



Wolff-Alport Chemical Company Superfund Site

Proposed Cleanup Plan

Public Meeting

August 16, 2017

7:00 PM

Brooklyn, NY



Project Team

Cecilia Echols	U.S. Environmental Protection Agency (EPA) Community Involvement Coordinator
Joel Singerman	EPA Central New York Remediation Section Chief
Tom Mongelli	EPA Project Manager
Lora Smith-Staines	EPA Human Health Risk Assessor
Kim Kaster	CDM Smith (Contractor to EPA)



Meeting Agenda

- **Superfund Overview**
 - Joel Singerman, EPA
- **Site Background**
 - Thomas Mongelli, EPA
- **Remedial Investigation**
 - Kim Kaster, CDM Smith
- **Remedial Alternatives**
 - Thomas Mongelli, EPA
- **Preferred Remedy**
 - Thomas Mongelli, EPA
- **Questions/Comments**



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Superfund Law

- Toxic waste disposal disasters prompted law passage by Congress in 1980
- Provides federal funds for cleanup of hazardous waste sites
- Allows EPA to respond to emergencies involving hazardous substances
- Empowers EPA to compel potentially responsible parties to pay for or conduct the clean up



Superfund Cleanup Process

- Site Discovery and Hazard Ranking System
- Site Placed on National Priorities List (NPL)
- Remedial Investigation/Feasibility Study
- Proposed Remedy
- Record of Decision
- Remedial Design/Remedial Action
- Long Term Monitoring/Five-Year Review of Cleanup
- Deletion of Site from NPL

****Removal***



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Wolff-Alport Chemical Company Superfund Site





History

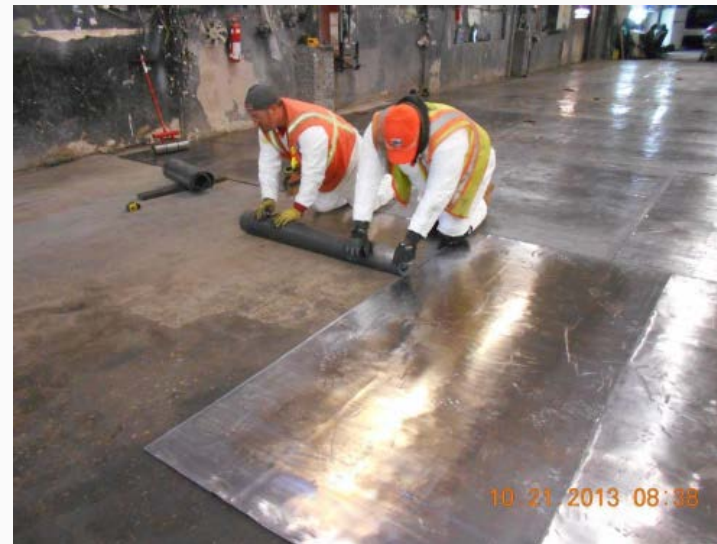
- **c.1920-1954** Wolff-Alport Chemical Company in operation
- **1988-2010:** Initial and follow-up radiological surveys conducted by New York City, New York State, and EPA reveal impacts to the on-site properties and nearby sewer





Recent EPA Actions

- **2012-2014:** EPA conducts a removal action at the Site
- **2014:** Site added to the NPL
- **2015-2017:** EPA conducts a Remedial Investigation and Feasibility Study at the Site





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Remedial Investigation Overview

