



Matteo & Sons, Inc. Superfund Site

Operable Unit 2

West Deptford Township, New Jersey

Proposed Plan

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

Summer 2017

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 ($\mu\text{g/dL}$) to 5% or less. To predict PbB and the probability of a child's PbB exceeding 5 $\mu\text{g/dL}$, 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

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.

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

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

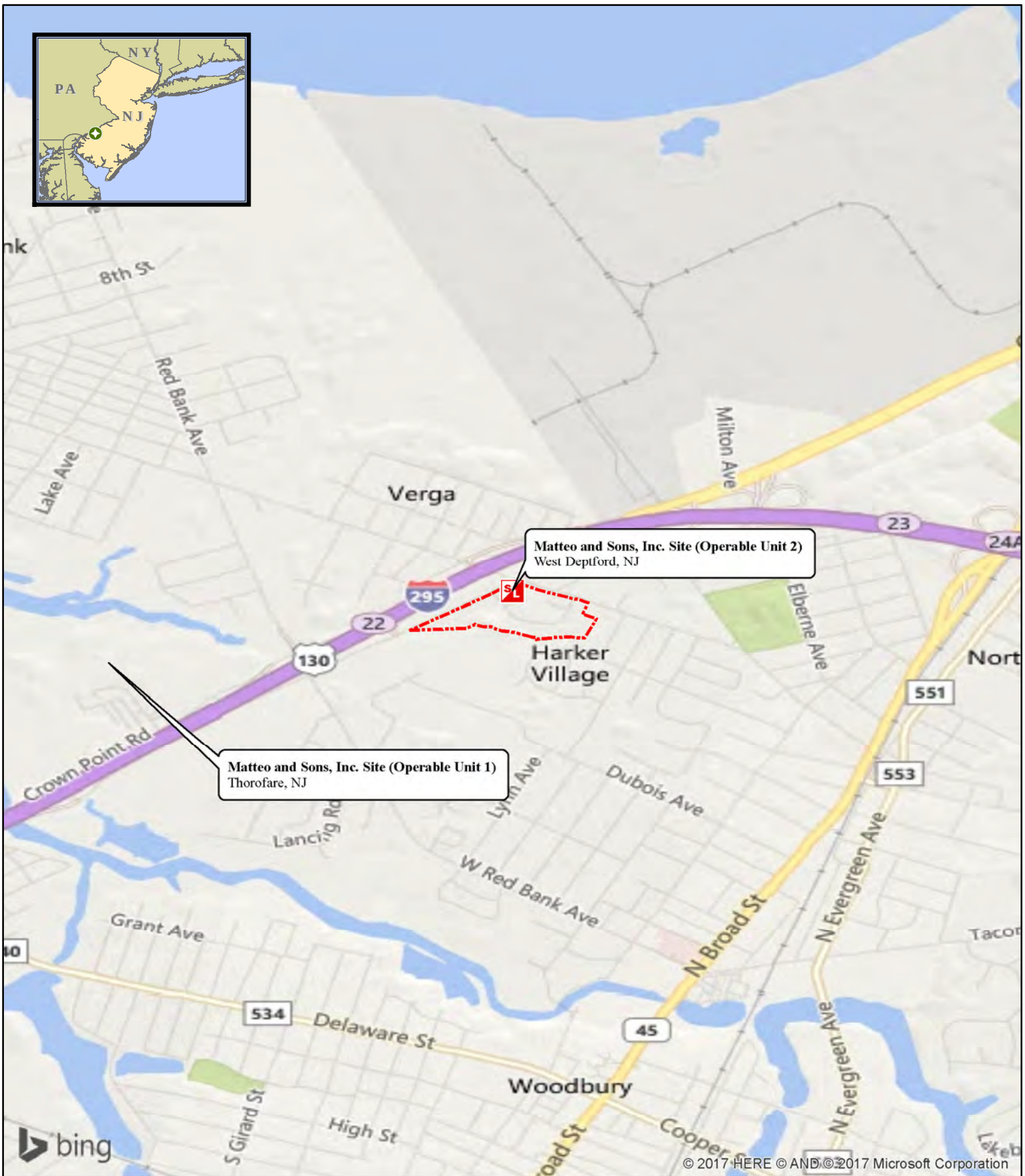
protective of human health and the environment, and will comply with ARARs to the extent practicable.

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



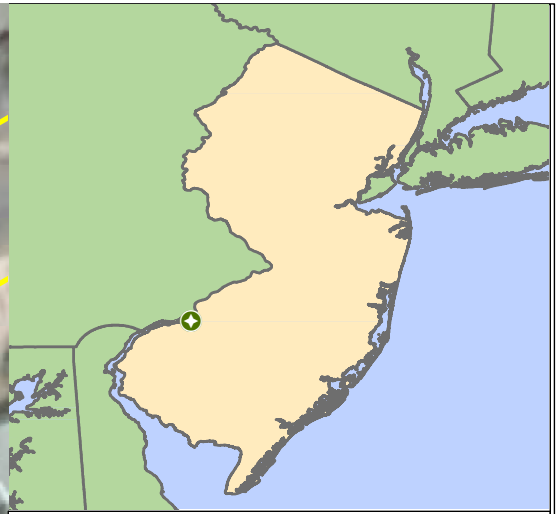
U.S. Environmental Protection Agency, Region II
Emergency & Remedial Response Division
290 Broadway 19th Floor
New York, New York 10007

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 (NJGIT), 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.

