

Jewett White Lead Site Engineering Evaluation / Cost Analysis



2000-2012 Richmond Terrace
Staten Island, New York
March 2011

Jewett White Lead Site
2000-2012 Richmond Terrace

Why are we here?

- Investigations at the 2000-2012 Richmond Terrace portion of Jewett White Lead Site
- Removal action alternatives in the EE/CA
- Preferred removal action alternative
- Solicit public comments on the EE/CA and the preferred removal action alternative



Jewett White Lead Site History

Jewett White Lead
2000-2012 Richmond Terrace

Jewett White Lead Site History

- ◎ 1839 - John Jewett & Sons White Lead Co. began operations at 2015 Richmond Terrace
 - Manufactured white lead
- ◎ 1891 - Operations extended across the street to include 2000 Richmond Terrace when National Lead acquired the company
- ◎ Lead manufacturing operations ceased at both properties in the early 1940s



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Jewett White Lead Site History

- **June 3, 2008** – EPA received request to review the property located at 2000-2012 Richmond Terrace
- **December 2008** – EPA and contractors conducted sampling
- **April 2009** – Current property owner, PRC, conducted an interim removal action
- **June 2009** – EPA conducted surface soil sampling at 2015 Richmond Terrace property
- **October 2010** – EPA conducted additional investigations at both properties for the EE/CA

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Present Day

2015 Richmond Terrace

- Home to the Moran Towing Corporation
- Active tugboat facility

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- Owned by Perfetto Realty Company
- Vacant parcel of land
- Currently is not being used by property owner



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What is an EE/CA and why is it needed?

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- ⦿ EPA has categorized removal actions in three ways:
 - Emergency
 - Time-critical
 - Non-time-critical
- ⦿ Non-Time-Critical removal actions when we have at least six months before on-site activities must be initiated
- ⦿ An EE/CA must be completed for all Non-Time-Critical removal actions

EE/CA =
Engineering
Evaluation/Cost
Analysis

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What is the EE/CA process?

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- ⦿ EE/CA Approval Memorandum
- ⦿ EE/CA
- ⦿ Public Comment Period
- ⦿ Action Memorandum
- ⦿ Implementation of Non-Time-Critical Removal Action

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What is included in an EE/CA?

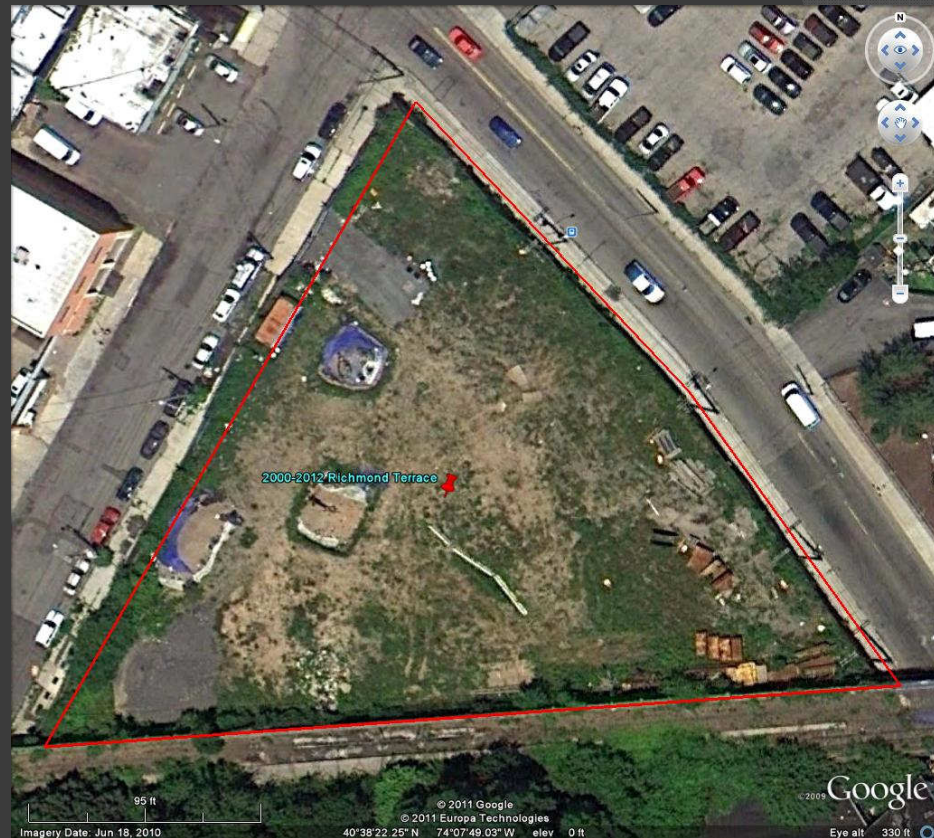
- ⦿ Removal action objectives
- ⦿ Comparative analysis and evaluation of the removal action alternatives
- ⦿ Recommendation of a preferred removal action alternative

