Total
Soil	Surface Soil	Surface soil on Properties P035/P036	Aroclor 1254	7E-06	3E-06	1E-07	1E-05
						Soil Risk Total[2]=	**1E-04**
						Total Risk[2]=	**1E-04**

Footnotes:
(1) Excess lifetime cancer risk was not identified above the EPA target risk range (1E-06 to 1E-04) at either exposure area. This table was added for completeness since the risk for the hotspot exposure area (Properties 035/036) was equal to the upper bound end of this range and included a site-related chemical of concern (COC) as a driver.
(2) Total Risk values represent cumulative estimates from exposure to all chemicals of potential concern (COPCs) as identified in the RAGS D table 2 series, and not only from those identified in this table (i.e, the COCs).

Table 7
Risk Characterization Summary - Lead
Medium-Specific Exposure Point Concentration and Resultant Risks

Scenario Timeframe: Current/Future
Receptor Population: Resident (Child)

Exposure Area	Exposure Media	Lead Exposure Point Concentration[1] (EPC)	EPC Units	Geometric Mean Blood Lead Level (ug/dL)[2]	Lead Risk[2,3]
Property P006	Surface Soil (0-2 ft bgs)	2,093	mg/kg	15.4	99.2%
Properties P035/P036	Surface Soil (0-2 ft bgs)	6,463	mg/kg	31.4	99.9%

Footnotes:
(1) The lead EPC in soil was the arithmetic mean of all samples collected from a given soil depth interval.
(2) Consistent with the EPA Superfund Lead-Contaminated Residential Site Handbook, lead risks were evaluated for the child using the Integrated Exposure and Uptake Biokinetic Model.
(3) Lead risks are expressed as the probability of having a blood lead level greater than 5 µg/dL; EPA's risk reduction goal is to limit the probability of a child's blood lead concentration exceeding 5 µg/dL to 5% or less.

Definitions:
ft bgs = Feet below ground surface
mg/kg = Milligram per kilogram
µg/dL = Microgram per deciliter

Table 8
Applicable or Relevant and Appropriate Requirements (ARARs)
& To-Be-Considered (TBC) Guidance

Authority	Standard, Requirement, Criteria, or Limitation	Citation Potentially Germane to Potential Remedial Alternatives	Description of Requirement
Action-Specific			
Federal Regulatory Requirement	RCRA Criteria for Classification of Solid Waste Disposal Facilities and Practices	40 CFR 257	Identify the criteria used to determine whether solid waste disposal facilities or practices pose a reasonable probability of adverse effects on human health or the environment.
Federal Regulatory Requirement	RCRA Standards Applicable to Generators of Hazardous Waste	40 CFR 262	Establish the standards that are applicable to hazardous waste generators, based on the amount and type of wastes generated.
Federal Regulatory Requirement	RCRA Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	40 CFR 264	Identifies the minimum national standards for the acceptable management of hazardous waste.
Federal Regulatory Requirement	RCRA Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	40 CFR 265	Establishes minimum national standards that define the acceptable management of hazardous waste facilities during the period of interim status and until certification of final closure/post-closure.
Federal Regulatory Requirement	RCRA Land Disposal Restrictions	40 CFR 268	Identifies hazardous wastes that are restricted from land disposal and identifies those circumstances under which otherwise prohibited waste may continue to be land disposed.
Federal Regulatory Requirement	Department of Transportation (DOT) Rules for Hazardous Materials Transport	49 CFR 107, 171.1-172.604	Defines requirements for the safe and effective transportation of hazardous materials in commerce.
Federal Regulatory Requirement	Occupational Safety and Health Standards and Safety and Health Regulations for Construction	29 CFR 1910, 29 CFR 1926	Establishes occupational safety and health standards.
New Jersey State Regulatory Requirement	Discharges of Petroleum and Other Hazardous Substances	N.J.A.C 7:1E	Sets forth guidelines and procedures to be followed in the event of a discharge of hazardous substance, and defines hazardous substance in New Jersey.
New Jersey State Regulatory Requirement	New Jersey Worker and Community Right-to-Know Regulations	N.J.A.C 7:1G	Establishes procedures by which employers provide chemical inventory reporting to inform employees and communities of the potential hazards in the work place.
New Jersey State Regulatory Requirement	New Jersey Storm Water Management Rules	N.J.A.C 7:8	Establishes stormwater management requirements to prevent contamination of waterways via stormwater discharge.
New Jersey State Regulatory Requirement	New Jersey Water Pollution Control Act Regulations	N.J.A.C 7:14	Prohibits the discharge of any pollutant into the waters of the State without a valid permit.
New Jersey State Regulatory Requirement	New Jersey Pollutant Discharge Elimination System Rules	N.J.A.C 7:14A	Establishes the framework under which NJDEP regulates the discharge of pollutants to the surface and groundwaters of the State.

Authority	Standard, Requirement, Criteria, or Limitation	Citation Potentially Germane to Potential Remedial Alternatives	Description of Requirement
New Jersey State Regulatory Requirement	Regulations Governing the Certification of Laboratories and Environmental Measurements	N.J.A.C 7:18	Establishes procedures for laboratories to obtain and maintain certifications and perform sample analysis to ensure analytical and data environmental measurements are of known and defensible quality.
New Jersey State Regulatory Requirement	New Jersey Solid Waste Rules	N.J.A.C 7:26	Governs the registration, operation, maintenance, and closure of sanitary landfills, other solid waste facilities, and solid waste transportation operations in the State of New Jersey.
New Jersey State Regulatory Requirement	New Jersey Recycling Rules	N.J.A.C 7:26A	Describes the requirements for operating recycling centers and the conduct of recyclable materials generators and transporters.
New Jersey State Regulatory Requirement	New Jersey Technical Requirements for Site Remediation	N.J.A.C 7:26E	Establishes the minimum technical requirements for the remediation of contaminated sites.
New Jersey State Regulatory Requirement	New Jersey Hazardous Waste Rules	N.J.A.C 7:26G	Identifies the minimum national standards for the acceptable management of hazardous waste in New Jersey.
New Jersey State Regulatory Requirement	New Jersey Air Pollution Control Rules	N.J.A.C 7:27	Identifies activities, which require obtaining an air permit for construction/operation.
New Jersey State Regulatory Requirement	New Jersey Noise Control Rules	N.J.A.C 7:29	Prohibits the generation of certain types of noise at specific times and establishes methods to determine compliance.
New Jersey State Regulatory Requirement	New Jersey Brownfield and Contaminated Site Remediation Act	P.L. 1997, C. 278	Enabling legislation for development of remediation standards necessary to protect public health and safety and the environment from discharged hazardous substances and for mandating cleanup of contaminated sites.
Chemical-Specific			
Federal Regulatory Requirement	Resource Conservation and Recovery Act (RCRA)-Maximum Concentration of Constituents for Groundwater Protection	40 CFR 264.94	Identifies the maximum allowable concentration limits in groundwater for hazardous constituents in RCRA solid waste management units.
Federal Regulatory Requirement	National Ambient Air Quality Standards (NAAQSs)	40 CFR 50	Establishes air quality standards for specific criteria pollutants, including lead.
New Jersey State Regulatory Requirement	New Jersey Air Pollution Control Rules	N.J.A.C 7:27	Governs actions that may result in emissions of contaminants into the ambient atmosphere.
New Jersey State Regulatory Requirement	Ground Water Quality Standards	N.J.A.C 7:9	Regulates activities respecting protection and enhancement of groundwater resources.
New Jersey State Regulatory Requirement	Remediation Standards	N.J.A.C 7:26D	Establishes the minimum standards for the remediation of contaminated groundwater and surface water, and establishes the minimum residential and non-residential direct contact soil remediation standards.
Location-Specific			
Federal Regulatory Requirement	Endangered Species Act	16 USC 1531 et seq.	Requires that action be performed to conserve endangered species or threatened species.
Federal Regulatory Requirement	Fish and Wildlife Coordination Act	16 USC 661 et seq.	Requires actions to protect fish or wildlife when diverting, channeling, or modifying a stream.

Authority	Standard, Requirement, Criteria, or Limitation	Citation Potentially Germane to Potential Remedial Alternatives	Description of Requirement
Federal Regulatory Requirement	Federal Water Pollution Control Act (FWPCA)	33 USC 1521 et seq.	Requires a permit from the Corps of Engineers and consideration by both the EPA and the Fish and Wildlife Service before an application to dredge and fill may be enacted.
Federal Regulatory Requirement	National Historic Preservation Act		Establishes a program for the preservation of historic properties in the United States.
New Jersey State Regulatory Requirement	New Jersey Endangered Plant Species Program	N.J.A.C 7:5C	Identifies the official list of endangered plant species and establishes the program for maintaining and updating the list.
New Jersey State Regulatory Requirement	New Jersey Freshwater Wetlands Protection Act Rules	N.J.A.C 7:7A	Constitutes the rules governing the implementation of the Freshwater Wetlands Protection Act and the New Jersey Water Pollution Control Act as it relates to freshwater wetlands.
New Jersey State Regulatory Requirement	New Jersey Flood Hazard Area Control	N.J.A.C 7:13	Sets forth the requirements governing activities in the flood hazard area or riparian zone of a regulated water.
New Jersey State Regulatory Requirement	New Jersey Division of Fish, Game, and Wildlife Rules	N.J.A.C 7:25	Supplements the statutes governing fish and game laws in the State of New Jersey.
New Jersey State Regulatory Requirement	New Jersey Industrial Site Recovery Act.		Requires owners of facilities with specific industrial classifications to investigate and remediate prior to property transfers when the business ceases operations or is sold.
"To-Be-Considered"			
Federal Regulatory Requirement	*Policy on Floodplains and Wetlands Assessments for CERCLA Actions*	EPA, 1985	Requires that CERCLA actions meet the substantive requirements of Floodplain Management Executive Order (EO 11988) and Protection of Wetlands Executive Order (EO 11990).
Federal Regulatory Requirement	Fish and Wildlife Coordination Act Advisories		Advisories on the effects of pollutants and other activities on wildlife, including migratory birds and fish, and wildlife habitat authorized under the Fish and Wildlife Coordination Act.
Federal Regulatory Requirement	Clean Water Act (as it pertains to wetlands)	Section 404	Prohibits discharge of dredged or fill material into wetlands adjacent to navigable waters without a permit.
Federal Regulatory Requirement	Executive Order 11988 Floodplain Management		Requires federal agencies to avoid to the extent possible long- and short-term adverse impacts associated with the occupancy and modification of flood plains, and avoid support of floodplain development wherever there is a practicable alternative.
Federal Regulatory Requirement	Executive Order 11990 Protection of Wetlands		Requires federal agencies to provide leadership and take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands.
New Jersey State Regulatory Requirement	Administrative Requirements for the Remediation of Contaminated Sites	N.J.A.C 7:26C	Establishes the administrative procedures and requirements for the remediation of a contaminated site, including general requirements, definitions, applicability and exemptions, certifications, forms and submissions, public notification, right of entry and inspection, liberal construction, and severability.

Authority	Standard, Requirement, Criteria, or Limitation	Citation Potentially Germane to Potential Remedial Alternatives	Description of Requirement
New Jersey State Regulatory Requirement	Site-Specific Impact to Ground Water Soil Remediation Standards Guidance Documents		While the Remediation Standards at N.J.A.C 7:26D do not establish numeric impact-to-groundwater remediation standards, N.J.A.C 7:26D-1.1(b) requires that impact-to-groundwater soil remediation standards be developed on a site-by-site basis using NJDEP's Soil Remediation Standards Guidance for Impact to Ground Water available on the NJDEP's web site.
New Jersey State Regulatory Requirement	New Jersey Department of Transportation (NJDOT) Standard Specifications – Soil Erosion and Sediment Control Measures (1996)		NJDOT standards are typically used to develop the appropriate plans for sediment and soil erosion control required under New Jersey Soil Conservation Act.