- RI Objectives
- RI Activities
- Data results



Remedial Investigation Objectives

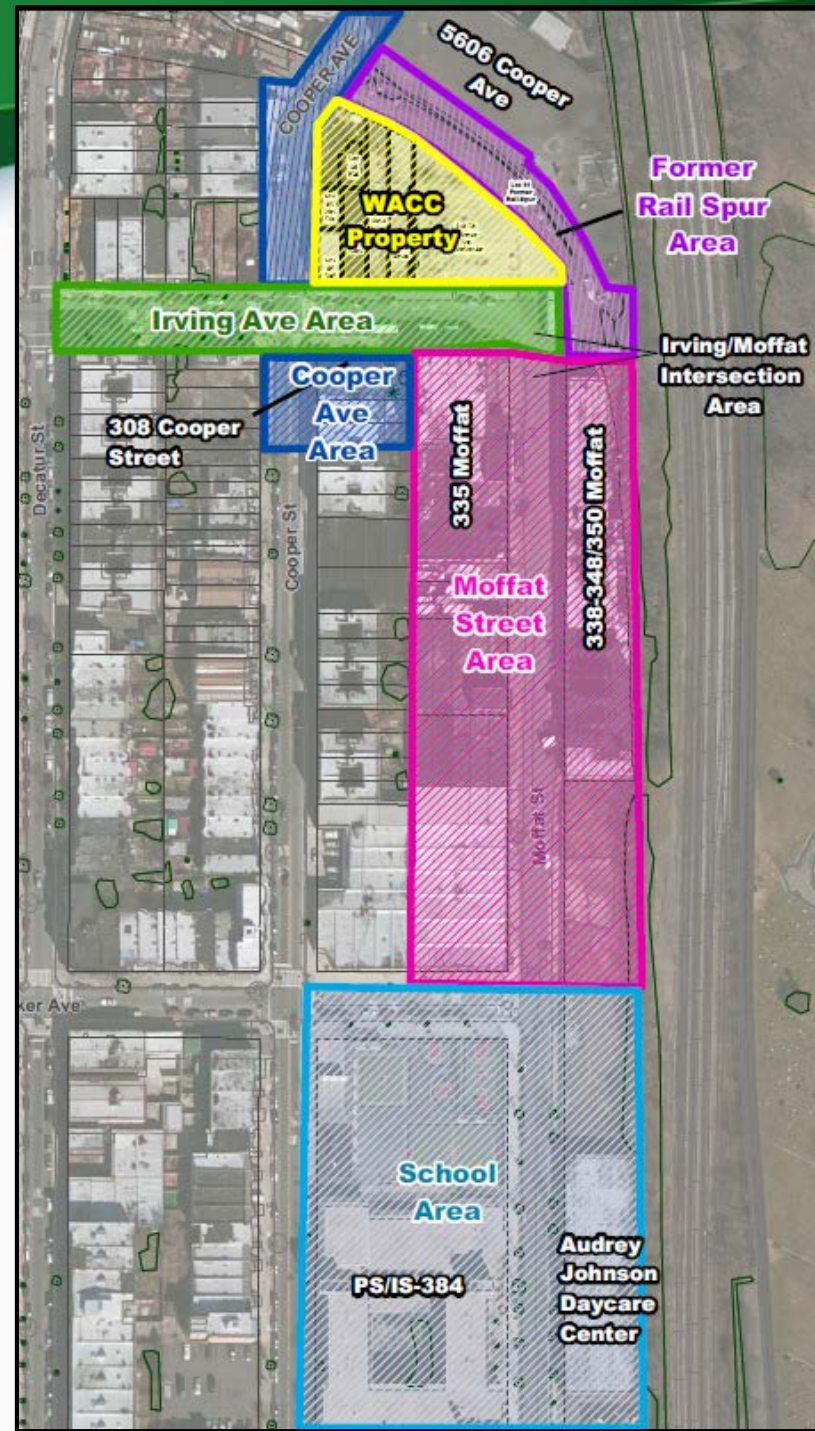
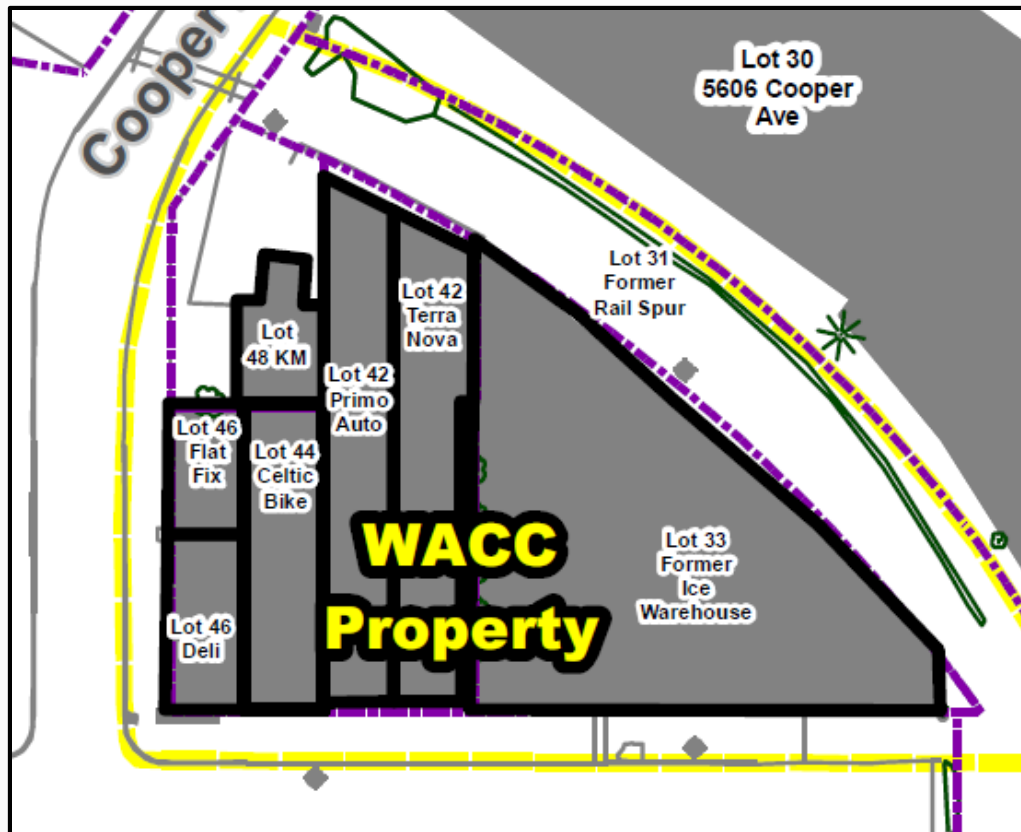
- Review and evaluate previous data
- Define nature and extent of contamination
- Provide data to support the Feasibility Study