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Engineering Evaluation/Cost Analysis

EE/CA for 2000-2012 Richmond Terrace

- This EE/CA will only cover the 2000-2012 Richmond Terrace portion of the Jewett White Lead Site
- Add'l investigations needed to determine extent of lead present at 2015 Richmond Terrace property
- A separate EE/CA may be developed for 2015 Richmond Terrace



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EE/CA Investigation

- Collected additional soil samples from depth throughout the entire site from October 4th – October 28th
- Soil samples collected from 1' depth intervals either to water table or to vertical extent of lead contamination
- Monitoring wells installed on the properties to determine if groundwater is impacted

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EE/CA Investigation

- ⊙ Average lead concentration across the property:
 - 1' = **7,023 ppm**
 - 2' = **20,400 ppm**
 - 3' = **21,070 ppm**
 - 4' = **14,389 ppm**
 - 5' = **5,753 ppm**
- ⊙ Lead contamination confined to upper 3.5', with exception of small area in SW corner of property
- ⊙ Lead concentrations at deeper depths drops off significantly
- ⊙ No ground water impacts observed at this property





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EE/CA Removal Action Objectives

- Prevent or minimize the migration of hazardous substances released at the Site to the area's soils, sediment, surface water and groundwater
- Abate, minimize, stabilize, mitigate, or remove the contaminants from the soil such that unacceptable risks to human and ecological receptors are eliminated
- Restore the property to its current use

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Streamlined Human Health and Ecological Risk Evaluation

◎ **Human Health Risk Evaluation**

- The lead results indicate that the average concentration in surface and subsurface soils presents an unacceptable risk to the current industrial/commercial receptor

◎ **Ecological Risk Evaluation**

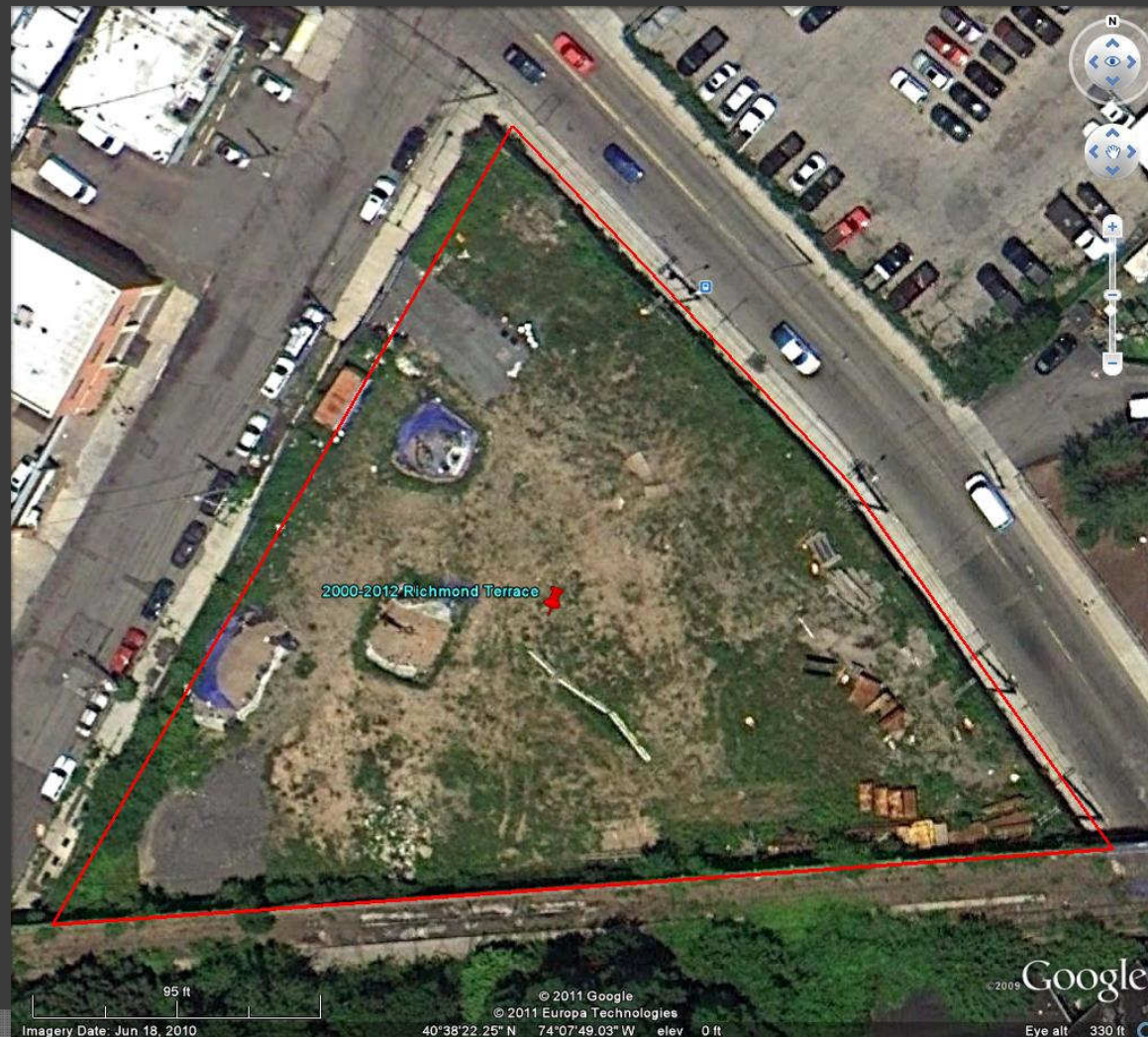
- Concentrations of lead and other metals are sufficiently high to present a risk to ecological receptors