APPENDIX III

Administrative Record Index

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

06/22/2017

REGION ID: 02

Site Name: MATTEO & SONS, INC.
CERCLIS ID: NJD011770013
OUID: 02
SSID: 02KD
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/Organization:
510506	6/22/2017	ADMINISTRATIVE RECORD INDEX FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	2	Administrative Record Index		(US ENVIRONMENTAL PROTECTION AGENCY)
503528	3/28/2017	FINAL REMEDIAL INVESTIGATION SUPPLEMENTAL SAMPLING REPORT FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	81	Report	(US ENVIRONMENTAL PROTECTION AGENCY)	(WESTON SOLUTIONS INCORPORATED)
499409	4/7/2017	FINAL REMOVAL ACTION REPORT OU2 - CONTRACT NO.: EP-S2-14-01 - TDD NO.: TO-0007-0080 - DCN NO.: RST3-03-F-0114 FOR THE MATTEO & SONS INCORPORATED SITE	1441	Report		
472968	4/20/2017	FINAL REMOVAL SITE EVALUATION REPORT FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	7332	Report		(WESTON SOLUTIONS INCORPORATED)
503522	5/1/2017	FINAL REMEDIAL INVESTIGATION REPORT FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	1096	Report		(US ENVIRONMENTAL PROTECTION AGENCY)
503523	5/1/2017	FINAL REMEDIAL INVESTIGATION REPORT WITH APPENDICES A - E FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	1246	Report		(US ENVIRONMENTAL PROTECTION AGENCY)
503524	5/1/2017	FINAL REMEDIAL INVESTIGATION REPORT WITH APPENDIX F FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	5138	Report		(US ENVIRONMENTAL PROTECTION AGENCY)
503525	5/1/2017	FINAL REMEDIAL INVESTIGATION REPORT WITH APPENDICES G - H FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	1541	Report		(US ENVIRONMENTAL PROTECTION AGENCY)
510528	5/31/2017	FINAL FOCUSED FEASIBILITY STUDY REPORT FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	69	Report		(US ENVIRONMENTAL PROTECTION AGENCY)

ADMINISTRATIVE RECORD INDEX OF DOCUMENTS

FINAL

06/22/2017 **REGION ID: 02**

Site Name: MATTEO & SONS, INC.
CERCLIS ID: NJD011770013
OUID: 02
SSID: 02KD
Action:

DocID:	Doc Date:	Title:	Image Count:	Doc Type:	Addressee Name/Organization:	Author Name/Organization:
503521	6/14/2017	CORRESPONDENCE REGARDING BIOAVILABILITY TRW CONSULTATION COMMENTS FOR THE ADMINISTRATIVE RECORD FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	2	Memorandum	Dobinson, Thomas (US ENVIRONMENTAL PROTECTION AGENCY)	Mazziotta, Nick (US ENVIRONMENTAL PROTECTION AGENCY)
510562	6/20/2017	PROPOSED PLAN FOR OU2 FOR THE MATTEO & SONS INCORPORATED SITE	14	Publication		(US ENVIRONMENTAL PROTECTION AGENCY)

APPENDIX IV

State Letter

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
SITE REMEDIATION & WASTE MANAGEMENT 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 13, 2017

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

Re: Matteo and Sons, Inc. Superfund Site
Record of Decision Operable Unit 1
EPA ID# NJD000565531
DEP PI# 026178

Dear Mr. Prince:

The New Jersey Department of Environmental Protection (DEP) completed its review of the "Record of Decision, Operable Unit Two, Matteo and Sons, Inc. Superfund Site, West Deptford, Gloucester County, New Jersey" prepared by the U.S. Environmental Protection Agency (EPA) Region II in August 2017 and concurs with the selected remedy to address lead soil contamination at residential properties.

The selected remedy included in this Record of Decision addresses a discrete portion of the Matteo and Sons, Inc. Superfund site involving battery casing waste and contaminated soil at residential properties in West Deptford. This is the second of at least three planned remedial phases, or operable units, for the site.

The major components of the remedy selected for Operable Unit 2 (OU2) include the following:

- Temporary relocation of residents;
- Excavation and off-site disposal of battery casing waste and soil contaminated with lead, antimony, and PCBs from approximately 25 residential properties, as well as excavation and removal of battery waste and contaminated soils underlying potentially impacted residential houses/structures;
- Restoration of the affected properties; and,
- Institutional controls, such as a deed notice, to prevent exposure to contaminated soil under roadways that exceed levels that allow for unrestricted use.

As this site cleanup represents the first use of the region's new lead strategy to achieve a target blood lead level of 5 ug/dL for residents potentially impacted by the site, it important to note the DEP's agreement with the plan. Specifically, DEP supports the proposed rounding to a 200 mg/kg lead level for use in the surface representing the top two feet and using the state lead soil standard of 400 mg/kg at deeper depths to meet the overall risk reduction goal for the site.

EPA anticipates that an operable unit will address contaminated soil on the Matteo and Sons, Inc. facility (Operable Unit 1), and operable units will address contaminated surface water and sediment along Hessian Run and Woodbury Creek (Operable Unit 3) and groundwater (Operable Unit 4), as necessary, based on the results of ongoing investigations.

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 during remedial actions for OU2 to ensure residential properties are cleaned up and restored for unrestricted use.

If you have any questions, please call me at 609-292-1250.

Sincerely,

Mark J. Pedersen
Assistant Commissioner
Site Remediation & Waste Management Program

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

APPENDIX V

Responsiveness Summary

RESPONSIVENESS SUMMARY
Matteo and Sons, Inc. Superfund Site
Operable Unit 2
West Deptford, New Jersey

INTRODUCTION

This Responsiveness Summary provides a summary of the public's comments and concerns regarding the Proposed Plan and preferred remedy for the Matteo and Sons, Inc., Superfund site, Operable Unit 2 (OU2) (Site), and EPA's responses to those comments. All comments summarized in this document have been considered in EPA's final decision for the selection of remedial alternative for the Site.

This Responsiveness Summary is divided into the following sections:

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

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 these comments, as well as responses to written comments received during the public comment period.

III. ATTACHMENTS
The last section of this Responsiveness Summary includes attachments, which document public participation in the remedy selection process for this Site. These attachments are:

Attachment A contains the Proposed Plan that was distributed to the public for review and comment;

Attachment B contains the public notice that appeared in the Courier Post;

Attachment C contains the transcript of the public meeting; and,

Attachment D contains the written comments received by EPA during the public comment period.

I. BACKGROUND ON COMMUNITY INVOLVEMENT AND CONCERNS

EPA has worked closely with local residents, public officials, and other interested members of the community since NJDEP requested assistance with the Site in 2016. On June 22, 2017, EPA released the Proposed Plan and supporting documentation for the soil remedy to the public. 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; and the West Deptford Free Public Library, 420 Crown Point Road in West Deptford, New Jersey.

On June 21, 2017, EPA published a Public Notice in the *South Jersey Times* newspaper that provided information about the public comment period, the public meeting for the Proposed Plan, and the availability of the Administrative Record for the Site. EPA also published a press release on June 22, 2017, to announce the release of the Proposed Plan. The public comment period closed on July 24, 2017.

A public meeting was held on July 6, 2017, at the RiverWinds Community Center 1000 RiverWinds Drive, West Deptford, New Jersey. The purpose of this meeting was to inform residents, local officials, and interested members of the public about the Superfund process, present details about EPA's remedial plan, receive comments on the Proposed Plan, and respond to questions from area residents and other interested parties.

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

Part 1: Verbal Comments

This section provides a summary of verbal comments received from the public during the public comment period and EPA's responses.

A. SUMMARY OF QUESTIONS AND EPA'S RESPONSES FROM THE PUBLIC MEETING CONCERNING THE MATTEO AND SONS, INC. SITE - JULY 6, 2017

A public meeting was held on July 6, 2017, at the RiverWinds Community Center 1000 RiverWinds Drive, West Deptford, New Jersey. In addition to a presentation of the investigation findings, EPA presented the Proposed Plan and preferred alternatives for the Site, received comments from meeting participants, and responded to questions regarding the remedial alternatives under consideration. A transcript of the public meeting is provided in Attachment C.

A summary of comments raised by the public following EPA's presentation are categorized by relevant topics and presented below:

Health Concerns

Comment 1: *A commenter asked if EPA was aware of five cancer related deaths within an eight-house radius within the neighborhood, and is that something that could have been caused by contamination from the battery casing waste.*

EPA response: The EPA only evaluates present and future exposure when conducting risk assessments. The Agency of Toxic Substance and Disease Registry (ASTDR) and the State Department of Health have the capability to look at past exposure and should be contacted if there are concerns regarding past exposure to contaminants at the Site.

Comment 2: *A commenter asked if there are any recommendations for screening tests for the contaminants at the Site.*

EPA response: Any questions regarding screening tests or health effects of contaminants should be directed to a physician or to the New Jersey State Department of Health.

Timeline

Comment 3: *A commenter asked if the EPA had a timeline of when remedial activities would start.*

EPA response: EPA anticipates to start the remedial design in the fall subsequent to the signing of the Record of Decision (ROD). The remedial design will include some investigation activities to further refine excavation boundaries, identify utility locations, and to determine if battery casing waste and/or contaminated soil is beneath residential structures. The start of the remedial action depends on funding. The timeframe when EPA will receive funding is undetermined at this time.

Temporary Relocations

Comment 4: *A commenter asked if residents would need to leave their residences during the remedial action.*

EPA response: Temporary relocations may be necessary for some residents. Temporary relocations will depend on the location of remediation on each property and if utilities or access to the home are interrupted during remediation. Temporary relocations, if necessary, will be discussed with residents on a case-by-case basis following the remedial design.

Comment 5: *A commenter asked if the cost of relocation is covered by the resident or EPA.*

EPA response: The cost of temporary relocation is covered by EPA. The homeowner is still responsible for normal household expenses (e.g., mortgage, taxes, etc.).

Comment 6: *A commenter asked if the temporary relocations were appropriate for different family situations.*

EPA response: Yes. The location of the temporary relocations will be discussed with the home owners and selected so that they are conducive to the home owner's needs and are reasonable.

Funding

Comment 7: *A commenter asked if there is a potential for the EPA budget to not be adequate enough to fund the preferred alternative.*

EPA response: CERCLA is an **"**enforcement first" program that enables EPA to pursue viable Potentially Responsible Parties (PRPs) to perform or pay for cleanup work. A settlement was made with Matteo and Sons, Inc., in 2013 due to an inability to pay for the remediation of OU1. EPA cannot comment on the identification of additional PRPs or

potential enforcement efforts to recover additional costs. CERCLA also provides EPA the ability to fund investigation and remediation efforts if viable PRPs cannot. EPA will provide funding for the design of the remedy and, following the completion of the design, EPA Region 2 will request funding for the remedial action from EPA Headquarters. A priority panel will evaluate Region 2's request, along with requests for other Superfund sites across the U.S., and prioritize which sites receive the limited funding available for remedial actions.

Institutional Controls

Comment 8: *A commenter asked how institutional controls would affect future access to utilities in roadways for repair and/or maintenance.*

EPA response: Under the preferred alternative institutional controls would not be required on residential properties; they would be required for roadways where contaminated soil is identified beneath the asphalt surface and is not removed. The institutional controls would not limit future access to utilities for repair, but would provide a mechanism (typically a road-opening permit) to inform a contractor or utility worker that contaminated soil is present and how to properly handle the contaminated soil and prevent exposure through the use of personal protective equipment.

Comment 9: *A commenter asked if leaving contaminated soil under the roadway would increase costs under a scenario where the resident would have to connect to a utility main in the roadway.*

EPA response: The EPA cannot speculate on potential costs of possible maintenance/repairs in the future.

Part 2: Written Comments

This section provides a summary of written comments received from the public during the public comment period and EPA's responses.

A. COMMENTS FROM WEST DEPTFORD TOWNSHIP

Comment: *The proposed implementation of Alternative 3 is agreed to be the most effective alternative to achieve the Remedial Action Objectives (RAOs) regarding the residential properties and is particularly attractive as it will not necessitate long term ICs or deed restrictions for those properties.*

However, the concern of the Township is the decision not to remove material from underneath public facilities (i.e. roadways, sidewalks, utilities, etc.).

The RAOs for the site are:

1. *To eliminate or reduce human exposure to battery casing waste and contaminated soils exceeding cleanup goals to levels protective of current and future land use; and,*

2. *Prevent transport and migration of site contaminants to other areas via overland flow and air dispersion.*

While on face the assumption that the IC of non-disturbance of the public facilities will ensure the RAOs will be effective in the long-term seems reasonable, the presence of water and sewer transmission lines beneath the public facilities creates a very real and very likely risk that the RAOs will be compromised at some point in the future.