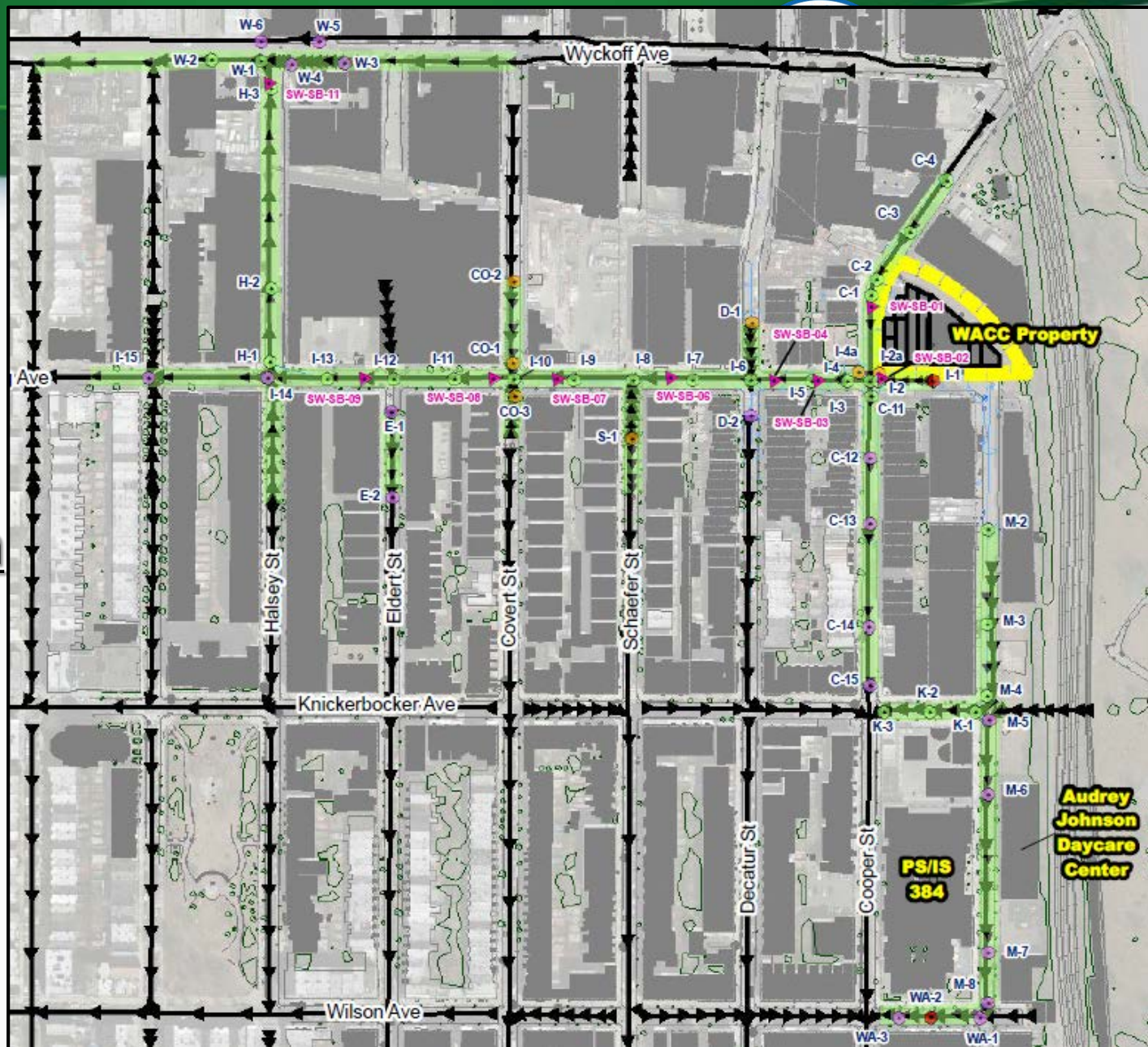
Remedial Investigation Activities

- Building investigation
- Soil investigation
- Groundwater investigation
- Sewer investigation
- Gamma exposure rate
- School and daycare investigation

