



REVIEW OF OPERABLE UNIT 2 FINAL REMEDIAL DESIGN REPORT

RINGWOOD MINES/LANDFILL SUPERFUND SITE

MARCH 8, 2018



AGENDA

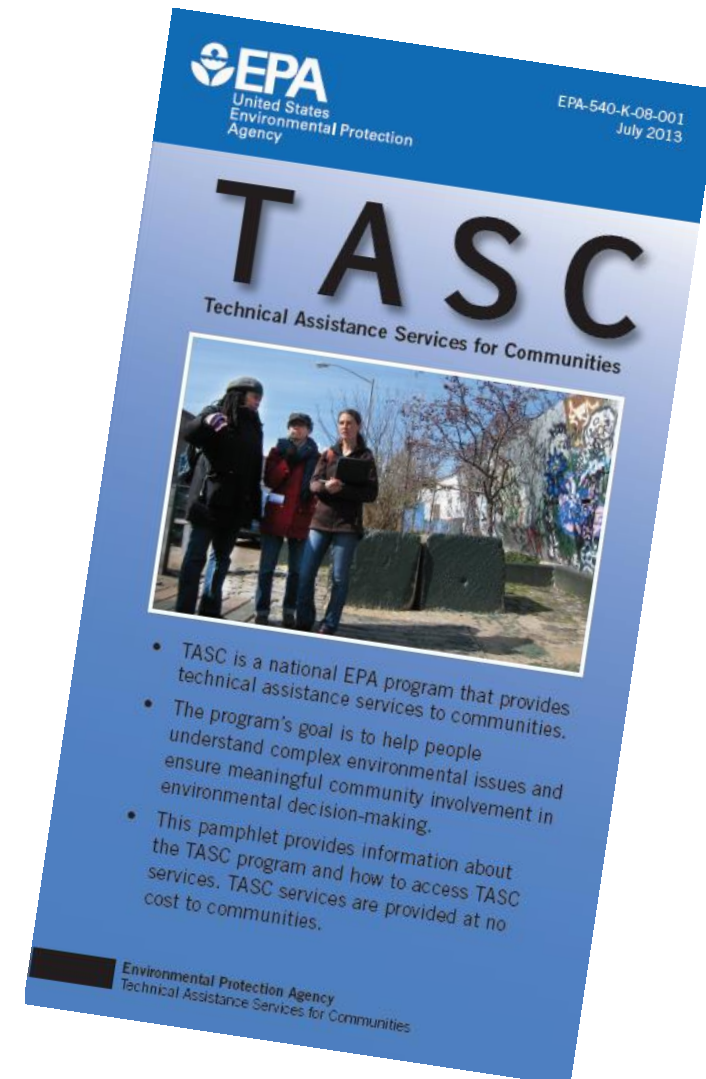
- TASC
- Site Background and the Superfund Process
- Final Remedial Design Report Summary
- TASC Comments



TASC

TASC

- Technical Assistance Services for Communities (TASC)
- Provides non-advocacy, independent technical assistance
- This presentation is funded by EPA's TASC program – its contents do not necessarily reflect the policies, actions or positions of EPA