At some point the water and/or sewer lines are likely to rupture. The resultant release will mobilize any contamination remaining under the roadway and transport the material back onto the remediated properties and/or into storm sewer systems that may impact sensitive ecological areas and/or groundwater.

Human exposure will exist at the time of release, during any repair activities and subsequent to any repair activities at any points whereby the material has come into contact with previously remediated properties and/or environmentally sensitive receptors due to the material being left under the public facilities.

RI data for COC levels and material distribution from under public facilities is very limited compared to the data collected from the residential properties. The exposure risk of the COC levels under public facilities cannot be accurately characterized with regard to an event that creates various exposure pathways.

In consideration of the above comments, the Township of West Deptford requests that the proposed Alternative 3 remedy be modified to include the removal of impacted material under public facilities.

EPA Response: Based on the comments received during the public comment period, EPA would like to clarify that the preferred alternative, Alternative 3, will include:

1. A pre-design investigation to determine the extent of battery casing waste and contaminated soil beneath public facilities (e.g., roadways and utilities) at the Site;
2. Excavation of battery casing waste present under public facilities at the Site; and,
3. Implementation of institutional controls on public facilities where residually contaminated soil might be present.

EPA maintains that the preferred alternative outlined in the Proposed Plan will be effective in achieving RAOs in the long term, while allowing EPA to address battery casing waste which acts as a source material. The removal of the battery casing waste will lower the risks to human health and the environment in the event of a water or sewer line break. Additionally, the institutional controls will not preclude repair and/or maintenance of the roadway or utilities, but will provide a mechanism to communicate the potential hazards associated with material present during maintenance. The pre-design investigation will also provide data on the extent of contaminants of concern (COCs) beneath the roadways to minimize the extent of potentially contaminated material.

B. COMMENTS FROM CONGRESSMAN NORCROSS, FIRST DISTRICT OF NEW JERSEY

Comment: *I write to you to express support for a modified U.S. Environmental Protection Agency Region II Alternative 3 for Removal of Contaminated Soil and Areas of Concentrated Battery Waste Accessible Areas and Beneath Residential Structures pertaining to Matteo & Sons, Incorporated Superfund Site Operable Unit 2 in West Deptford Township, Gloucester County, New Jersey, which is part of my Congressional District.*

While Alternative 3 is West Deptford Township's and the EPA's preferred remediation plan to address this urgent public health and environmental matter, I ask EPA Region II give full consideration to West Deptford Township's request (attached to this correspondence) that Alternative 3 be modified to include additional remediation work under public facilities including, but not limited to sidewalks, roads, and utilities.

Per the EPA's findings at Matteo & Sons, Inc. Superfund Site Operable Unit 2 in West Deptford Township, battery waste and contaminated soils containing hazardous substances have been identified, and have the potential to create adverse human health conditions. It is imperative the EPA take all appropriate steps to fully remediate the affected 36 single-family, residential properties located in and adjacent to the Tempo Development in West Deptford, New Jersey.

EPA Response: Please see EPA's response to the West Deptford Township comments.

Attachment A

Proposed Plan

Superfund Program U.S. Environmental Protection Agency

Matteo & Sons, Inc. Superfund Site
Operable Unit 2
West Deptford Township, New Jersey

Proposed Plan Summer 2017

EPA ANNOUNCES PROPOSED PLAN

This Proposed Plan identifies the Preferred Alternative to remediate battery casing waste and associated contaminated soil at the Matteo & Sons, Inc. Superfund site Operable Unit 2 (OU2), located in West Deptford Township, Gloucester County, New Jersey, herein referred to as the "Site" and provides the rationale for this preference. This is the second of three OUs at this Superfund site. The first OU will address contaminated soils and the source material impacting soil, groundwater, surface water, and sediment at the Matteo & Sons, Inc. facility. The third and final OU will address surface water and sediment impacts. Various remedial alternatives are described in this Proposed Plan and the U.S. Environmental Protection Agency (EPA) has identified a preferred alternative.

EPA's Preferred Alternative to address the battery casing waste and associated contaminated soil at the Site is Alternative 3, which includes the removal and off-Site disposal of contaminated soil and areas of concentrated battery casing waste in accessible areas and areas beneath residential structures.

This document is issued by EPA, the lead agency for the Site, in consultation with the New Jersey Department of Environmental Protection (NJDEP), the support agency. EPA, in consultation with NJDEP, will select a final remedy for the battery casing waste and contaminated soil at 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 response action presented in this Proposed Plan based on new information or public comments. Therefore, the public is encouraged to review and comment on all the alternatives presented in this Proposed Plan.

MARK YOUR CALENDARS

Public Comment Period
June 22, 2017 to July 24, 2017
EPA will accept written comments on the Proposed Plan during the public comment period.

Public Meeting
July 6, 2017 at 7:00 P.M.
EPA will hold a public meeting to explain the Proposed Plan and all of the alternatives presented in the Focused Feasibility Study. Oral and written comments will also be accepted at the meeting. The meeting will be held at the RiverWinds Community Center at 1000 RiverWinds Drive, West Deptford, New Jersey.

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

EPA Records Center, Region 2
290 Broadway, 18th Floor
New York, New York 10007-1866
(212) 637-4308
Hours: Monday-Friday – 9 A.M. to 5 P.M.
EPA website for the Matteo & Sons, Inc. site:
https://www.epa.gov/superfund/matteo-and-sons

West Deptford Free Public Library
420 Crown Point Road
West Deptford, New Jersey 08086
(856) 845-5593
Please refer to website for hours:
http://www.westdeptford.lib.nj.us/

EPA is issuing this Proposed Plan as part of its public participation responsibilities under Section 117(a) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA or Superfund). This Proposed Plan summarizes information that can be found in greater detail in the OU2 Remedial Investigation (RI) report and Focused Feasibility Study (FFS) and other documents contained in the Administrative Record file for this Site.

SITE DESCRIPTION

The Site includes 36 single-family, residential properties located in and adjacent to the Tempo Development in West Deptford, New Jersey. The Site is located in a residential neighborhood with some industrial and municipal properties located within one-half mile.

The topography of the Site slopes down from northwest to south and southeast. The elevation of the Site at its highest in the northeast is approximately 33 feet (ft) above mean sea level (AMSL) and averages approximately 20 ft AMSL in the southern and southeastern extents.

Surface water bodies located in the area of the Site include the east-to-west flowing Hessian Run, as well as Woodbury Creek, which are tributaries of the Delaware River.

SITE HISTORY

The Site is located within one mile of the Operable Unit 1 (OU1) portion of the Matteo & Sons, Inc. Superfund site. OU1 consists of an 80-acre area which includes an active scrap metal recycling facility, a junkyard, and an inactive landfill. Hessian Run is observed on its northern border. In 1968, the NJDEP identified an inactive incinerator at the property. In 1971, NJDEP approved Matteo's request to operate the incinerator to burn copper wire and Matteo submitted a plan to operate a "sweating fire box" to melt lead battery terminals for lead reclamation. This lead melting operation continued until approximately 1985. In 1972, NJDEP observed landfilling of crushed battery casings and household waste in an area of wetlands adjacent to Hessian Creek. This operation was apparently performed in conjunction with the lead melting operation, as there were several reports of battery waste incineration and subsequent on-site ash disposal. These land uses resulted in the contamination of soil, sediment, and groundwater with lead, antimony, and polychlorinated biphenyls (PCBs). EPA placed the Matteo & Sons, Inc. Site (OU1) on the National Priorities List (NPL) in September 2006.

Tempo Development

The OU2 Site was discovered in November 2015 when crushed battery casing waste was uncovered during a sewer lateral repair in the front yard of a residential property located on Birchly Court. Local authorities from Gloucester County and West Deptford were the initial on-Site responders. The Site was referred to the NJDEP, who subsequently referred it to the EPA in March 2016 for further assessment and characterization under CERCLA.

As part of a Removal Site Evaluation (RSE) and subsequent RI/FFS conducted in 2016 and 2017, EPA determined the relative nature and extent of the battery waste present and the associated soil contamination throughout the Site. Additionally, a Removal Action was conducted at two properties on Birchly Court and one property on Woodlane Drive between August and October 2016. The removal action included the excavation and off-Site disposal of battery casing waste and associated contaminated soil. Approximately 1,936 tons of battery casing waste and contaminated soil was transported off-Site for disposal. Approximately 1,386 tons of the battery casing waste/soil transported off-Site for disposal was characterized as hazardous. The Site was transferred from the Removal Program to the Remedial Program in October 2016.

The results of the RSE/RI revealed that significant concentrations of battery waste were present in three areas of the Site with additional battery casing waste spread randomly throughout the neighborhood in lesser concentrations. Battery casing waste is also present under public right-of-ways and may be present under several residential structures. Contaminants found at the Site include lead, antimony, and PCB Aroclor 1254.

SITE CHARACTERISTICS

Geology

The Site is located within the Inner Coastal Plain Physiographic Province of New Jersey. Soil found throughout the Site primarily consists of silts and sandy silts for the first three to four feet below ground surface (bgs), with some occurrences of clay, which are not uniform in distribution. Construction fill (e.g., brick, block, and concrete) is randomly encountered across the Site at various depths. Battery waste was identified across the Site at depths to seven feet bgs, with volumes encountered ranging from one or two pieces to layers more than one-foot thick, and spanning large portions of an area.

Hydrology

Groundwater was not encountered at the maximum depth of the subsurface soil investigation of six feet bgs on the northern properties; however, soils were documented as saturated (or wet) as shallow as 1.5 feet bgs on the southern properties located adjacent to Hessian Run. Groundwater flow is generally to the south-southwest toward Hessian Run.

NATURE AND EXTENT OF CONTAMINATION

The crushed battery casing waste observed at the Site is believed to have been brought in from OU1, and dumped in OU2 at the time of the battery recycling operation at OU1. There appeared to have been three waste disposal areas on the OU2 Site: located near P001, P035/P036, and P013/P019.

Prior to the development of the Tempo neighborhood, the OU2 area was much lower in elevation than the current topography. When the developer began preparations for construction (i.e., grading), a significant amount of fill was brought in to the Site. It is suspected that during pre-construction grading of the Site the fill material was mixed with the battery casing waste already existing in piles on Site and spread by heavy equipment. This redistribution created a heterogeneous spread of battery casing waste in a soil or construction debris matrix of fill, with the volume of battery casing waste depending on location within the development. The waste disposal likely did not take place through a "dig and bury" approach, as no waste has been discovered in native subsurface soil.

Lead and antimony exceeding regulatory limits is contained primarily to the first 4 ft of soil, with some exceedances at depths of 7 ft bgs. The on-Site PCB exceedances are collocated with lead exceedances and/or battery casing waste.

Concentrations of lead in soil ranged from non-detect to 68,000 mg/kg. Concentrations of antimony ranged from non-detect to 4,720 mg/kg and concentrations of PCBs ranged from non-detect to 32 mg/kg.

The analytical results for soil and battery casing waste samples indicate that the highest concentrations of contamination are collocated with the subsurface battery casing waste; that the significant COC, lead (by concentration, presence and distribution), is not readily miscible or organic in nature; and the physical transport of the waste is likely the only potential route of migration. However, some of the TCLP lead concentrations indicate that the concentrations should be deemed hazardous for disposal purposes. None of the COCs found on the Site degrade or reduce further and are expected to persist if left in place.

A limited groundwater investigation conducted as part of the RI indicated that lead concentrations in the unfiltered groundwater were detected in four sample locations at concentrations ranging from 1.8 to 46 µg/L. Corresponding filtered samples were non-detect for lead except for one sample, which had a lead concentration of 6.1 µg/L which exceeded the NJDEP GWQS of 5 µg/L. The associated duplicate sample had a lead concentration of 4.5 µg/L.