Site Areas



Sewer Investigation Areas

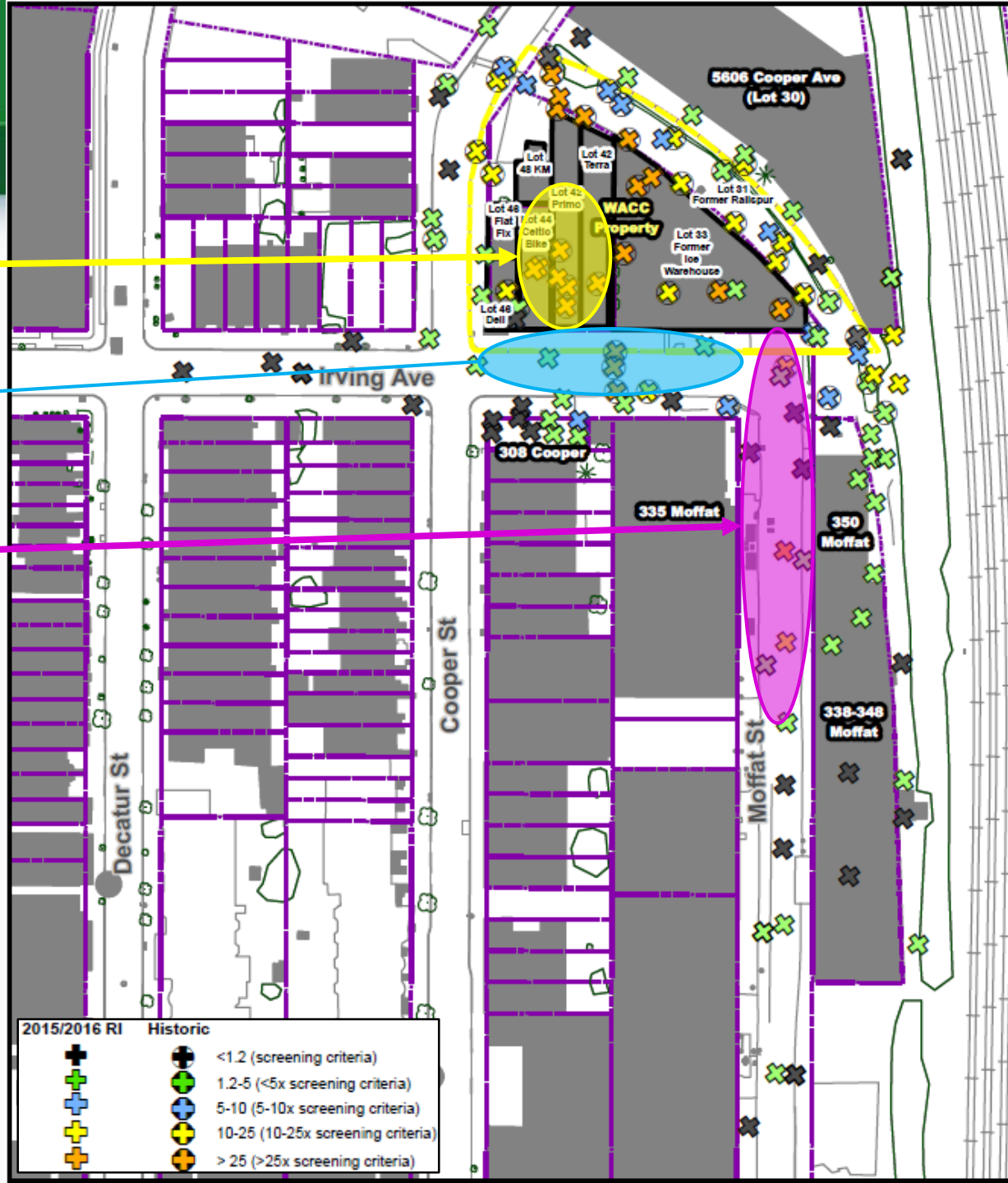


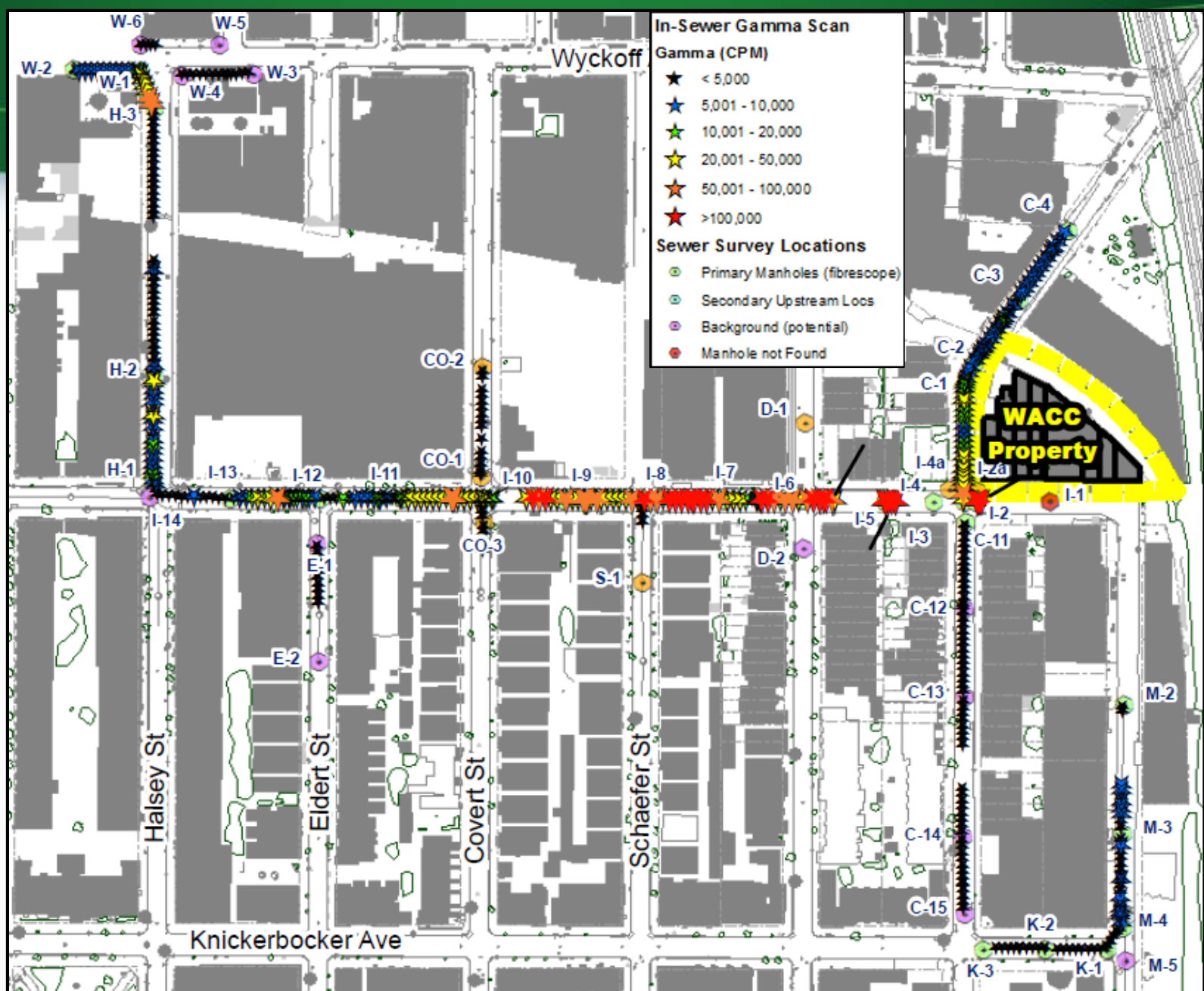
Soil Radionuclide Results

0-30 feet

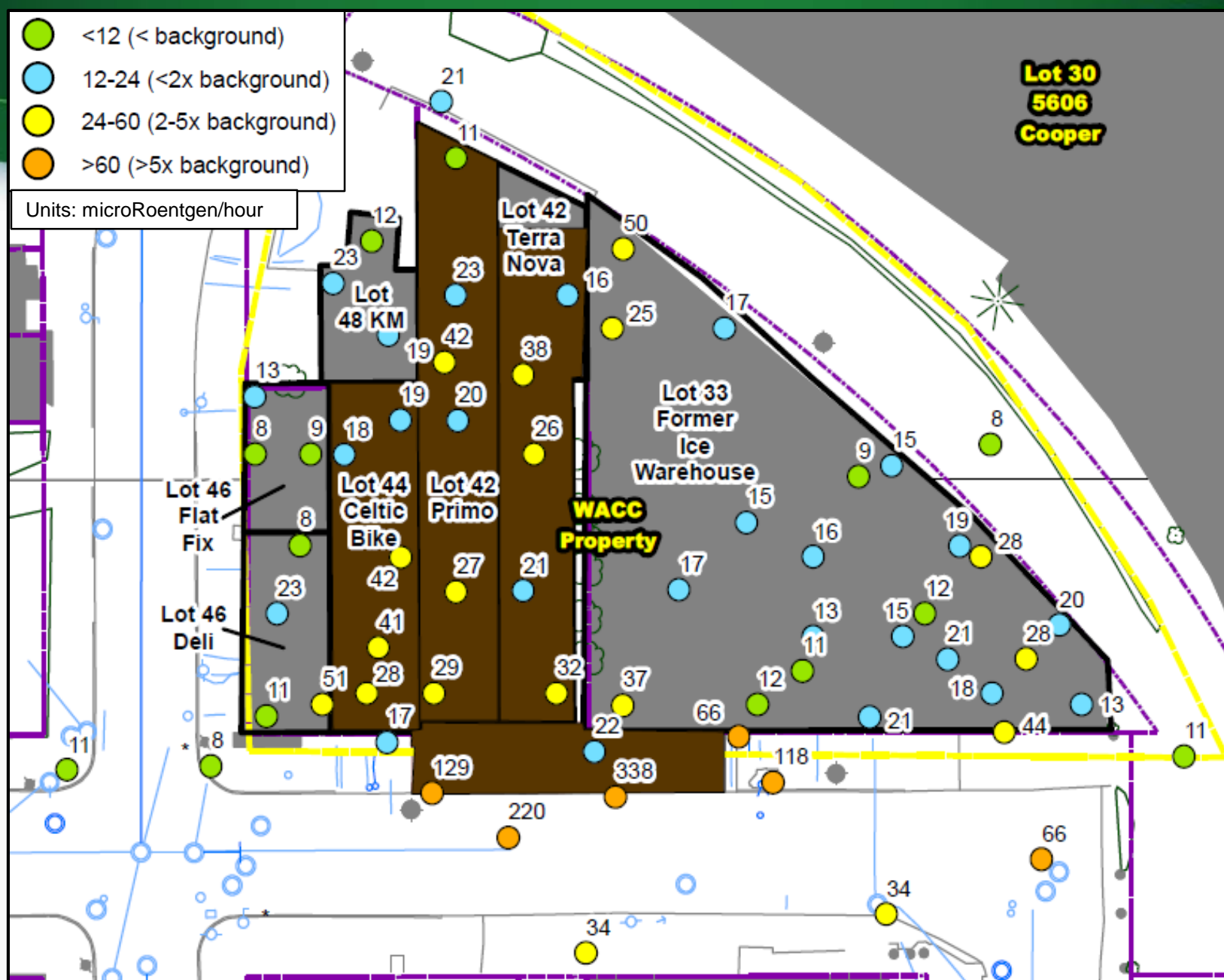
0-20 feet

0-6 / 8 feet



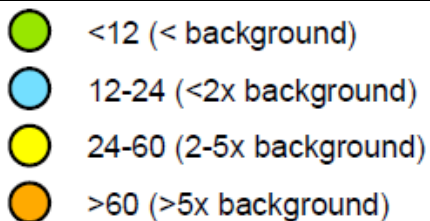