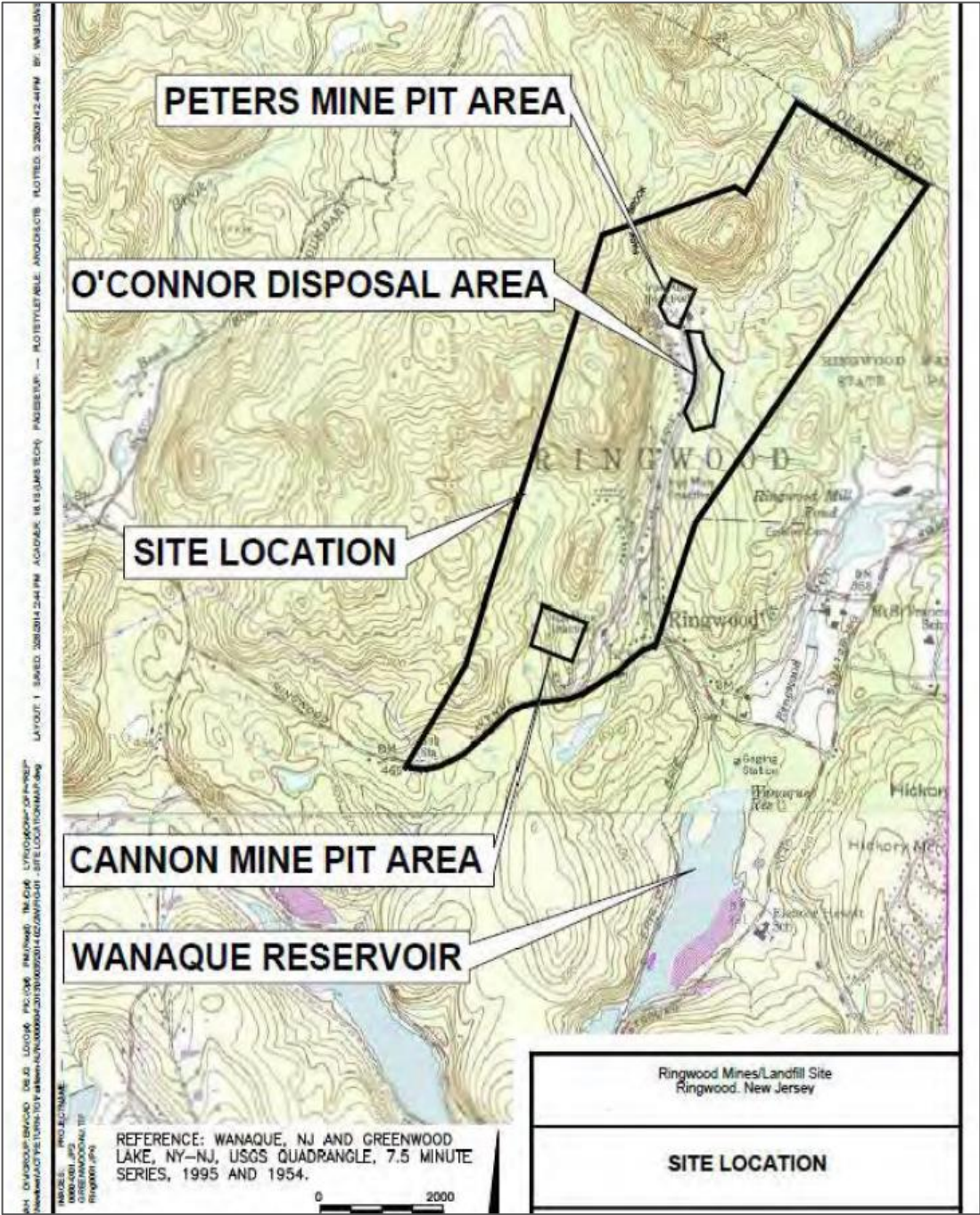
SITE BACKGROUND AND THE SUPERFUND PROCESS

SITE BACKGROUND

- 500-acre site is in historic iron-mining district
- Ford disposed of paint sludge and other wastes in late 1960s and early 1970s
- Operable units (OUs):
 - OU1 = originally intended to address entire site
 - OU2 = land areas of concern – Peters Mine Pit (PMP) Area, O'Connor Disposal Area (OCDA) and Cannon Mine Pit (CMP) Area
 - OU3 = sitewide groundwater and St. George Pit Area
- Primary constituents of concern (COPCs): benzene, chloroethane, 1,4-dioxane, arsenic and lead

Ringwood
Mines/Landfill Site
Location

(Figure 1, Site's
2014 Record of
Decision)