The total lead exceedances of the NJDEP standards were generally found in the unfiltered groundwater samples (one exceedance of the NJDEP Groundwater Quality Criteria was detected in a filtered groundwater sample) indicating that the total lead is primarily contained in the particulates of the sample. It does not appear that there is significant dissolved phase total lead within the groundwater underlying the Site and lead concentrations in unfiltered groundwater that exceed the NJDEP Groundwater Quality Standard are correlated to

historic battery casing waste stockpiles, as determined by soil borings, waste locations, Site history, groundwater flow direction, and aerial photography review. Additional investigation of groundwater will be required following soil remediation activities as part of Matteo OU2

SCOPE AND ROLE OF THE ACTION

As with many Superfund sites, the contamination at the Site is complex. In order to manage the cleanup of the Site more effectively, the EPA has organized the work into three phases of long-term cleanup called OUs, under the authority of CERCLA.

- OU1 – Matteo Facility
- OU2 – Residential Neighborhood
- OU3 – Surface water/Sediments

WHAT IS A "PRINCIPAL THREAT"?

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

PRINCIPAL THREATS

The waste battery casings contain elevated concentrations of lead and are characteristically hazardous for lead. The casing material also contains elevated concentrations of antimony and PCB Aroclor-1254. The waste battery casings act as a continued source of the contaminants to soil and potentially groundwater and are considered a principal threat waste.

SUMMARY OF SITE RISK

Human Health Risk Assessment

EPA conducted a four-step baseline human health risk assessment (HHRA) as part of the OU2 RI/FFS to assess Site-related cancer risks and non-cancer health hazards in the absence of any remedial action. 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 (COPCs) were selected by comparing the maximum detected concentration of each analyte in surface soil (0-2 feet) with available state and federal risk-based screening values. The screening of each COPC was conducted separately for each exposure area.

Based on current zoning and future land use assumptions, exposure to surface soil by a child (0-6 years) and adult resident were the only receptors and media of interest considered in this risk assessment. Potential exposure routes included ingestion of, dermal contact with, and inhalation of particles from surface soil.

In this assessment, two exposure areas consisting of three residential properties were chosen to represent the high-end of potential exposures to all nearby residences at the Site. The first exposure area consists of a residence containing elevated lead and casing material across the majority of the yard. The other two properties were combined into a second exposure area to illustrate potential risks and hazards posed by exposure to a hotspot area (i.e. used for play or gardening) where a localized compilation of casing material traverses both residences.

It is not possible to evaluate risks from lead exposure using the same methodology as for the other COPCs because there are no published quantitative toxicity values for lead. Since the toxicokinetics (the absorption, distribution, metabolism and excretion of toxins in the body) of lead are well understood, however, it is regulated based on blood lead level (PbB), which can be correlated with both exposure and adverse health effects. The Site-specific risk reduction goal is to limit the probability of a child’s PbB exceeding 5 micrograms per deciliter (µg/dL) to 5% or less. To predict PbB and the probability of a child's PbB exceeding 5 µg/dL, the Integrated Exposure and Uptake Biokinetic (IEUBK) model was used to derive an exposure level that satisfies the risk reduction goal by considering lead exposure and toxicokinetics in a child receptor.

For contaminants other than lead, 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.

Summary of Risks to Residential Receptors

Cancer risks and noncancer health hazards from exposure to contaminated surface soil were evaluated for adult and child residents. The HHRA results indicate that exposure to surface soil for the adult/child resident is within EPA's target cancer risk range of 1×10^{-6} to 1×10^{-4} for both exposure areas (**Table A**). The noncancer HIs for each exposure area exceed EPA's threshold of 1 for the child resident. The hotspot exposure area also exceeds the noncancer threshold of 1 for the adult resident. The hazard estimates were driven by exposure to antimony, PCB Aroclor 1254 in soil.

Table A. Summary of hazards and risks associated with soil

Receptor	Hazard Index	Cancer Risk	Probability of PbB > 5 µg/dL
Exposure Area 1 (Yard-wide)			
Resident - child	**4**	9.0E-05	**99.2%**
Resident - adult	0.3		NA
Exposure Area 2 (Hotspot)			
Resident - child	**21**	1.0E-04	**99.9%**
Resident - adult	**2**		NA

Bold indicates value above the target risk range, hazard index, or lead risk reduction goal.

Risks from exposure to lead in residential surface soil, as quantified by the IEUBK model, are elevated above the EPA risk reduction goal for the Site. According to the model, more than 99% of children living on a property containing a hotspot area used for play, or with lead contamination exhibited throughout the yard, would have PbBs greater than 5 µg/dL. In addition, although individual fragments of the crushed battery casings are not expected to be ingested by a child, any exposure to this material should be limited due to the high concentrations of lead infused within.

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 and are referred to as chemicals of concern, or COCs, in the final remedial decision document, or Record of Decision.

Ecological Risk Assessment

Since OU2 focuses on residential properties, an ecological risk assessment was not conducted. However, ecological risks will be assessed as part of OU3.

Risk Assessment Summary

The results of this HHRA indicate that lead, antimony, and PCB Aroclor-1254 are the Site-related contaminants of concern (COCs), and that the surface soil at each of the targeted exposure areas could present adverse risks and/or hazards to current and future residents. It is EPA's judgement 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 RAOs in the FFS have been developed to focus on preventing exposure to contaminated soil and battery casing waste. The RAOs for the Matteo & Sons, Inc. OU2 are:

- Eliminate or reduce human exposure, via inhalation of, incidental ingestion of, and dermal contact with battery casing waste and contaminated soils exceeding remediation goals, to levels protective of current and anticipated future land use.
- Prevent transport and migration of Site contaminants to other areas via overland flow and/or air dispersion.

The impact to groundwater pathway was evaluated as part of the RI/FFS. It was determined that the proposed remedies are protective for this pathway. Lead and PCBs are considered immobile contaminants and there is greater than two feet of clean soil above the water table for the majority of the Site. Dissolved lead concentrations in groundwater were not detected except in one temporary monitoring well where it is suspected that battery casing waste is in direct contact with the groundwater table. Additionally, since antimony impacts are collocated with lead impacted soil, it is anticipated that an excavation remedy would be protective for antimony as well

The remediation goals (RGs) are based on the New Jersey Residential Direct Contact Soil Remediation Standards and are as follows:

- Lead – 400 milligrams per kilogram (mg/kg);
- Antimony – 31 mg/kg; and,
- PCB Aroclor 1254 – 0.2 mg/kg.

Additionally, to achieve the risk reduction goal established for the Site, the average lead concentration within the top two feet across each residential property must be at or below 200 mg/kg once the selected remedial action targeting detections above 400 mg/kg is complete.

SUMMARY OF REMEDIAL ALTERNATIVES

CERCLA, Section 121(b)(1), 42 U.S.C. Section 9621(b)(1), mandates that remedial actions must be protective of human health and the environment, cost-effective, comply with ARARs, and utilize permanent solutions and alternative treatment technologies and resource recovery alternatives to the maximum extent practicable. Section 121(b)(1) also establishes a preference for remedial actions which employ, as a principal element, treatment to permanently and significantly reduce the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants at a site. CERCLA Section 121(d), 42 U.S.C. Section 9621(d) further specifies that a remedial action must attain a level or standard of control of the hazardous substances, pollutants, and contaminants, which at least attains ARARs under federal and state laws, unless a waiver can be justified pursuant to CERCLA Section 121(d)(4), 42 U.S.C. Section 9621(d)(4).

The objective of the FFS for the OU2 Study Area was to identify and evaluate remedial action alternatives to meet the RAOs. A total of six

alternatives were initially developed and screened in the FFS for overall implementability, effectiveness, and cost, and three were carried over for further evaluation.

Three alternatives were retained for a detailed evaluation against the seven National Contingency Plan (NCP) evaluation criteria. The sections below present a summary of the alternatives that were retained and evaluated. The Present-worth Costs are based on a 30-year timeframe in accordance with EPA guidance.

The time frames for remediation presented below do not include the time for pre-design investigations, remedial design, or contract procurements.

Detailed descriptions of the remedial alternatives for OU2 can be found in the FFS report.

Alternative 1 – No Action

The No Action Alternative was evaluated, as required by the NCP, and provides a baseline for comparison with other alternatives. No remedial actions would be implemented as part of the No Action Alternative. Furthermore, contaminated soil and battery waste would remain in its current location and the potential for migration of contaminants via overland flow or air dispersion would not be reduced or eliminated. Environmental monitoring would not be performed. In addition, no restrictions on land-use would be pursued. Current Site exposures and risks would remain. Statutory CERCLA Five-Year Reviews would be required.

Capital Cost:	$0
Annual O&M Cost:	$0
Present-Worth Cost	$0
Duration Time:	None

Alternative 2 – Removal of Contaminated Soil and Areas of Concentrated Battery Waste in Accessible Areas

Alternative 2 includes excavation and removal of battery waste and contaminated soils within the readily accessible areas that were identified during the RI. Certified clean backfill soil would be placed in the open excavations to restore surface grade. Institutional controls (IC), such as deed restrictions, would be required for the footprints of residential houses/structures and public facilities (roads/utilities) overlying concentrated battery wastes and/or contaminated soils.

Excavated soils would be managed and disposed of as contaminated solid wastes, either non-hazardous or hazardous, depending upon the characteristics.

A resident relocation plan would be established for temporary relocation of residents that require significant removal activities at their impacted property. Statutory CERCLA Five-Year Reviews would be required.

Capital Cost:	$6,600,000
Annual O&M Cost	$0
Present-Worth Cost:	$6,600,000
Duration Time:	2 Years

Alternative 3 – Removal of Contaminated Soil and Areas of Concentrated Battery Waste Accessible Areas and Areas Beneath Residential Structures

Alternative 3 includes excavation and removal of battery waste and contaminated soils within the readily accessible areas that were identified during the RI. This alternative also includes excavation and removal of obstructed battery waste and contaminated soils underlying potentially impacted residential houses/structures. ICs (e.g., deed restrictions) would be implemented for obstructed battery waste and contaminated soils located under public facilities (roads and utilities). Certified clean backfill soil would be placed in the open excavation to restore surface grade.

Excavated soils would be managed and disposed of as contaminated solid wastes, either non-hazardous or hazardous, depending upon the characteristics.

A resident relocation plan would be established for temporary relocation of residents that require significant removal activities at their impacted properties. Statutory CERCLA Five-Year Reviews would be required.

Capital Cost:	$9,400,000
Annual O&M Cost	$0
Present-Worth Cost:	$9,400,000
Duration Time:	2 Years

EVALUATION OF ALTERNATIVES

Nine criteria are used to evaluate the different remediation alternatives individually and against each other in order to select a remedy. This section of the Proposed Plan profiles the relative performance of each alternative against the nine criteria, noting how it compares to the other options under consideration. The nine evaluation criteria are discussed below. A detailed analysis of each alternative can be found in the FFS.

Overall Protection of Human Health and the Environment

The No Action alternative (Alternative 1) would not provide protection of human health and the environment. Current Site contamination, exposures and risks would remain. This alternative would not satisfy the RAOs. Routine monitoring of Site conditions would not be conducted and future changes in contaminant conditions would not be identified. Because Alternative 1 (No Action) is not protective of human health and the environment, it was eliminated from consideration under the remaining evaluation criteria.

Both alternatives would provide protection of human health and the environment by removing battery casing waste and contaminated soils and preventing human exposure to any remaining wastes and contaminants through ICs (e.g., deed restrictions). However, Alternative 3 would be more protective because it would remove the battery casing waste and contaminants, thereby preventing exposure.

Compliance with ARARs

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

Alternatives 2 and 3 would both assure that remedial measures taken at OU2 would meet ARARs for the Site, which include residential soil RGs for the COCs, construction standards for erosion control and storm water runoff, waste characterization and management requirements for RCRA hazardous waste, treatment and disposal requirements for RCRA hazardous waste, and transportation requirements for hazardous waste.

The alternatives would achieve chemical-specific ARARs by excavating battery waste and contaminated soil and ensuring confirmation

THE NINE SUPERFUND EVALUATION CRITERIA

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

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

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

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

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

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

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

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

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

samples are in compliance with RGs. The IC (e.g., deed restrictions) would be effective in preventing exposure to potential contamination underlying structures and/or public facilities, such as roads, sidewalks, utilities, etc.

Location-specific ARARs (wetlands, floodplains, stream encroachment), if required, would be addressed to the extent possible during design and construction of the remedy. Pre-design investigations may be needed to determine whether any historical or cultural resources would be impacted and whether the construction project would need to address migratory birds, fish and wildlife or bald eagle preservation requirements.