Sewer Results



WACC Property Gamma Exposure Rates

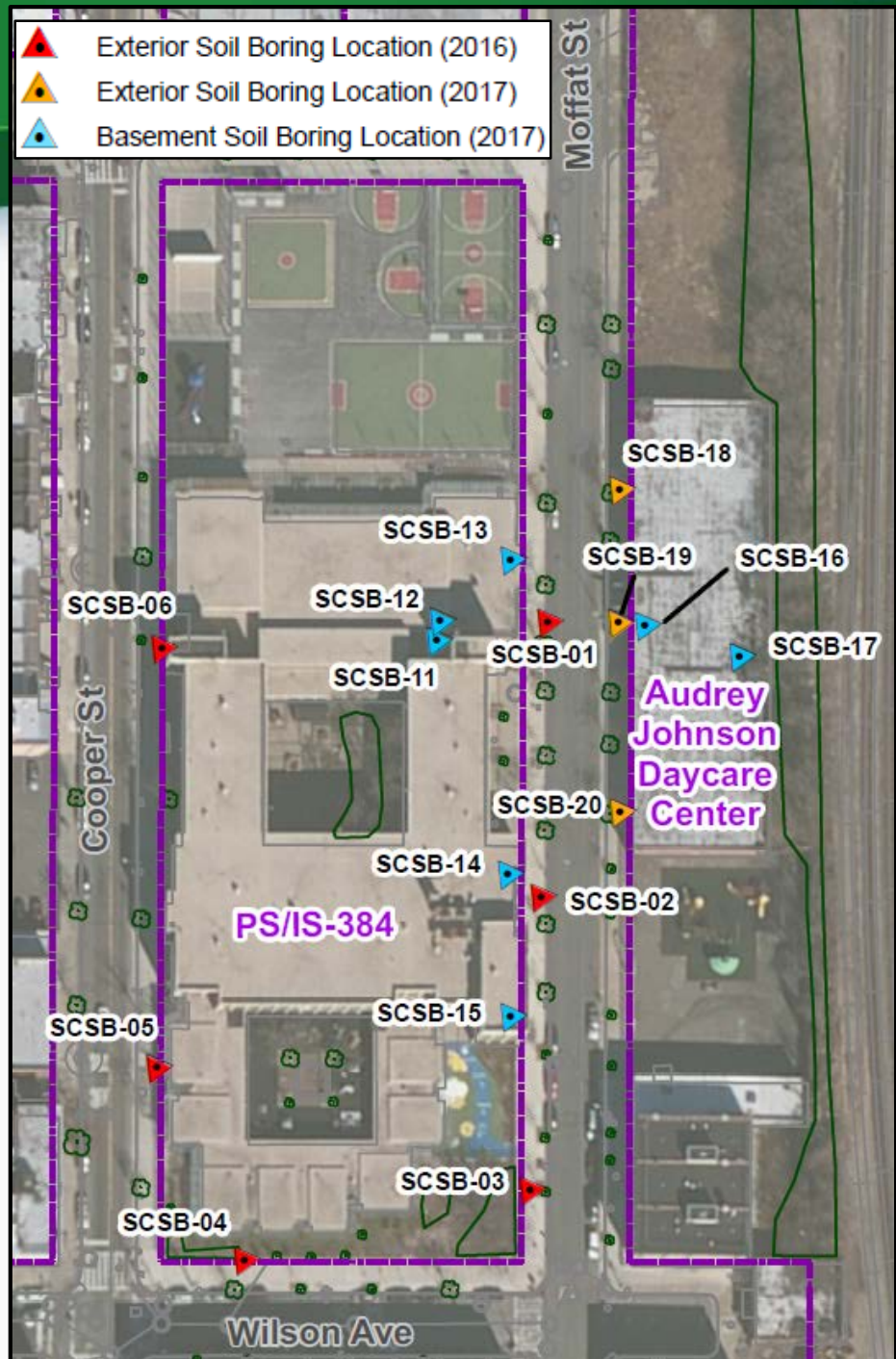
Neighborhood Gamma Exposure Rates



Units: microRoentgen/hour



School and Daycare Investigation





Conclusions

- Radiological contamination found in soil, building material, and sewer
- No radiological contamination in groundwater
- No radiological contamination found above biota screening levels in creek sediments
- Air concentrations in school and daycare below EPA action level
- Data is sufficient to support the FS