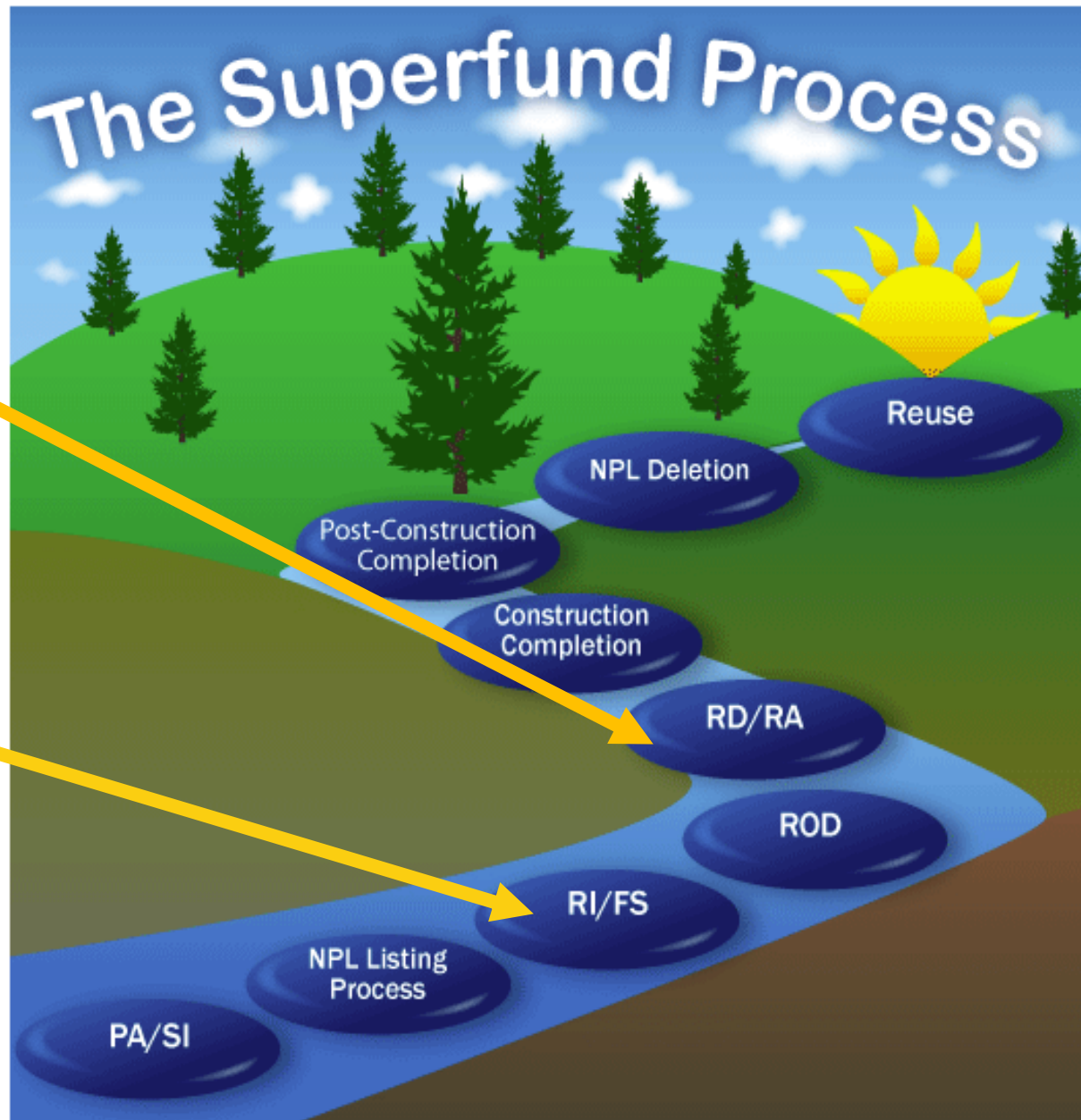


Groundwater
flow is generally
down valley to
the south and
southeast

The Superfund Process

Operable unit 2 (OU2)
is here

Operable unit 3 (OU3)
is here



THE SUPERFUND PROCESS

- OU2 remedy selected in 2014 Record of Decision (ROD) and updated by 2015 Explanation of Significant Differences (ESD)
- Any fundamental changes to the remedy would require a ROD Amendment
- Any significant changes to the remedy would require an ESD



FINAL REMEDIAL DESIGN REPORT SUMMARY

SUMMARY OF REMEDIAL DESIGN

Eight Chapters

1. Introduction
2. Background
3. Pre-Design Sampling
4. Basis of Design
5. Interim Groundwater Monitoring
6. Permits and Approvals
7. Schedule
8. References



Technical Assistance Services
for Communities
Ringwood Mines/Landfill Superfund Site
Fact Sheet – March 2018

**Summary of Ringwood Mines/
Landfill Superfund Site Final
Remedial Design Report for
Operable Unit 2 (OU2)**

This fact sheet summarizes the Ringwood Mines/Landfill Superfund Site Final Remedial Design Report for OU2 (October 2017 revision). Technical comments are provided in the last section. This fact sheet is funded by EPA's Technical Assistance Services for Communities (TASC) program. Its contents do not necessarily reflect the policies, actions or positions of EPA.

The 500-acre Ringwood Mines/Landfill site is in a historic iron mining district in the Borough of Ringwood in Passaic County, New Jersey. Magnetite mines operated on site as early as the 1700s. In the late 1960s and early 1970s, Ford Motor Company disposed of paint sludge and other wastes on site. To manage the cleanup, EPA separated the site into OUs. OU1 was originally intended to comprehensively address the entire site. Later, EPA established OU2 and OU3. OU2 covers the land areas of concern known as the Cannon Mine Pit (CMP) Area, the O'Connor Disposal Area (OCDA) and the Peters Mine Pit (PMP) Area. OU3 is sitewide groundwater and the St. George Pit Area. See Figure 1.

