Norwood Landfill
Superfund Site Assessment

Joseph Vitello, Site Assessment Manager
US EPA Region III
Overview

• Community concerns prompted EPA to conduct a site assessment.

• EPA’s site assessment began in February 2017 and is ongoing.

• Current data does not indicate contamination found in the landfill or residential soil poses a threat to human health.

• Additional sampling will be conducted.

• Health agency partners will be conducting a health consultation to address some of the health concerns.
Norwood Landfill Site Assessment
Community Information Session | November 21, 2019

- Old Norwood Dump
  - ~10 acres
  - “Town Dump”
  - ~1950 – 1959

- Norwood Landfill
  - ~15 acres
  - 1960 – 1963
  - Municipal Solid Waste

- Former Muckinipattis WWTP
  - Demolished in 1980’s
Norwood Landfill

1957 Aerial

Outline of the “Norwood Dump” boundaries (approximate)
Norwood Landfill

1958 Aerial

Outline of the “Norwood Dump” boundaries (approximate)
Norwood Landfill Site Assessment
Community Information Session | November 21, 2019

Norwood Landfill
1958 Aerial Depicting Norwood Dump
Norwood Landfill

1965 Aerial

Outline of the known landfill boundaries
Norwood Landfill
1965 Aerial
Depicts a capped landfill
How did EPA Become Aware of the Site?

• Referred to EPA by the Agency for Toxic Substances and Disease Registry (ATSDR) in September 2016

• Community Concerns:
  • The landfill itself
  • Contaminated fill in their neighborhood
  • Cancer and auto-immune disease
  • Proximity to the Lower Darby Creek NPL site
What Steps Did EPA Take to Investigate the Concerns?

• Consulted with ATSDR to review the cancer and MS data provided to EPA

• Initiated and performed a Site Assessment
  • Pre-CERCLA Screen/Discovery 02/2017
  • Preliminary Assessment 07/2017
  • Site Inspection 02/2018
  • Expanded Site Inspection 09/2018
The Overall Superfund Remedial Process

Assessment
- Discovery of Contamination
- Preliminary Assessment
- Site Inspection
- National Priorities List (NPL) Site Listing

Characterization
- Remedial Investigation/Feasibility Study & Proposed Plan

Selection of Remedy
- Record of Decision

Cleanup
- Remedial Design
- Remedial Action

Post-Construction
- Operation and Maintenance
- NPL Deletion

Community involvement and planning for a site's redevelopment are integral to the entire process.

Five-Year Reviews
Norwood Landfill Site Assessment
Community Information Session | November 21, 2019

Referred to another program for potential cleanup

No further Superfund Assessment Needed
Hazard Ranking System (HRS)

• Used to assess the relative threat associated with actual or potential releases of hazardous substances

• Determines whether a site is to be proposed on the NPL

• Evaluates four pathways of contaminant migration and exposure
  • Groundwater Migration
  • Surface Water Migration
  • Soil Exposure
  • Air Migration
Why did EPA conduct environmental testing of the landfill?

- There were indicators in the information received from the community that fit the criteria of the Hazard Ranking System (HRS):
  - Credible information received from the community
  - Proximity of landfill to large residential community
  - Proximity to sensitive environments such as wetlands
  - Community health concerns
Sample Location Map  September 2017
SOIL sampling activities in September 2017

• 20 surface (0”-6” below surface) samples

• 9 subsurface soil samples (24”-48” below surface)

• 3 test pits dug down to 48” to determine if waste material was present

• Analyzed for VOCs, SVOCs, PAH’s, pesticides, PCBs, metals, and mercury samples
Results from September 2017 sampling

- PAHs, PCBs, pesticides, and metals found at low levels in both surface and subsurface soils of the landfill.

- Only certain metals found in surface water, with most detected below EPA’s Screening Levels for a freshwater environment.

- PAHs, certain metals, pesticides, and mercury were found in sediments at certain locations above EPA’s Screening Levels for a freshwater environment.

- Exceeding EPA’s Screening Levels does not mean there is a risk, but rather indicates the need to do further evaluation.
Areas where residential soil samples were collected and analyzed

Sample Location Map (Residential Soil Sample general area) May 2018
RESIDENTIAL SOIL sampling RESULTS for May 2018

- 3 properties exceeded EPA’s Screening Level for PAHs
- 1 property exceeded EPA’s Screening Level for lead
- 2 properties exceeded EPA’s Screening Level for a pesticide
- 
  Exceeding EPA’s Screening Level does not mean there is a risk, but rather indicates the need for further evaluation by EPA
- Human Health Risk Evaluation conducted
What have we learned from the Site Assessment to date?

- Approximate landfill boundaries
- Time frame waste was deposited
- Discovery of the “Old Norwood Dump”
- Contaminants are present at varying levels in surface soils in the landfill area
What have we learned from the Site Assessment to date?

- There is no pattern or equal distribution of contaminant concentrations across residential properties or the landfill

- Data from residential properties does not appear to be attributable to the landfill

- Data does not reflect an ongoing release to surface water

- *Current data does not support proposing the site to the Superfund National Priorities List (NPL)*
What are EPA’s Next Steps?

• Collecting soil samples from the Old Norwood Dump to determine if there is an ongoing release

• Collecting additional sediment samples along Muckinipattis Creek to determine if there is contamination migrating from the Dump to surface water

• Sampling to be conducted in early 2020

• Data review and finalizing the Site Assessment by the end of 2020
Summary

• Community concerns prompted EPA to conduct a site assessment.

• EPA’s site assessment began in February 2017 and is ongoing.

• Current data does not indicate contamination found in the landfill or residential soil poses a threat to human health.

• Additional sampling will be conducted.

• Health agency will be conducting a health consultation to address some of the health concerns
Resources for More Information

Superfund Site Assessment Process:
  • https://www.epa.gov/superfund/superfund-site-assessment-process

Human Health Risk Assessment Process:
  • https://www.epa.gov/risk/human-health-risk-assessment

Agency for Toxic Substances and Disease Registry
  • https://www.atsdr.cdc.gov/

PA Department of Health
  • https://www.health.pa.gov/Pages/default.aspx
Contacts

**US EPA:**
Joseph Vitello  
Site Assessment Manager  
1650 Arch Street  
Philadelphia, PA 19103  
215-814-3354  
vitello.joseph@epa.gov

Larry Brown,  
Community Involvement Coordinator  
1650 Arch Street  
Philadelphia, PA 19103  
215-814-5527  
brown.larry@epa.gov

**Agency for Toxic Substances and Disease Registry (ATSDR):**
Karl V Markiewicz, PhD  
Senior Toxicologist  
CDC/NCEH/ATSDR  
215-814-3149  
kvm4@cdc.gov

**PA Department of Health:**
Bevin S Durant Fidler, MPH  
PA Department of Health | Bureau of Epidemiology  
625 Forster Street, Room 933  
Harrisburg, PA 17120-0701  
Phone: 717.787.3350