Meeting Agenda

- Superfund Process Overview
- Site Background
- Remedial Investigation
- **Remedial Alternatives**
- Preferred Remedy
- Questions/Comments



Remedial Alternatives – Cleanup Options

- **Alternative #1** – No Further Action
- **Alternative #2** – Temporary Relocation of Tenants; Targeted Building Demolition; Additional Shielding; Shallow Soil Excavation; Sewer Removal and/or Cleaning; Institutional Controls
- **Alternative #3** – Permanent Relocation of Tenants; Demolition of All Buildings; Shallow Soil Excavation; Sewer Removal and/or Cleaning; Institutional Controls
- **Alternative #4** – Permanent Relocation of Tenants; Demolition of All Buildings; Excavation of All Contaminated Soil; Sewer Removal and/or Cleaning



Alternative #1 - No Further Action

- Under this alternative, no further actions would be taken to address the Site
- The Superfund program requires consideration of a “no-action” alternative to act as a baseline for comparison
- Because contamination would be left in place, the Site would be reviewed once every five years



Common Element of Alternatives #2, #3, and #4

Sewer System Removal and/or Cleaning

- A small section of clay sewer pipe adjacent to the Site would be excavated and replaced
- Remaining portions of contaminated sewer line would be jet cleaned and resurveyed to determine any remaining areas of contamination
- Any areas of sewer pipe which still exhibit elevated radiation levels would undergo additional investigation
 - Based on this investigation, any areas of sewer pipe or sewer bedding material determined to be contaminated would be excavated and replaced



Alternative #2- Temporary Tenant Relocation, Targeted Demolition, Shallow Soil Excavation, Shielding Installation, Institutional Controls

In addition to the previously described common element:

- All current on-site tenants would be temporarily relocated while construction takes place
- The currently unoccupied warehouse on Lot 33 would be demolished
- Soil would be excavated to a maximum depth of 4 feet in areas where no buildings are present, including beneath streets and sidewalks



Alternative #2- Continued

- Additional shielding would be installed on Lots 42, 44, and the basement wall of Lot 46 adjoining Lot 44
- Institutional controls would be enacted which, at a minimum, would limit intrusive activities at the Site, allow access for monitoring, and require radon mitigation system installation in any future structures
- The site remedy would be reviewed every five years since contamination would be left in place



LEGEND

- | | |
|---------------------|--|
| 2015 RI BORINGS | 2 FT DEPTH OF EXCAVATION |
| 2013 DATA BORINGS | 3 FT DEPTH OF EXCAVATION |
| 2010 REPAIR BORINGS | 4 FT DEPTH OF EXCAVATION |
| RI MONITORING WELLS | EXTENT OF PCB AND/OR PAH CONTAMINATION |

NOTES

- BORING SYMBOLS SHOWN IN RED INDICATE FIELD EXCEEDS PRELIMINARY EXCAVATION GOALS AT THAT LOCATION.
- THE HORIZONTAL EXTENT OF EXCAVATION IS DETERMINED USING THE NEAREST CLEAN SAMPLE IN THE OUTWARD DIRECTION FROM THE WOLFF-ALPORT CHEMICAL COMPANY PROPERTY. IF SUCH A SAMPLE DOES NOT EXIST, THE EXTENT IS EXTENDED 40 TO 50 FEET AWAY FROM THE FURTHEST SAMPLE RESULT ABOVE PRELIMINARY EXCAVATION GOALS OR TO THE NEXT PHYSICAL BARRIER (E.G., BUILDING).

Figure 3-3
Alternative 2 Excavation Plan
Wolff-Alport Chemical Company Site
Ridgewood, Queens, New York



Alternative #3 – Permanent Relocation of Tenants; Demolition of All Buildings; Shallow Soil Excavation; Institutional Controls

In addition to the previously described common element:

- All current on-site tenants would be permanently relocated and all on-site buildings would be demolished
- Soil would be excavated to a maximum depth of 4 feet in areas where no buildings are present, including beneath streets and sidewalks



Alternative #3 – Continued

- Institutional controls would be enacted which, at a minimum, would limit intrusive activities at the Site, allow access for monitoring, and require radon mitigation system installation in any future structures
- The site remedy would be reviewed every five years since contamination would be left in place



LEGEND

- 2015 RI BORINGS
- 2013 DATA BORINGS
- ⊗ 2010 RI MONITORING WELLS
- 2 FT DEPTH OF EXCAVATION
- 3 FT DEPTH OF EXCAVATION
- 4 FT DEPTH OF EXCAVATION
- EXTENT OF PCB AND/OR PAH CONTAMINATION

NOTES

- BORING SYMBOLS SHOWN IN RED INDICATE RESULT EXCEEDS PRELIMINARY REVISION GOALS AT THAT LOCATION.
- THE HORIZONTAL EXTENT OF EXCAVATION IS DELINEATED USING THE HIGHEST CLEAN SAMPLE IN THE OUTWARD DIRECTION FROM THE WOLFF-ALPORT CHEMICAL COMPANY PROPERTY. IF SUCH A SAMPLE DOES NOT EXIST, THE EXTENT IS ESTIMATED AS 20 FEET AWAY FROM THE FURTHEST SAMPLE RESULT ABOVE PRELIMINARY REVISION GOALS OR TO THE NEXT PHYSICAL BARRIER (E.G., BUILDING).