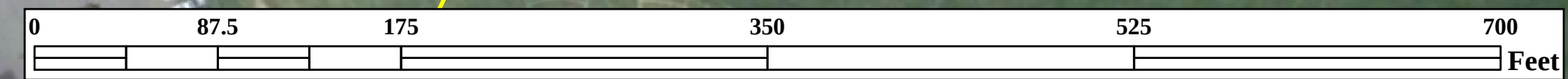
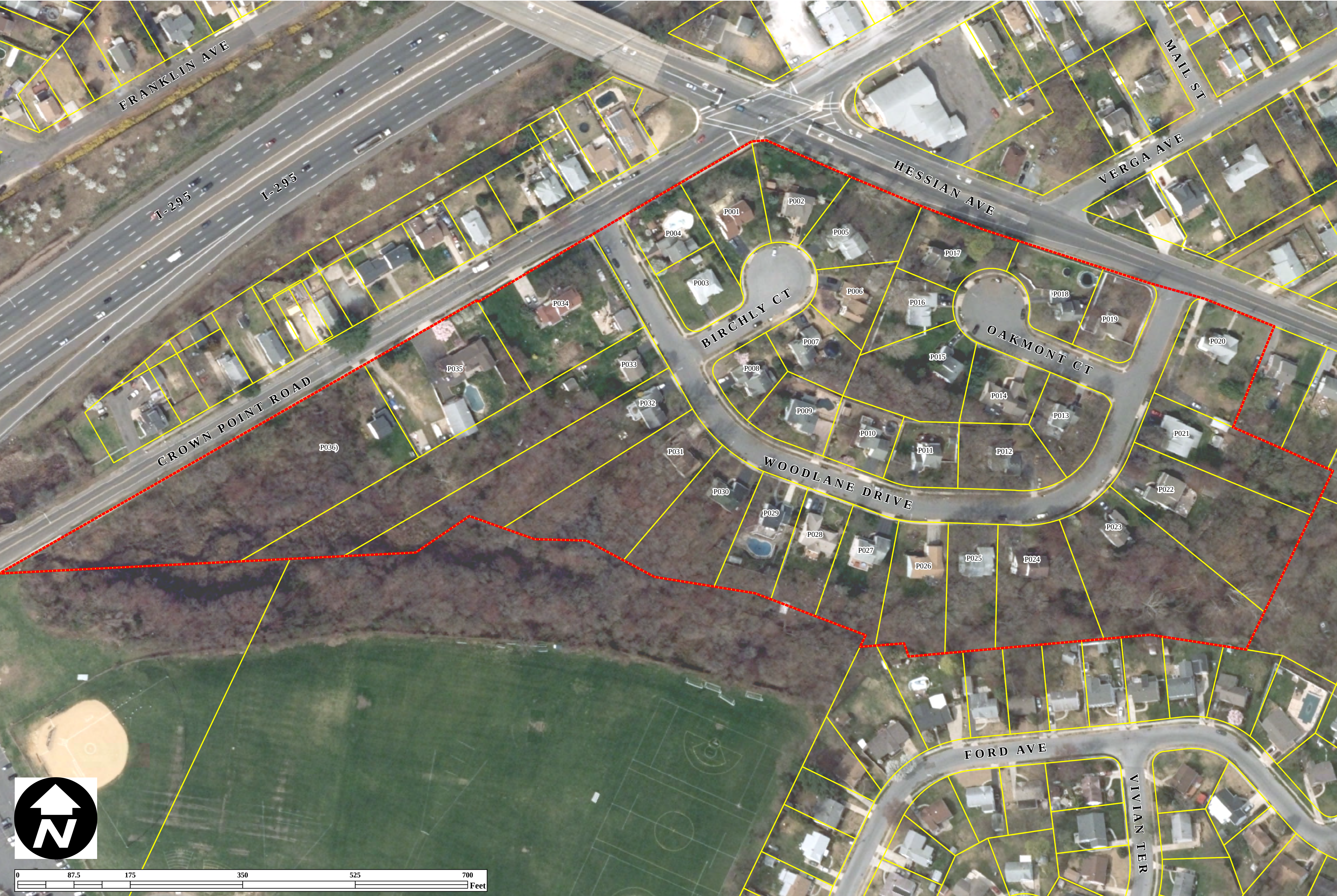
Figure 2: General Site Plan

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





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 (NJGIT), 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
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GIS ANALYST:	D. ROSOFF
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RST SPM:	
PROJECT #:	NA
FIGURE:	3
REVISION:	0
DATE MODIFIED:	6/6/2017