Action-specific ARARs would be met for the construction phase by proper design and implementation of the remedial action and engineering controls for erosion and storm water, and for the disposal phase by proper selection of the disposal facility.

Long-Term Effectiveness and Permanence

For both Alternatives 2 and 3 the COCs at OU2 would be removed and transported off-Site and properly disposed of at a permitted landfill. Confirmation sampling would be conducted to ensure residential soil RGs for the COCs are met.

Long-term ICs (e.g., deed restrictions) would be implemented to prevent direct contact exposure of human receptors to potential obstructed battery casing waste and contaminated soils underlying public facilities, such as roads and utilities, at the Site. Alternative 2 would also require long-term ICs for residential properties with battery casing waste and contaminated soil beneath structures.

While both alternatives are expected to be effective in the long term, ICs on residential properties are complicated by the lack of direct control of the residential property. CERCLA Five-Year Reviews would be required, and long-term effectiveness and permanence would continue to be evaluated.

Reduction in Toxicity, Mobility or Volume (TMV)

Alternatives 2 and 3 do not provide reduction of toxicity, mobility or volume of Site contamination through treatment. However, treatment may occur off-Site at a RCRA Subtitle C hazardous waste disposal facility, if needed, to meet land disposal restriction treatment standards prior to disposal.

Short-Term Effectiveness

Both Alternative would have some risk in the short term for exposure as excavated material would be transported through the community. Engineering controls for dust generation and storm water runoff during excavation would minimize exposures during on-Site activities. Alternatives 2 and 3 are expected to be effective in the short term.

Implementability

Soil excavation uses readily available techniques and conventional earth-moving equipment. Some ancillary construction of a staging area for loading and unloading, soil erosion control, dust and noise control, construction vehicle control, additional clearing and grubbing, tree removal, garage and shed removal and replacement, and concrete and asphalt pavement removal and replacement may be necessary, and can be readily implemented.

Excavating in close proximity to structures and utility lines would require structural evaluation and shoring to mitigate the potential for damage to those structures.

Administrative implementation of Alternative 2 would be significantly impacted by the need for deed restrictions on private residential properties. These restrictions could impact the owner’s or resident's use of the property and may not be acceptable to the owner. Therefore, the implementability of Alternative 2 would be challenging due to the deed restriction requirement under residential structures.

Implementability for removal of readily accessible waste/soil for Alternative 3 is similar to Alternative 2 with regard to concerns about potential structure damage and construction access for excavation in close vicinity of houses/structures.

Removal of battery waste and contaminated soils beneath residential houses/structures is more complex. However, required specialized equipment and properly trained personnel are readily available in the market. EPA Region 2 personnel are experienced in managing and overseeing projects involving remediation activities to remove contaminated soil beneath residential houses/structures. It would take a longer time to remediate properties that require removal of obstructed battery waste and/or contaminated soil than would be required to remediate those properties only involving removal of readily accessible waste/soil. Consequently, a longer temporary relocation would be required for the residents of those properties affected.

Deed restrictions would not be necessary for residential houses/structures for Alternative 3. Overall, Alternative 3 is relatively implementable with proper planning and design.

Cost

The estimated present worth of Alternative 2 is $6,600,000. This cost includes mobilization, Site preparation, utility relocation, temporary resident relocation, excavation, Site clearing and tree removal, pavement and small structure removal, backfilling, transportation and disposal of soil and debris, field oversight, site restoration, and demobilization.

The present worth of the estimated cost for Alternative 3 is $9,400,000. This estimate includes mobilization, Site preparation, utility relocation, temporary resident relocation, excavation of wastes and soils (including those beneath houses/structures), Site clearing and tree removal, pavement and small structure removal, backfilling, transportation and disposal of soil and debris, field oversight, sight restoration, and demobilization.

No annual O&M cost would incur under Alternative 2 or Alternative 3.

State/Support Agency Acceptance

The State of New Jersey supports EPA's preferred remedy as presented in this Proposed Plan.

For further information on Matteo & Sons, Inc. Superfund site OU2, please contact:

Thomas Dobinson, PE
Remedial Project Manager
(212) 637-4176
dobinson.thomas@epa.gov

Natalie Loney
Community Relations Coordinator
(212) 637-3639
loney.natalie@epa.gov

Written comments on this Proposed Plan should be addressed to Mr. Dobinson.

U.S. EPA Region 2
290 Broadway 19th Floor
New York, New York 10007-1866

The public liaison for EPA Region 2 is:
George H. Zachos Regional Public Liaison
Toll-free (888) 283-7626, or (732) 321-6621

U.S. EPA Region 2
2890 Woodbridge Avenue, MS-211
Edison, New Jersey 08837-3679

Community Acceptance

Community acceptance of the preferred alternatives will be evaluated after the public comment period ends and will be described in the Record of Decision, the document that formalizes the selection of the remedy for the Site.

PREFERRED ALTERNATIVE

The preferred alternative for OU2 is Alternative 3, which includes excavation and removal of battery waste and contaminated soils within readily accessible and obstructed areas underlying potentially impacted residential houses/structures, hereafter referred to as the Preferred Alternative.

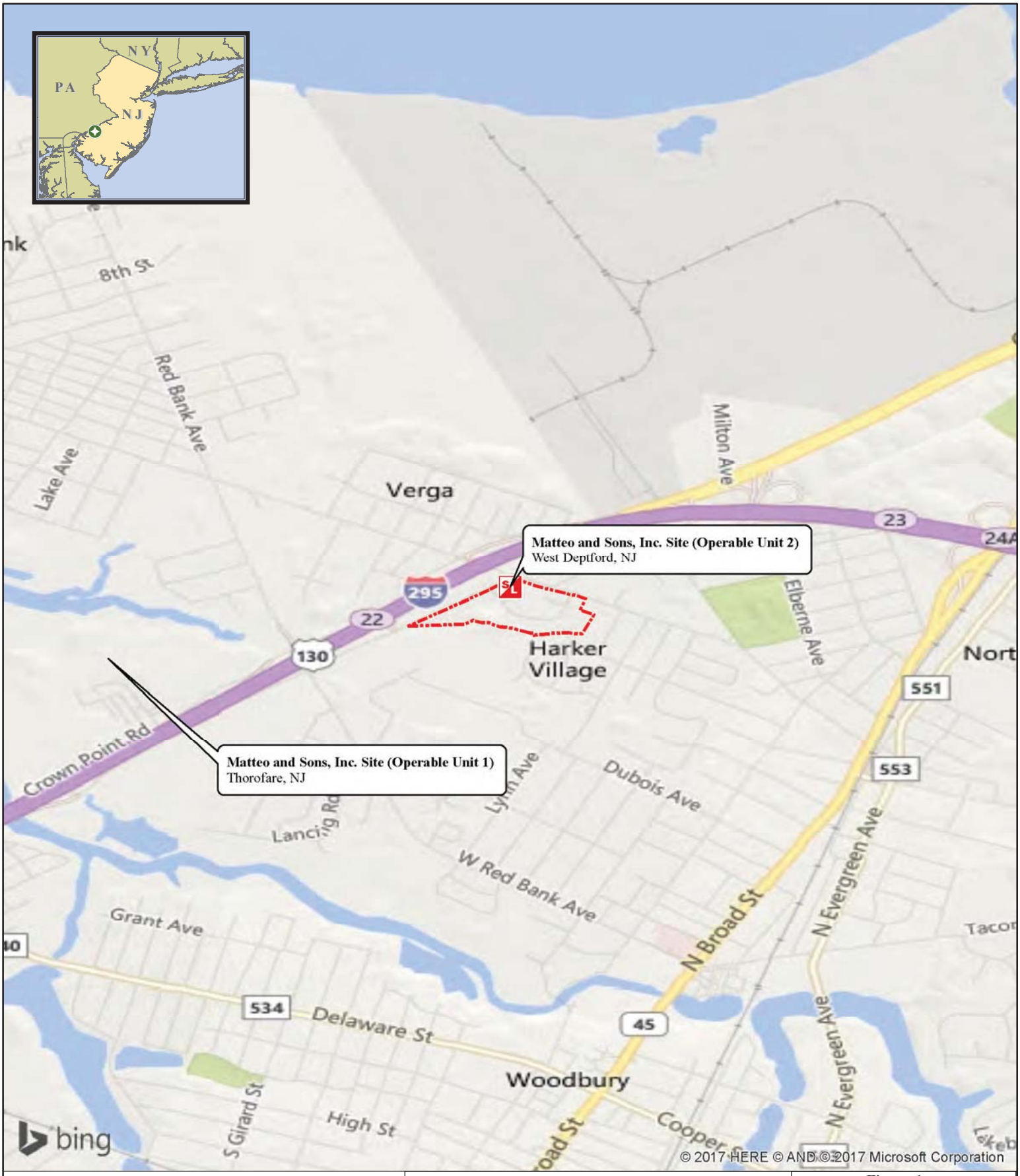
Alternative 3 is believed to provide the most-protective remedy for impacted residents. The Preferred Alternative is believed to provide the best balance of trade-offs among the alternatives with respect to the evaluation criteria. Based on the information available at this time, EPA believes the Preferred Alternative will be

protective of human health and the environment, and will comply with ARARs to the extent practicable.

Consistent with EPA Region 2's Clean and Green policy, EPA will evaluate the use of sustainable technologies and practices with respect to any remedial alternative selected for the Site.

COMMUNITY PARTICIPATION

EPA encourages 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. Written comments on the Proposed Plan should be addressed to the Remedial Project Manager Thomas Dobinson at the address provided. EPA Region 2 has designated a public liaison as a point-of-contact for the community concerns and questions about the federal Superfund program in New York, New Jersey, Puerto Rico, and the U.S. Virgin Islands. To support this effort, the Agency has established a 24-hour, toll-free number that the public can call to request information.



Legend

- Site Location
- Study Area

0 0.1 0.2 0.4 0.6 0.8 Miles

N

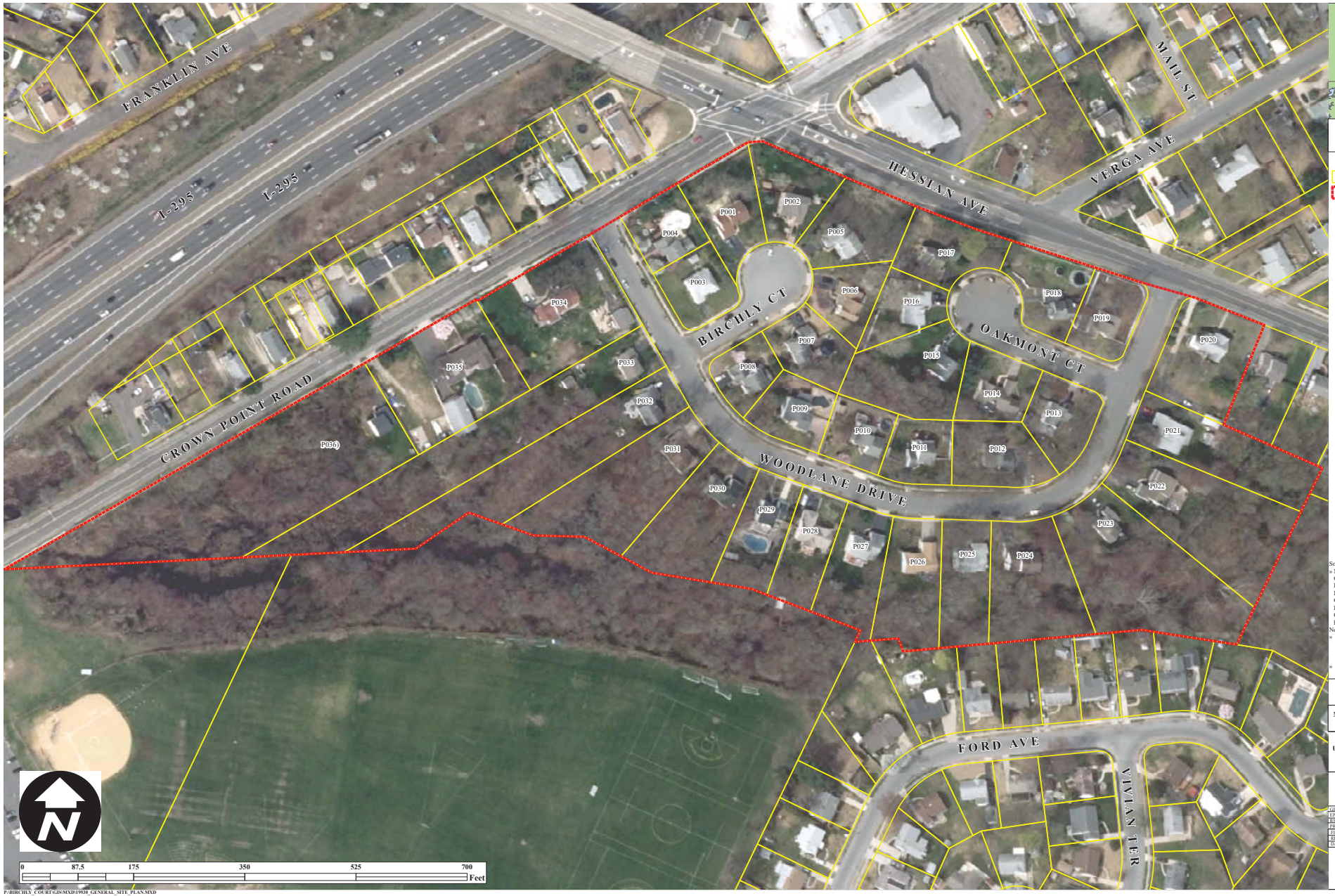
U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