The Remedial Design Report has eight chapters and eight appendices. The chapters are:

1. Introduction
2. Background
3. Pre-Design Sampling
4. Basis of Design
5. Interim Groundwater Monitoring
6. Permits and Approvals
7. Schedule
8. References



Figure 1. Ringwood Mines/Landfill Site Location
(Figure 1, 2014 Record of Decision)

The sections below cover Chapters 1-7.

1. Introduction
This section describes the report's purpose, scope and organization. The remedial design for OU2 follows an EPA-approved work plan, builds on a Preliminary Remedial Design Report and includes modifications based on EPA comments on the February 2017 draft of the Remedial Design Report.

1 U.S. Environmental Protection Agency
Technical Assistance Services for Communities 2018

1. INTRODUCTION

- The remedial design for OU2 follows an EPA-approved work plan
- It builds on a Preliminary Remedial Design Report
 - Includes modifications based on EPA comments on the February 2017 draft of the Remedial Design Report

2. BACKGROUND

- Explains 2014 ROD requirements for the three land areas of concern – CMP Area, OCDA, PMP Area

2. BACKGROUND

Cannon Mine Pit (CMP) Area Remedy Requirements

- Excavate drums of waste and dispose of them off site
- Add fill and grade for proper drainage
- Add permeable engineered geotextile/soil cap and restore vegetation
- Add engineering controls such as fencing, boulders and signs to control access
- Institutional controls such as use restrictions and long-term monitoring, maintenance and reporting

2. BACKGROUND

O'Connor Disposal Area (OCDA) Remedy Requirements

- Excavate fringe-area fill and consolidate within OCDA cap
- Add permeable engineered geotextile and soil cap
- Construct recycling center above the engineered cap
- Add engineering controls, such as fencing, to control access
- Restore vegetation in areas outside of engineered cap.
- Restore/mitigate wetlands disturbed by remedy
- Institutional controls such as use restrictions and long-term monitoring, maintenance and reporting

2. BACKGROUND

Peters Mine Pit (PMP) Area Remedy Requirements

- Excavate soil and fill to the water table (remove drums and paint waste from below water table if possible)
 - Segregate excavated materials for reuse or off-site disposal
- Add compacted fill to achieve grades above the water table and grade area for engineering cap construction
- Install permeable engineered geotextile/soil cap and restore with indigenous vegetation consistent with Ringwood State Park
- Institutional controls such as use restrictions and long-term monitoring, maintenance and reporting

3. PRE-DESIGN SAMPLING

- Landfill gas testing in the three land areas of concern: CMP Area, OCDA, PMP Area
- Excavation of test trenches in predetermined data-gap areas to refine remediation boundaries
- Completion of test borings and collection of soil samples for characterization of the soil/fill to be excavated in PMP Area
- Geotechnical investigation to develop foundation recommendations for the recycling center

4. BASIS OF DESIGN

- Explains the various remedy components
 - Excavation
 - Capping
 - Drainage
 - Landfill gas management
 - Wetlands and riparian zone disturbance and mitigation
 - Geotechnical considerations
- Includes drawings that illustrate the remediation plan

5. INTERIM GROUNDWATER AND SURFACE WATER MONITORING

- Monitoring for volatile organic compounds (VOCs), 1,4-dioxane, arsenic and lead planned
- Certain existing groundwater monitoring wells are recommended for each land area of concern
- Surface water monitoring locations are recommended for the PMP Area
- Sampling is planned twice per year in the CMP Area and the OCDA
- Sampling four times per year is planned in the PMP Area for the first year and twice per year in later years because existing data for 1,4-dioxane is limited

6. PERMITS AND APPROVALS

- Federal, state and local permits are not required for remedial actions on Superfund sites
 - However, the substantive requirements of Applicable or Relevant and Appropriate Requirements (ARARs) must be met
 - ARARs include state regulations that are applicable to the site
 - New Jersey Department of Environmental Protection (NJDEP) assesses meeting state ARARS through a permit equivalent process

7. SCHEDULE (for remedial action)

- Report indicates May 25, 2009, to October 3, 2011



TASC COMMENTS

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- The following technical comments are based on TASC's independent review and are provided for the use of the community
- TASC does not submit comments to EPA on behalf of the community. The comments reflect the opinions of the reviewers and may not reflect the policies, actions or positions of EPA
- TASC has identified some questions the community may wish to consider asking – these are identified in text boxes on the following slides