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Removal Alternatives

- ◎ EPA considered five cleanup options and evaluated them against the following criteria:
 - **Effectiveness** – ability to meet the objectives
 - **Implementability** – technical/administrative feasibility
 - **Cost** – Estimated construction and operations and maintenance costs for 30 years

Alternative 1: No Action



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Removal Alternatives

- ⦿ A “No-Action” option is a basis for comparison with other removal action alternatives
- ⦿ No removal measures to address the contaminated media
- ⦿ This alternative includes the implementation of a public awareness program
- ⦿ The potential for future migration and risk of incidental contact would not be addressed with this alternative
- ⦿ Cost: **\$10,050**

Alternative 2: Excavation and Off-Site Treatment/Disposal

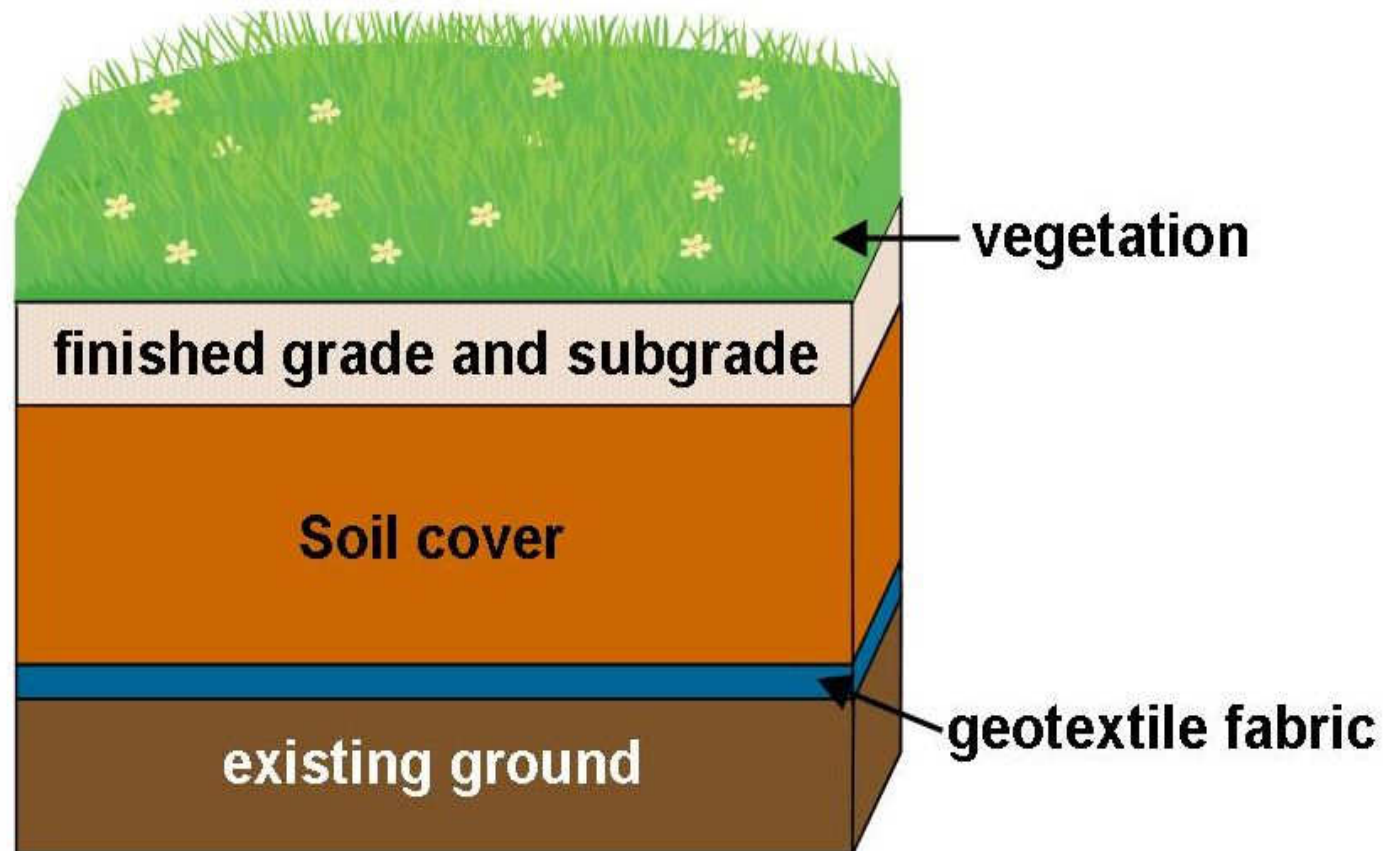


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Removal Alternatives

- Approximately 4,242-cubic yards of soils removed from the property and disposed off-site
- Excavated areas would be backfilled with clean fill material and re-vegetated
- No long-term monitoring or administrative controls would be necessary to ensure protectiveness
- Eliminates the potential for future migration and risk of incidental contact by removing the contaminated soils
- Cost: **\$924,153**

Alternative 3: Capping



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Removal Alternatives

- A soil cover, or earthen cap, would be placed over the lead contaminated soils
- Top 2' of contaminated soils will be excavated and disposed off-site (approximately 2,400-cubic yards)
- Long-term monitoring and administrative controls would be necessary to ensure lead is not being released from the property
- Risk of incidental contact greatly reduced by capping the contaminated soil
- Cost: **\$644,076**

Alternative 4: Paving



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Removal Alternatives

- Contaminated soils contained under an asphalt cover
- Top 6" of contaminated soils will be excavated and disposed off-site (approximately 500-cubic yards), to maintain existing grade on the property
- Long-term monitoring and administrative controls would be necessary to ensure lead is not being released from the property
- Risk of incidental contact reduced by capping the contaminated soil
- Cost: **\$354,711**

Alternative 5: Immobilization



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Removal Alternatives

- The immobilization of the contaminants in the top 2' of contaminated soil
- Concrete additive mixed with the soil will prevent leaching of lead to the surface and groundwater, and prevents contact with deeper, untreated soils
- Long-term monitoring and administrative controls would be necessary to ensure lead is not being released from the property