Figure 1:
Site Location Map

MATTEO & SONS, INC. SITE (OPERABLE UNIT 2)
WEST DEPTFORD, NEW JERSEY

U.S. ENVIRONMENTAL PROTECTION AGENCY

GIS ANALYST:	
EPA OSC:	D. ROSOFF
RST SPM:	
FILENAME:	SITE_LOCATION_MAP.MXD



SCALE
1:825

LEGEND

Parcel Boundary

Area of Concern

Source(s):

» New Jersey 2015 High Resolution Orthophotography, NAD83(2011) NJ State Plane Feet, MrSID Tiles. NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS). Publication Date: February 2016. Online Linkage: https://njgin.state.nj.us/NJ_NJGINExplorer/.

Note(s):

» The area of concern for the Site includes residential properties located along Birchly Court, Woodlane Drive, Oakmont Circle, Hessian Avenue, and Crown Point Road.

» There are a total of 36 residential properties located within the area of concern.

Figure 2: General Site Plan

MATTEO & SONS, INC. SITE (OU2)
WEST DEPTFORD, NEW JERSEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

GIS ANALYST:	
EPA OSC:	D. ROSOFF
EST SPOL:	
PROJECT #:	NA
FIGURE:	2
REVISION:	0
DATE MODIFIED:	5/24/2017

P:\BIRCHLY_COURT\GIS\MXD\19930_GENERAL_SITE_PLAN.MXD

SCALE

1:825

LEGEND

- Parcel Boundary
- Area of Concern
- Sampled Parcel - No Remediation Planned
- Sampled Parcel - Previously Remediated
- Sampled Parcel - Remediation Planned

Source(s):

» New Jersey 2015 High Resolution Orthophotography, NAD83(2011) NJ State Plane Feet, MrSID Tiles. NJ Office of Information Technology (NJOIT), Office of Geographic Information Systems (OGIS). Publication Date: February 2016. Online Linkage: https://njgin.state.nj.us/NJ_NJGINExplorer/.

Note(s):

» The area of concern for the Site includes residential properties located along Birchly Court, Woodlane Drive, Oakmont Circle, Hessian Avenue, and Crown Point Road.

» There are a total of 36 residential properties located within the area of concern.

Figure 3: Residential Properties for Remediation

MATTEO & SONS, INC. SITE (OU2)
WEST DEPTFORD, NEW JERSEY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

GIS ANALYST:	
EPA OSC:	D. ROSOFF
EST.SPOL:	
PROJECT #:	NA
FIGURE:	3
REVISION:	0
DATE MODIFIED:	6/8/2017

P:\BIRCHLY_COURT\GIS\MXD\20310_PROPERTY_STATUS.MXD

Attachment B

Public Notice

them. Students wore ribbons bearing the initials "S.P." in honor of classmate Shapaul "S.P." Johnson, 18, who was fatally shot in May. A moment of silence was held, as his mother stood on stage, near the end of the ceremony.

"No one understands what we go through, but we

...ard speaks during Camden High School's graduation on Tuesday.

can't let that struggle break us," said Rasheed Pollard Jr. "We need to let that struggle make us."

Lori M. Nichols, NJ Advance Media, lnichols @njadvancemedia.com

...he said.

Shaun Eagan, a spokesman for the joint base, said Manago's claims that he was treated vindictively were fully investigated and found to be unsubstantiated. He confirmed that Manago's conviction was for being six minutes late to the meeting.

"The U.S. Air Force, out

EPA Invites Public Comment on Proposed Plan for Cleanup of the Matteo and Sons, Inc Superfund Site, West Deptford, New Jersey

The U.S. Environmental Protection Agency (EPA) has issued a Proposed Plan for the Matteo and Sons Superfund Site in West Deptford, 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, begins on June 22 and ends on July 24, 2017.

EPA's preferred cleanup plan consists of the removal and off-site disposal of contaminated soil and areas of concentrated battery casing waste in accessible areas and areas beneath residential structures.

During the public comment period, the EPA will hold a public meeting in West Deptford, NJ to receive comments on the preferred cleanup plan and other options that were considered. The meeting will be held on July 6, 2017 at 7:00 PM at the RiverWinds Community Center, 1000 RiverWinds Drive, West Deptford, New Jersey.

The Proposed Plan is available at www.epa.gov/superfund/matteo-and-sons 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 July 24, 2017, may be mailed to Tom Dobinson, EPA Project Manager, U.S. EPA, 290 Broadway, 19th floor, New York, NY 10007-1866 or emailed no later than July 24, 2017 to dobinson.thomas@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:

West Deptford Free Public Library, 420 Crown Point Road, West Deptford, New Jersey 08086

EPA Region 2 Superfund Records Center located at 290 Broadway, 18th Floor, New York, New York 10007

Attachment C

Public Meeting Transcripts

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
- -

TEMPO DEVELOPMENT CONTAMINATION

MATTEO & SONS SUPERFUND SITE PUBLIC MEETING

- -

RiverWinds Community Center
1000 RiverWinds Drive
West Deptford, New Jersey

July 6, 2017
7:00 p.m.

EPA PRESENT:

TOM DOBINSON, PROJECT MANAGER

NATALIE LONEY, COMMUNITY INVOLVEMENT COORDINATOR

DAVE ROSOFF, ON-SCENE COORDINATOR

NICK MAZZIOTTA, RISK ASSESSOR

ULA KINAHAN, RISK ASSESSOR

ELIAS RODRIGUEZ, PUBLIC INFO OFFICER

- - -

MS. LONEY: Good afternoon. My name is Natalie Loney. I am the Community Involvement Coordinator for the Matteo & Sons Superfund Site. We are here today to present the proposed plan for the remediation of a portion of the Matteo Site that we call, OU2, which is the Tempo Development.

Now the purpose of this meeting, as I said, is to present our proposed remedy. It is a public meeting, and it's a formal meeting. In that we have a stenographer present who will be recording the presentation, in addition, any questions or comments she will be recording.

As many of you know, the comment period for this proposed plan started on June 22 and it closes on June 24 -- (Audience: "July") -- I'm sorry, thank you, July 24. So, you can submit comments to us via email. You can also submit comments through regular U.S. Postal Service mail. And you can also record your comments this evening with the stenographer.

So the way the meeting is going to work, at the completion of the presentation, we will open up the floor for question and answer and

comment. I ask that when you ask a question, that you first state your name loud and clear for the stenographer. There will be a completed -- what are they called?

(Audience Member: "Transcript.")

MS. LONEY: Thank you. I'm getting old.

There will be a transcript of the meeting that will be included in our response of this summary, which is a completed document that has all of the comments, the -- our selected remedy. It's part of the record of decision. But we will get into that a little bit later.

Nick?

(Begins slide presentation.)

So by way of introduction, again, my name is Natalie Loney. I'm the Community Involvement Coordinator for the site. To my right is Tom Dobinson. Tom is the Remedial Project Manager. And to Tom's right is Dave Rosoff. I know many of you know Dave. He was the on-scene coordinator who handled the project when it was a removal action.

In addition, we have some more EPA folk present. I have a Elias Rodriguez here. Elias is our Press Officer. And on the other side of

the room, we have both Nick and Ula. They are Human Health Risk Assessors. And they will be able to respond to any questions you have in that subject area.

So again, just to review why we are here tonight, we are going to be discussing the proposed remedy to address contamination at the Tempo Development. I'm sure many of you have a full breadth of understanding of what's happening at Tempo. We are going to be going through that process, clearly delineating what EPA has learned over these many months. And we will be talking about the proposed remedy to address that contamination.

Comments will be accepted, again, until July 24. They will be included as part of the final record with regard to this remedy.

So, let me go over for you the -- little bit of the Superfund process. How do we normally get to this position on a Superfund Site? It's a little bit different for this site, but generally these are the steps that happen when a site becomes a Superfund Site and then we go to the cleanup process.

Generally, sites are discovered and they

go through a preliminary assessment to determine if the contamination and the risk associated with that site is warranted to being placed on the Superfund list. Once a site is named a Superfund Site, it then qualifies for funding for remediation with Superfund dollars. The Matteo -- this portion of the site did -- was added to the existing Superfund Site, the Matteo site. This became -- this is folded into that site, so we didn't go through the standard process. But it has been named a Superfund Site.

We went through something called a Remedial Investigation and Feasibility Study. What that means is we looked at the nature and extent of contamination at the site, and we also looked at feasible options to address that contamination. Once we completed our investigation and looked at feasible options, we then come up with something called a proposed plan. And that's what we are here tonight to discuss. That plan that EPA is proposing to remediate to clean up the site.

As part of that proposed plan process, there is an opportunity for the community to weigh in. There's a 30-day comment period where

people can look at the plan. They can ask questions. They can get clarification. They have commentary. All of those things happen within that comment period. And so, kind of midway through that comment period, we want to make sure that the community has a full depth of understanding of what our plan is. Hence, we have a public meeting like this to present it and offer any explanation or answer to any questions you may have before you submit your comments.

Once the comments have been submitted and the comment period closes, EPA makes its final decision as to what the remedy is. And that's called the record of decision. That also -- that record of decision will also be made public. I think many of you, if not most of you, received an email with regard to this meeting. I also have the sign-in sheet. If you haven't included your name and address or email, please do so, so that we can notify you once the final decision as to what the remedy is going to be at the site has been made.

Once we have -- so far, we have investigated the site. We looked at feasible remedies to address it. We are going to make a

final decision as to what that remedy will be. And then we will take the actions of designing the remedy and implementing it. So, those things are going to be coming down the line.

But at this point, I'm going to turn over the microphone to Tom. He's actually going to take you all through the site assessment, the remedial investigation on through to the proposed plan. If you have an opportunity -- if you have any questions, you can jot them down. If you need a pen, I have some. And so at the end of his presentation, you can ask your questions.

All right. Thank you so much.

MR. DOBINSON: So, you've already heard us mention the Operable Units or -- yeah. Already heard us mention Operable Units a few times. And just wanted to briefly explain what those are.

First, the Superfund Sites, we can break them up into these Operable Units to better address specific problems at the site. They can be divided based on geography, different contaminants, different types of remedial responses and/or immediately effecting the groundwater, soil, surface water and sediment.

So for the Matteo Site, we have three operable units. First one is the main facility on Crown Point Road. Second one is residential properties at the Tempo Development. And third, is the surface water and sediment, particularly it's particularly around the mean site. It's actually on -- actually comes up on the southern border of the residential properties, as well.

So, provided a few maps just so everyone is on the same page of where we are. OU1 is in the box on the left. That is the main facility. Hessian Run is right there to the north of it. And you can see I-295 running down the middle of the map. Residential neighborhood is to the northeast of the main site. It's about a mile away. Crown Point Road is on the west end side, Hessian Road is on the north.

Here is a zoomed-in map of the neighborhood. You can see both Crown Point Road, Hessian Road or Hessian Avenue, Wood Lane or Birchly Court and Oakmont. So in order to really understand what's happened at the residential neighborhood, we want to give you a little bit of background on the main portion of the site.