PRE-DESIGN SAMPLING

- Arsenic levels above its Residential Direct Contact Soil Remediation Standard (RDCSRS) found in three trench confirmatory samples in the PMP Area
- Ask EPA to consider whether higher arsenic concentrations found in PMP-TP-1, PMP-TP-15 and PMP-TP-16 indicate a need to further explore the southern remediation boundary of the PMP Area

PERFORMANCE STANDARDS

- Reduction of the potential for COPCs in soil or fill materials to migrate into groundwater
- Ask EPA if any revisions can be made to remedial design to further reduce potential for COPC migration into groundwater and surface water
 - Would more aggressive groundwater protection help prevent additional 1,4-dioxane from migrating to groundwater?

SITE PREPARATION

- CMP Area remedy will require work in Van Dunk Lane cul-de-sac
- Ask for more information about this planned work, if concerned about local traffic or access to private properties

SITE PREPARATION

- Stormwater runoff during remedy construction could carry contaminated soil into the OCDA sediment basin and possibly from the basin to the discharge area on the newly established flat area next to Park Brook
- Ask EPA whether the location of the detention basin near Park Brook and the planned discharge of stormwater from the basin could cause redistribution of contaminants, possibly into Park Brook

PERFORMANCE OF EXCAVATIONS

- Report does not specify how the success of excavations will be confirmed

- Ask EPA for additional details about performance standards for each excavation

DEWATERING AND WATER TREATMENT

- Dewatering waters will be treated through a temporary treatment system consisting of filters and granular activated carbon prior to discharge to groundwater
- Granular activated carbon is not an effective treatment for 1,4-dioxane
- Ask EPA to clarify that treated dewatering water will be tested for all COPCs, including 1,4-dioxane, prior to discharge

DEWATERING AND WATER TREATMENT

- Area designated for use as PMP Area detention pond after completion of the remedy also to be used for storage and recharge of dewatering waters
- Using the detention pond for this purpose may allow contaminated groundwater to be discharged to another location, which is typically not allowed
- Ask EPA what steps will be taken to prevent contaminated groundwater from being discharged from the detention pond to other locations

DUST CONTROL

- Dust control measures include the spraying of water and the removal of dried soil from land or roadway surfaces and tarping material stockpiles
 - Visible dust leaving the project site is prohibited
- Ask EPA whether any site perimeter monitoring will be done for dust and VOCs
 - Ask EPA what levels of dust or VOCs in air will trigger actions and what actions will be taken

REUSE OF EXCAVATED SOIL

- Excavated soil or fill may be reused on site
 - To be tested for corrosivity, ignitability, reactivity and toxicity using the Toxicity Characteristic Leaching Procedure (TCLP)
 - The only COPCs with TCLP limits are arsenic and lead
- Ask EPA to require that excavated soils with a COPC level above its applicable RDCSRS or above a level that could cause exceedance of its Groundwater Quality Standard (GWQS) to be disposed of off site and any imported soil to be certified as “clean”

LANDFILL GAS MANAGEMENT

- Design drawings show a limited number of landfill gas wells, and they are not located on all sides of the three planned capped areas
- Report does not indicate what gases will be monitored, how often monitoring will occur, or what performance standards will be used to make decisions
- Ask EPA for more information on the landfill gas monitoring program and specifically on what levels of concern in landfill gas monitoring points necessitate action

LANDFILL GAS MANAGEMENT

- The report states that landfill gas will be vented through the permeable clean fill and final cover soils without any structural components such as passive gas vents
- Ask EPA if soil vapor intrusion protection will be required for recycling center buildings

INTERIM GROUNDWATER MONITORING

- Report recommends:
 - Sampling twice per year in three CMP Area monitoring wells
 - Sampling twice per year in five OCDA monitoring wells
 - Sampling four times per year in 14 PMP Area monitoring wells and two surface water locations for the first year and sampling twice per year in later years

Ask EPA if additional eight existing monitoring wells and one new well can be added to the interim groundwater monitoring plan

WETLANDS RESTORATION

- Restoration of wetlands is planned for low-lying areas in the PMP Area and the OCDA

Ask EPA if there is a long term plan to monitor the health of the wetlands after restoration is complete

ADDITIONAL QUESTIONS THE CAG MAY WANT TO ASK EPA

- What oversight will EPA provide during remedy construction?
- How will noise levels be measured and what levels will prompt action?
- What route(s) will trucks follow when hauling materials to and from the site?
- How can community members ask for information or report a safety or health concern during remedy construction?



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