Figure 3-4
Alternative 3 Excavation Plan
Wolff-Alport Chemical Company Site
Ridgewood, Queens, New York



Alternative #4 – Permanent Relocation of Tenants; Demolition of All Buildings; Excavation of All Contaminated Soil

In addition to the previously described common element:

- All current on-site tenants would be permanently relocated and all on-site buildings would be demolished
- All contaminated soil would be excavated and disposed of off-site
- No institutional controls necessary
- No five-year reviews necessary



LEGEND

- 2015 RI BORINGS
- 2015 DATA BORINGS
- 2010 REMEDIATION BORINGS
- RI MONITORING WELLS
- EXTENT OF PCB AND/OR PAH CONTAMINATION

- 2 FT DEPTH OF EXCAVATION
- 3 FT DEPTH OF EXCAVATION
- 4 FT DEPTH OF EXCAVATION
- 6 FT DEPTH OF EXCAVATION
- 8 FT DEPTH OF EXCAVATION
- 20 FT DEPTH OF EXCAVATION
- 30 FT DEPTH OF EXCAVATION

NOTES

1. BORING SYMBOLS SHOWN IN RED INDICATE RECENT EXCEEDS PRELIMINARY REMEDIATION GOALS AT THAT LOCATION.
2. EXTENT OF EXCAVATION IS DETERMINED USING THE NEAREST CLEAN SAMPLE IN THE OUTWARD DIRECTION FROM THE EXCEED-QUALITY LOCATION. IF SUCH A SAMPLE DOES NOT EXIST, THE EXTENT IS ESTIMATED AS 20 FEET AWAY FROM THE FURTHEST SAMPLE RESULT ABOVE PRELIMINARY REMEDIATION GOALS OR TO THE NEXT PHYSICAL BARRIER (E.G., BUILDING).

Figure 3-5
Alternative 4 Excavation Plan
Wolff-Alport Chemical Company Site
Ridgewood, Queens, New York



Comparison of Alternatives



Alternative #2



Alternative #3



Alternative #4



Remedial Alternatives Cost Analysis

Alternative	Capital Cost	Annual Operation & Maintenance	Present Worth Cost
#1 – No Further Action	\$0	\$0	\$0
#2 – Targeted Demolition & Shallow Soil Excavation	\$34,400,000	\$109,000	\$36,200,000
#3 – Complete Demolition & Shallow Soil Excavation	\$33,500,000	\$60,000	\$34,200,000
#4 – Complete Demolition & Complete Excavation	\$39,400,000	\$0	\$39,400,000



EPA's Remedial Alternative Evaluation Criteria

- Nine Criteria
- Federal Superfund Requirements
- Technical and Policy Considerations



Threshold Criteria

1. Overall Protection of Human Health and the Environment.
2. Compliance with Applicable or Relevant and Appropriate Requirements.



Balancing Criteria

3. Long-Term Effectiveness and Permanence
4. Reduction in Toxicity, Mobility or Volume through Treatment
5. Short Term Effectiveness
6. Implementability
7. Cost



Modifying Criteria

8. State Acceptance
9. Community Acceptance - acceptance of preferred alternative will be assessed following the public comment period.



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Preferred Remedy - Alternative #4

- All current on-site tenants would be permanently relocated and all on-site buildings would be demolished
- All contaminated soil would be excavated and disposed of off-site
- The impacted sewer system would be cleaned and/or excavated, as needed



LEGEND

- 2015 RI BORINGS
- 2015 DATA BORINGS
- 2010 REMEDIATION BORINGS
- RI MONITORING WELLS
- EXTENT OF PCB AND/OR PAH CONTAMINATION

- 2 FT DEPTH OF EXCAVATION
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2. EXTENT OF EXCAVATION IS DETERMINED USING THE NEAREST CLEAN SAMPLE IN THE SUBTERRANEAN REGION FROM THE EXISTING PROPERTY OF THE COMPANY. IF A SAMPLE DOES NOT EXIST, THE EXTENT IS ESTIMATED AS 20 FEET AWAY FROM THE FURTHEST SAMPLE RESULT ABOVE PRELIMINARY REMEDIATION GOALS OR TO THE NEXT PHYSICAL BARRIER (E.G., BUILDING).

Figure 3-5
Alternative 4 Excavation Plan
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Questions and Comments

Please address written comments no later than
Monday, August 28, 2017 to:

Thomas Mongelli
US EPA

290 Broadway, 20th Floor
New York, NY 10007-1866

Phone: (212) 637-4256

E-mail: mongelli.thomas@epa.gov

www.epa.gov/superfund/wolff-alport