Operations at the main site started

about 1961. And that included junkyard, metals recycling and an unregistered landfill. The portion of the metals recycling included recycling car batteries where they would take the plastic or the battery, crack open the plastic casing, take out the lead and recycle the lead. But the issue arises that with these battery casing pieces, because they were in contact with the lead for so long, they actually have lead in them, as well. And these were then placed all throughout the main site and, eventually, on the residential property before it was developed.

So from 1968 to about 1984, there was several New Jersey DEP inspections at the property and identified few issues, including landfilling the crushed battery waste and other household wastes, unauthorized use of incinerator, ash from the incinerator being put into the on-site landfill. There were also two fires in the landfill and a band of drums of unknown waste.

(Audience member cell phone ringing.)

MR. DOBINSON: So, NJ DEP started investigating the site. And eventually they, through the scope of the investigation, they

ended up referring it to the EPA. In 2006, the site was listed on the National Properties List.

The Remedial Investigation and Feasibility Study are currently ongoing for both OU1 and OU3. And currently, a portion of the facility is still in active metal salvaging operation.

So, this brings us to the neighborhood. And so in November 2015, the crushed battery casings were identified in the front yard of a residence when a contractor uncovered them while they were preparing the utility, a sewer line. They -- the contractor identified the local authorities who then contacted the DEP. They started looking into the site, realized that it was -- the previous owner of the properties was the same owner as the Superfund Site down the road.

So they, at that point in time, contacted the EPA. And we went out there and started our removal site evaluation which was run by Dave. There was removable on action on Birchly Court that started in August and finished in October of 2016. And at that time, based on the size and scope of the investigation in the

neighborhood and the fact that the removal program didn't have enough budget to remediate the entire neighborhood, it was switched to the Remedial Program and brought into the Superfund Site.

So in November of 2016, we began our Remedial Investigation. And we finished that in May. Finish the RI and Feasibility Study. As Natalie mentioned, the Remedial Investigation characterizes the site conditions. It determines the nature and extent of contamination and assesses risk to the human health and the environment. Whereas, the Feasibility Study develops the potential remedies, screens them for effectiveness, implementability and cost and evaluates the alternatives against each other to determine which we feel will be the best for the neighborhood.

So the findings of the RI report include that -- we determined that the battery casings were stock piled at the site at one point in time. And then when construction of the neighborhood started, the materials was used as fill to raise the grade of some people's properties. And it was spread across the site

that way. Contaminants of concern associated with the battery casings include lead from the lead cores of the battery; antimony, which is a common additive for lead for batteries; and PCB, specifically Aroclor 125. Now, that's normally not associated with batteries.

That contaminant concern is also contaminant concern at OU1 at the main site. What we believe happened is that other recycling operations they had, including electrical transformers, which had mineral oil in them. At that mineral oil used to contain PCBs. So when they salvaged the metal for scrap, they just dumped that oil, as well. That is where we get the PCBs.

Lead and antimony and the battery casings are primarily found in the first 4 feet of soil. There are a few areas where it's a little deeper. And the highest concentrations are co-located with the battery casing materials. Where you have concentrated areas of battery casings, that is where you have the highest concentrations. The farther you get away from the battery casings, the lower concentrations get. And the PCBs are found with the battery

casings, as well.

And at this time, we feel approximately 25 residences require remediation. Here is just a map showing the different properties, the green properties in the north are where the removal action occurred. The brown properties are properties that require remediation. And the yellow properties we do not think need remediation.

So, part of the RI process is to evaluate risk which is done through risk assessments. And we use these to determine if there is a potential risk for people who might come in contact with material. And we have two different kinds. We have a human health risk assessment and an ecological risk assessment.

The ecological risk assessment of Hessian Run will be done as part of the Operation Unit 3. We don't feel there is ecological risks on the residential properties at this time. That is why it's going to be done at a later.

The human health risk assessment determined that there is, you know, direct exposure to the soil and battery casings, poses potential unacceptable risk to human health for

current and future residents.

And so, the risk assessment was done on two worst-case scenarios within the neighborhood. We found that if exposed to the worst-case scenario, there is over 99 percent chance for children to have blood lead levels greater than the recommended level of 5 micrograms per deciliter. It's EPA's goal to have that risk lower than 5 percent chance. And there's also a slightly elevated non-cancer risk for exposure to antimony PCBs.

But it's important to note that you can limit your exposure by limiting contact to the contaminated soil. Wear gloves when doing yard work, wash your hands before eating, take off your shoes before you enter your house and avoid contact with the battery casings.

So, we have identified that there is a risk in the neighborhood, very unacceptable risk. And we need to take some sort of action. And our remedial action objectives are the goals of the action. So in this case, they are to eliminate or reduce human exposure, be it inhalation, incidental ingestion and dermal contact to battery casing waste and contaminated soils

exceeding cleanup goals to levels protective of current and anticipated future land use. And to prevent transport and migration of site contaminants to other areas via overland flow and air dispersion.

In other words, we want to make sure you don't come in contact with it in the future, and that it can't travel anywhere else.

So now that we have our goals, we need to know how much do we -- to what levels do we clean up so that there -- so that it's protected for residential exposure.

So for our contaminants of concern, with lead, antimony, PCBs. We have level for lead is 400 milligrams per kilogram, antimony is 31 milligrams per kilogram, and PCB is 0.2 milligrams per kilogram. This is based off of New Jersey Department of Environmental Protection residential soil remediation standards.

It's important to note that the -- due to a recent change in guidance for lead remediation, the previous blood lead level for children that was deemed acceptable was 10 micrograms per deciliter. But like I said, recent guidance suggests that it should be lower.

And that is why we are looking at 5 micrograms per deciliter. And so for the top 2 feet of soil at each residence, we will make sure that the concentration is actually below 200 milligrams per kilogram.

So for our Feasibility Study, we developed three alternatives. The first is no action, and that's required by statute. We need to evaluate what would happen if we do nothing. It's used as a baseline. Because if we -- if it's acceptable to do nothing, we shouldn't do anything. But in this case, it's not acceptable to do that but it's included because we have to.

Alternative two is removal of the contaminated soil in areas of concentrated battery casing waste in accessible areas. So in your yards, in your driveways, sidewalks, those areas.

And alternative three is similar. But we would also include excavation under residences if there is -- we have identified contamination below your -- under your house.

Like I said, Alternative One, no action. It's not acceptable.

Alternative two. So part of this one,

we will excavate, remove all the battery casing waste, impacted soil within readily accessible areas. Transport it off site to permanent landfill. We will then backfill the excavation with clean soil, restore your property. And in this case, if your property has material underneath your house. And at this point in time, there is a very limited number where we think that may be the case. We would leave it there. The house would act as a cap because underneath the house, there is really no way for anyone to come in contact with that material.

But because there would be things, you know, stuff left on your property underneath your house, you -- it would require institutional controls. Which just means that it's not contingent saying the material is there, the house is acting as a cap. And the house needs to stay there to always act as a cap. And if for some reason the house gets taken down, then something else, something needs to be done.

So, there would be institutional controls on residential houses if there is material underneath them and also the roads. We have identified that there are some battery

casings underneath the streets. We would review this site and the protectiveness of the remedy every five years. And the cost to do that would be $6.6 million.

Just as a reference, this work excavation is similar to the removal action that was done last year, which many of you are familiar with. So, it would be familiar situation not to the extent that that was in the properties.

Alternative three is pretty much the same thing except that we would also, if it's underneath the home, we would take measures to excavate that material, as well. There would not be institutional controls on any residences, but there still would be institutional controls on the roads because it acts as a cap. And no one would come in contact with that.

Again, review the site every five years to make sure that the remedy is still effective. And the cost to do that would be $9.4 million. So now that we have this -- the three alternatives, we have to evaluate them. We do that by looking at nine different criteria. And it's a very -- it's a rigorous evaluation. This

is how we evaluate it.

We look at, is it protective of human health in the environment, and are we complying with all applicable laws, regulations, rules and everything like that. So, that's why Alternative One was ruled out because it's not.

Then we look at these five criteria as balancing criteria. Is it effective in the long term? Is it a permanent solution? Does it reduce the toxicity, mobility or volume through treatment? Is it effective in the short term? Like, while we are doing the implementation, while we are doing it, and is it implementable and the cost?

So, we can do an analysis that way. One may cost more, but it may be more protective. It might be better to do the more expensive one because it is more protective.

Then we have two Modify Criteria, which is the -- does the state accept it. And in this case, the state does accept a preferrable alternative. And do you, the community, accept it. And that's why we are here to present the alternative and to get your feedback.

So while preferred alternative is

alternative three, we feel it's more protective. It's more effective in the long term. And it's implementable because we are removing more contamination and we are not relying on institutional controls on the residents to prevent exposure in the future.

This is just a table of how we scored.

All right. So the next steps. We will respond to your public comments and incorporate them into the responsiveness summary, prepare and sign the record or decision, design the remedy, implement it and then we will be done. You can submit comments through July 24. My contact information is on the board, email, address, fax. We will also accept oral and written comments this evening.

And you can find out more information at the website for the Superfund Site that is with the Proposed Plan and other documents posted there for you to review. You can look at the RI, the Feasibility Study, Risk Assessment. All of that is available for your review and comment.

Now we have questions and comments. Can you put the last slide up so they can write that?

(Hand raised.)

MR. DOBINSON: Yes, sir.

MR. PACAROT: Yes. Anthony Pacarot is my name. I previously owned the property on 1409 Wood Lane. My question is, is the EPA aware of the five deaths within the eight-house radius?

MR. DOBINSON: I was not --

MR. PACAROT: That's my question to you as a government agency. Are you aware of the five people that died of cancer within an eight-house radius?

MR. DOBINSON: I am not aware.

MR. PACAROT: You think you should be? Is that something that could have been caused by this? All these people were original owners and lived there. I know -- I see you looking at me puzzled.

MS. LONEY: I was looking at Risk Assessors.

MR. MAZZIOTTA: Hi. I'm Nick Mazziotta. I'm the Project Risk Assessor. And I do recall one of the homeowners notifying me of that last year when we held one of our public availability sessions. I could be wrong, but I believe there were numerous -- there were numerous types of cancers -- brain cancers and maybe liver or

kidney if I'm recalling correct.

MR. PACAROT: It was different types, yes.

MR. MAZZIOTTA: Okay. The EPA, we don't necessarily look at past exposures. The Agency of Toxic Substance and Disease Registry along with the State Department of Health will look at previous exposures. And they do have the capability of doing cancer studies.

But we just look at current and prospective exposures. Nevertheless, I believe that the preferred remedy that we have selected will prevent any type of site related --

MR. PACAROT: I think that's wonderful for the people that are alive.

My question to you is about the five deaths within an eight-house radius, all relatively young that planted flowers, worked in the yard, walked out barefoot. I just think it's a question that if your agency doesn't handle it, why don't you push it up to another agency then?

MR. DOBINSON: We have the people from the Department of Health here today.

MS. ALUWALIA: My name is Somia. I am from the Department of Health. We are working

with the EPA as they are developing it. We are working with the data. We will be coming out with something called a Public Health Assessment that does look at past exposures, current and future. And we will be out here in a separate meeting to present that apart from the EPA.

I'm happy to stay back and talk to you later after the meeting.

MR. PACAROT: Wonderful. I appreciate that. Thank you very much.

(Hand raised.)

MR. DOBINSON: Yes.

MS. BARNA: Nancy Barna, 1422 Wood Lane.

Nick, I was the person that supplied that list to you. I left at least four messages for the Health Department. Not a single person got back to me. When I called, the person said they would get back to me, they'd get back to me. They didn't get back to me. We don't know anything like what -- why didn't no one get back to me?

MR. MAZZIOTTA: You left that with the State Department of Health?

MS. BARNA: I left it with the State Department of Health.

MS. ALUWALIA: Nancy, I did call you back.

MS. BARNA: You called me back and said, I am checking it out and will get back to you. you never got back to me. I mean, this was a year ago I gave you that information. I can't believe it takes that long to get a report.

MS. ALUWALIA: It actually is a long review process. And the guidance is continuously updated. And the way that we evaluate lead is very different than how we evaluate the other metals and the other contaminants in a site is a contaminant. I appreciate your comment.