- Risk of incidental contact greatly reduced by capping the contaminated soil
- Cost: **\$279,315**

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EPA Preferred Removal Alternative

Alternative 2 – Excavation & Off-Site Treatment/Disposal

- Effectiveness– The potential for future migration of hazardous substances in soils from the Site, and incidental human contact would be eliminated by permanently removing contaminated soils
- Implementability– Uses proven earth moving equipment and techniques, and is easily implemented. No administrative controls are needed
- Cost- While this alternative has a higher cost, it is a permanent action that requires no additional long-term oversight, operation & maintenance, and monitoring

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**Now that the EE/CA is
complete, what is next?**

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PUBLIC COMMENT PERIOD

March 4, 2011 to April 17, 2011

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Public Comment Period

- The EE/CA is open to public comment and evaluation
- EPA relies on public input to ensure that the concerns of the community are considered in selecting an effective removal action
- EPA is required to prepare a written response to significant comments
- Comments will be taken into consideration in selecting the removal action

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Public Comment Period

● Comments can be submitted via e-mail, letter, or at the public meeting

- E-mail: staiger.kimberly@epa.gov
- Postal Mail:

Kimberly Staiger, OSC
U.S. EPA, Region 2
2890 Woodbridge Avenue
Edison, NJ 08837

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Alternative 2: Excavation and Off-Site Treatment/Disposal

EPA has provided a
preferred response
action

The preferred
response action may
not always be the final
alternative selected



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**Where can I review the
EE/CA?**

- To review online, visit:

[www.epa.gov/region02/superfund/
removal/jewettwhitelead](http://www.epa.gov/region02/superfund/removal/jewettwhitelead)

- To review a paper copy, contact:

**New York Public Library
Port Richmond Branch**

75 Bennett Street
Port Richmond
Staten Island, NY 10302

Superfund Records Center

US EPA Region 2
2890 Woodbridge Avenue
Edison, NJ 08837

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**How will we know which
removal action is selected?**

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- ◉ An Action Memorandum will be prepared and placed in the Administrative Record
 - Written record of decision to select an appropriate removal action
 - Will include EPA's response to significant public comments on the EE/CA as an attachment

● Comments can be submitted via e-mail, letter, or at the public meeting

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○ Postal Mail:

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