I should have gotten back to you, let you know it will be a delay. It does take as long as it does. Unfortunately, our review process is very extended. And we can't publicly release information unless it's been reviewed by our federal agency.

MS. BARNA: Thank you.

MR. DOBINSON: Yes.

MS. SERGIO: Kelly Sergio.

Do you guys have some kind of timeline or any idea of when this would start?

MR. DOBINSON: Currently, I mentioned

there will be a design phase where we will have to gather some more information. We hope that that will start in the fall. But the remedial action at this point in time depends on funding. And we don't know what the funding would be for our next fiscal year. We don't know that until later on.

(Hand raised.)

MR. DOBINSON: Yes.

MS. TRAGER: Kathy Trager, 1405 Wood lane. Just curious if you know if -- I guess it depends on each property. But would we have to leave our property, leave our residence or.

MR. DOBINSON: There is possibility that some residents may be temporarily relocated. It will all depend on where remediation will happen on the property. And if -- for example, like if it affects your utility, if the contamination runs through where your water or sewer line is and we have to shut it off for a short period of time, we would sit down with you and discuss a temporary relocation for that time period.

Or you know, if we are in the front yard and we can't access your house safely, that would be a reason why. But any specifics about what

would happen on your properties will be discussed later on with you in your home. We will sit down, go through everything, like, where exactly we will be excavating, timelines, how long, things like that. If temporary relocation is necessary, that will all be done with you at your homes.

MS. TRAGER: Is that done by email to notify us?

MR. DOBINSON: We will contact you either by phone, email.

MS. TRAGER: Okay.

MR. DOBINSON: We will set a time to do that. That will be a little bit down the road once we have done our remedial design and have a definitive plan for each residence.

MS. TRAGER: Thank you.

(Hand raised.)

MR. DOBINSON: Yes.

MS. SERGIO: Kelly Sergio again. Is that at cost to you guys? Who covers the cost of relocation? Is that something we --

MR. DOBINSON: Yes.

MS. SERGIO: -- pay for out of pocket?

MR. DOBINSON: No. Natalie, do you want

to --

MS. LONEY: Yes. We -- the Relocation Program falls under EPA specific. So, Superfund Dollars would be -- would take care of that. There are certain costs that are incurred by residences -- I mean, by property owners. Like, you would still have to pay your mortgage and your property taxes and all those other things. But the temporary relocation is a bill that is borne by EPA.

MS. SERGIO: Is that standard for everyone? Or is -- like, would it be family appropriate for those of us with young children if we had to be relocated somewhere where the kids are in school.

MS. LONEY: Yes. There is a whole process by which we go through temporary relocation. We try to, particularly if you have children and your children go to school in West Deptford, we're not going to, you know, put you up in Cherry Hill, for example.

We try to find -- we try to find locations that are conducive and reasonable -- a reasonable distance away from the things that you would have. We have had cases of people who have

pets. And where they're relocated to, maybe it's a hotel that doesn't accept pets. We have boarded animals. So, there is a whole process that we go through. Each one, of course, is tailored for each specific individual. Everyone has specific needs and specific challenges.

And so, we try to tailor the temporary relocation to meet the needs of those families.

(Hand raised.)

MR. DOBINSON: Yes, sir.

MR. FAYTER: Tom Fayter, 1420. A couple comments. I want to thank you for very professional presentation.

Secondly, I know you're not doctors. Is there any recommendations as far as screening blood tests, et cetera, for some of these contaminants? The original residents -- we are the second people to move in. So, we've been here a long time gardening, et cetera. Some health issues, but there are health issues.

So, is there any kind of federal or state guideline that talks about taking a look at some of the blood levels perhaps of lead, et cetera or whom?

MR. DOBINSON: Be best to talk to the

Department of Health for that.

MR. FAYTER: Okay. And with the new administration, we know your funds have been cut.

What is the probability -- I mean, that's hard to answer -- of your budget not being adequate to fund Alternative Three?

MR. DOBINSON: So after the record of decision is signed, the site competes with all the other Superfund Sites in the country for funding. It goes through what's called priority plan. And so, after the record decision signing, it's -- each site is ranked based on the hazards at the site. And the most -- the ones with the most potential risk get the funding first.

So, we don't know where it will fall on that list. We -- usually, it's been experiencing -- residential sites do get jumped to the top of the list. But we just don't know at this time.

MS. BARNA: I have another question. Your press release back from June 22 states that the cleanup proposal requires deed restrictions be placed on public right-of-way areas such as roads to ensure that future construction or roadwork activities do not disturb the battery

casings or contaminated soil below the roads.

Just say that there was a sewer problem on Wood Land Drive. And whoever comes out to repair that, tears that up 10, 15 years from now. How are you going to regulate that? Because I know I was told in front of my house, there is some battery casings buried under the asphalt. And the asphalt is being used to encapsulate the con -- I mean, yeah. The asphalt is being used to encapsulate that.

But if there is a road repair that needs to be done or just say they want to totally tear up all the blacktop in the entire neighborhood and resurface it all the way down to the curb, which has been done on another road, how are you going to regulate that in the future?

MR. DOBINSON: So, standard practice for any time you dig in a road, you get a road opening permit from the Township.

MS. BARNA: Right.

MR. DOBINSON: The institutional controls would need to be set up so that when you -- whoever is digging up the road gets their permit, they are notified of what's underneath the road. So, they can take the proper

precautions for their workers and also for handling material.

MS. BARNA: Okay. Thank you.

MR. FAYTER: It's not going to prevent them from doing the work.

MS. BARNA: If it's an emergency --

MR. DOBINSON: No. If it needs to be a sewer repair, that can happen. They would need to provide the workers with the proper protection. And there could be procedures in place to handle the material.

MR. FAYTER: But that could potential increase the cost to the homeowner who then has to have the street opened up to hook up with a new sewer line because now they have to handle contaminated soil if they hire the contractor; is that correct?

MS. BARNA: I mean --

MS. LONEY: You believe on your property are you talking about the roadway?

MR. FAYTER: If you're connecting the sewer line to the main sewer line, the question is, is that main sewer line under the road or is it back where our curb line is?

MR. DOBINSON: I don't know where all

the utilities all.

MR. ROSOFF: It's under the road. It would be unusual for you to have to connect to the main again. It would have to be a problem at the main as opposed to the lateral as with the case. But in that case, an unlikely case, it would have to be managed properly once it's in the street. I can't whether it will be an increase in cost, though.

MR. FAYTER: Thank you.

WEST DEPTFORD TOWN CHAIR: I may as well talk at this point. My name is Norm, Chair of West Deptford Committee. I apologize for what you're going through.

To your point, sir, part of this process is there are formal types of comments that are made during this. The Township is going to file a formal comment just to your point, which is our request would be that all the soil underneath all the public access roadways and sidewalks be removed for just the reason you are speaking about.

And to get to the point of what you formally comment in your letter, but one of the UROs, if you remember back was that they are

attempting to not have any contamination be spread over ground into other areas. And in the event of a water leak, water break, sewer break, that certainly could become potential.

We are going to make comments to the EPA with regards to the proposed alternative.

MR. DOBINSON: We will take that into consideration before we reach our formal decision.

MS. LONEY: Are there any further questions?

(No further comments/questions.)

MS. LONEY: All right. Well, thank you all for coming. Again, the comment period closes on July 24. You can submit. Here is the contact information. The proposed plan is on the web page. And you can call and ask questions or submit your comments, your written comments onto that email address.

Thank you again.

(Public Meeting adjourned at 7:52 p.m.)

C E R T I F I C A T I O N

I, hereby certify that the proceedings and evidence noted are contained fully and accurately in the stenographic notes taken by me in the foregoing matter, and that this is a correct transcript of the same.

ANGELA M. KING, RPR
Court Reporter - Notary Public

(The foregoing certification of this transcript does not apply to any reproduction of the same by any means, unless under the direct control and/or supervision of the certifying reporter.)

Attachment D

Written Comments

WEST DEPTFORD TOWNSHIP
Municipal Building
400 Crown Point Road
West Deptford, New Jersey 08086
Phone (856) 845-4004

Via electronic mail to dobinson.thomas@epa.gov

July 12, 2017

United States Environmental Protection Agency
290 Broadway, 18th floor
New York, NY 10007-1866

Attn: Thomas Dobinson, Project Manager

Re: West Deptford Township, Gloucester County, New Jersey
Comments on the Proposed Remedy for the Matteo & Sons, Inc. Site
Operable Unit 2 (Tempo) Remediation, West Deptford, New Jersey.

Dear Tom:

Thank you and your colleagues for holding the public hearing on the proposed remedy for the above referenced site last Thursday, July 6th at the Township of West Deptford RiverWinds Community Center.

Based upon the public hearing, please accept the following comments on behalf of West Deptford Township regarding the proposed remedy as conveyed at the public hearing.

The proposed implementation of Alternative 3 is agreed to be the most effective alternative to achieve the Remedial Action Objectives (RAOs) regarding the residential properties and is particularly attractive as it will not necessitate long term ICs or deed restrictions for those properties.

However, the concern of the Township is the decision not to remove material from underneath public facilities (i.e, roadways, sidewalks, utilities, etc.).

The RAOs for the site are:

1. To eliminate or reduce human exposure to battery casing waste and contaminated soils exceeding cleanup goals to levels protective of current and future land use; and
2. Prevent transport and migration of site contaminants to other areas via overland flow and air dispersion.

While on face the assumption that the IC of non-disturbance of the public facilities will ensure the RAOs will be effective in the long-term seems reasonable, the presence of water and sewer transmission lines beneath the public facilities creates a very real and very likely risk that the RAOs will be compromised at some point in the future.

At some point the water and/or sewer lines are likely to rupture. The resultant release will mobilize any contamination remaining under the roadway and transport the material back onto the remediated properties and/or into storm sewer systems that may impact sensitive ecological areas and/or groundwater.

Human exposure will exist at the time of the release, during any repair activities and subsequent to any repair activities at any points whereby the material has come into contact with previously remediated properties and/or environmentally sensitive receptors due to the material being left under the public facilities.

RI data for COC levels and material distribution from under the public facilities is very limited compared to the data collected from the residential properties. The exposure risk of the COC levels under the public facilities therefore cannot be accurately characterized with regard to an event that creates various exposure pathways.

In consideration of the above comments, the Township of West Deptford requests that the proposed Alternative 3 remedy be modified to include the removal of impacted material under public facilities.

Please feel free to contact me with your thoughts and questions.

Best regards,

Lyman Barnes
Township Administrator

cc: *Via e-mail only:*
Mayor & Township Committee
Lee Ann DeHart, RMC
Timothy D. Scaffidi, Esquire, Township Solicitor
Honorable Donald Norcross, United States House of Representatives

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Mr. Thomas Dobinson
Remedial Project Manager
U.S. Environmental Protection Agency-Region II
New Jersey Remediation Branch
290 Broadway, 19th Floor
New York, NY 10007-1866

July 24, 2017

Dear Mr. Dobinson,

I write to you to express support for a modified U.S. Environmental Protection Agency Region II Alternative 3 for Removal of Contaminated Soil and Areas of Concentrated Battery Waste Accessible Areas and Beneath Residential Structures pertaining to Matteo & Sons, Incorporated Superfund Site Operable Unit 2 in West Deptford Township, Gloucester County, New Jersey, which is part of my Congressional District.

While Alternative 3 is West Deptford Township's and the EPA's preferred remediation plan to address this urgent public health and environmental matter, I ask EPA Region II give full consideration to West Deptford Township's request (attached to this correspondence) that Alternative 3 be modified to include additional remediation work under public facilities including, but not limited to sidewalks, roads, and utilities.

Per the EPA's findings at Matteo & Sons, Inc. Superfund Site Operable Unit 2 in West Deptford Township, battery waste and contaminated soils containing hazardous substances have been identified, and have the potential to create adverse human health conditions. It is imperative the EPA take all appropriate steps to fully remediate the affected 36 single-family, residential properties located in and adjacent to the Tempo Development in West Deptford, New Jersey.

If you have any questions about my input on this matter, I invite you to contact Karl Parker on my staff at my office in Cherry Hill, New Jersey at 856-427-7000.

Sincerely,

Donald Norcross
Member of Congress