



# Technical Assistance Services for Communities

## Ringwood Mines/Landfill Superfund Site Fact Sheet – February 2021

### Summary of Ringwood Mines/Landfill Superfund Site Operable Unit (OU) 2 Remedial Action Work Plan

This fact sheet covers the Ringwood Mines/Landfill Superfund Site OU2 Remedial Action Work Plan (RAWP), submitted to EPA in December 2020, available online at:

<https://semspub.epa.gov/src/document/02/620277>. Remedial Construction Services (RECON) prepared the RAWP for Ford Motor Company. The work plan describes OU2 remedial activities. The OU includes the Cannon Mine Pit (CMP) Area, the Peters Mine Pit (PMP) Area, and the O'Connor Disposal Area (OCDA).

Remedial activities will take place beginning in spring 2021, after EPA's approval of the RAWP. The project schedule lists completion by February 2022. The project order is the CMP Area, the PMP Area, and the OCDA. The RAWP includes the construction of the Recycling Center at the OCDA.

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 divided the site into OUs. OU1 was originally the entire site. Later, EPA established OU2 and OU3. Figure 1 shows the land areas of concern in OU2. OU3 is sitewide groundwater and the St. George Pit Area. In September 2020, EPA selected the OU3 remedy.



### TASC Remedial Action Work Plan Presentation

**Thursday, February 25, 2021  
6:00 p.m. to 8:00 p.m.**

Please join us for a virtual online presentation of TASC's review of the RAWP.



#### Join by smartphone or tablet:

Go to

<https://skeno.zoom.us/j/94173853265?pwd=aVJNVTFFWlJVM0lzL1pObS81ekRqdz09>.

It may prompt you to download the Zoom Cloud Meetings app.



#### Join using a web browser on a computer:

1. Go to [join.zoom.us](https://join.zoom.us).
2. Enter the Meeting ID: 941 7385 3265.
3. At the bottom of the window, click on "Join from Your Browser."
4. Enter your name.
5. Enter the Passcode: 242050.
6. Click "Join Audio by Computer."



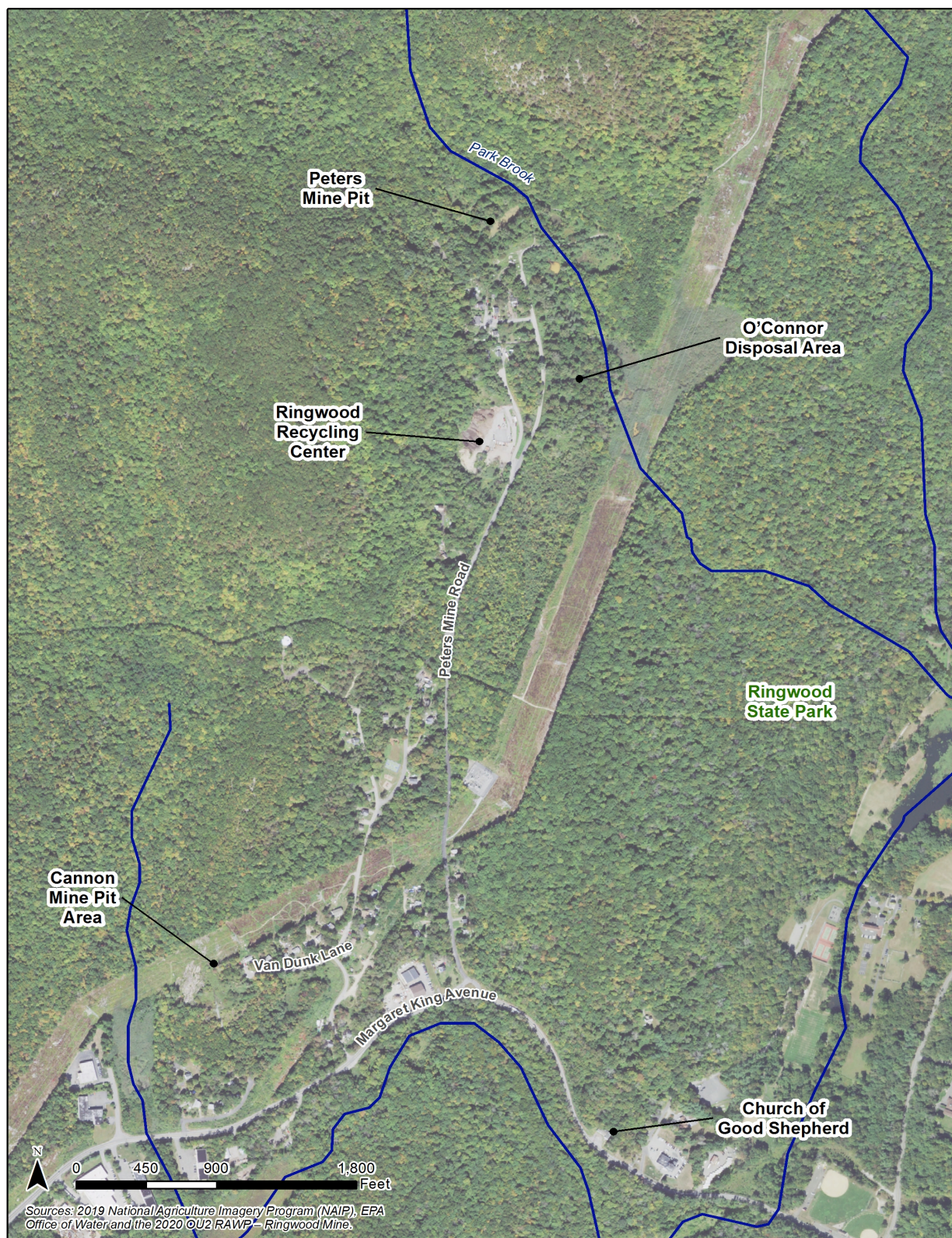
#### Join by phone:

1. Call 1-833-548-0282 (US Toll-free).
2. Enter the Meeting ID (941 7385 3265) and press # when prompted.
3. Press # to continue (no Participant ID).
4. Enter the Passcode (242050) and press # when prompted.

The U.S. Environmental Protection Agency's (EPA's) Technical Assistance Services for Communities (TASC) program funded this fact sheet. Its contents do not necessarily reflect the policies, actions or positions of EPA. TASC technical comments are provided in the last section.



**Figure 1: Location of OU2 RAWP Activities**





The OU2 RAWP has 14 sections, four figures and nine appendices:

1. Introduction
2. RAWP Document Organization
3. Existing Site Conditions
4. Remedial Action Field Team
5. Remedial Action Pre-Mobilization Tasks
6. Mobilization and Site Preparation
7. Field Tasks
8. Monitoring Activities
9. Site Management
10. Quality Assurance and Quality Control Program
11. Remedial Action Health and Safety Program
12. Final Site Restoration and Demobilization Activities
13. Remedial Action Project Schedule
14. References

Figure 1-1 – Site Location Map

Figure 4-1 – Remedial Field Activities Team Organization

Figure 5-1 – Submittal Register

Figure 13-1 – Project Schedule

Appendix A – Construction Quality Assurance/Quality Control Plan (CQA/QCP)

Appendix B – Site-Specific Health and Safety Plan (HASP)

Appendix C – Vibration Monitoring Plan

Appendix D – Community Air Monitoring Plan

Appendix E – Quality Assurance Project Plan (QAPP)

Appendix F – Field Sampling Plan

Appendix G – Paint Waste, Drum, and Drum Carcass Excavation and Removal Plan

Appendix H – Transportation & Disposal Plan

Appendix I – Technical Specifications

## 1. Introduction

The introduction provides the purpose of the document, prior documents that provided the basis for it and overall performance standards. It also summarizes relevant project documents.

In 2015, EPA finalized the OU2 remedy. Primary components of the remedy include:

- Appropriate management of fill, waste and soil, including reuse on site or proper disposal off site.
- Use of engineered caps.
- Use of institutional and engineering controls:
  - Security fencing and signs.
  - The CMP Area and PMP Area will have boulders to discourage cap access by all-terrain recreation vehicles.
  - Institutional controls will be a New Jersey Department of Environmental Protection (NJDEP) deed notice.

## 2. RAWP Document Organization

The table in this section summarizes the RAWP's appendices. It also lists the attachments in the appendices.

## 3. Existing Site Conditions

This section provides a general description of the site and its location, including current site uses. It provides background information on the PMP Area, the OCDA and the CMP Area. For example, it covers the remedies and prior investigations for each area.

It also summarizes site geology and groundwater. Site-related groundwater is being addressed separately under OU3. It also provides a conceptual site model for each area.

### Conceptual Site Model (CSM)

A CSM represents the physical, chemical and biological processes (either written or illustrated) that control movement of contamination. It also represents how people could be exposed to site-related contaminants.

### CMP Area

Located in the southwest part of the site. Covers about 2 acres. Next to the Van Dunk Lane cul-de-sac.

## OCDA

Located in the north-central part of the site, just south of the PMP Area. Covers about 12 acres. Next to and extends along Peters Mine Road. Slopes to the east toward Park Brook.

## PMP Area

Located in the north-central part of the site. Covers about 3 acres. Most of the area is in Ringwood State Park. The remaining area is on Borough of Ringwood property. A half-acre pond is in the PMP Area.

## **4. Remedial Action Field Team**

This section summarizes the primary firms involved in the OU2 activities. Figure 4-1 also covers this information. Section 9.1 provides detail on lines of communication and reporting for all parties. The de maximis project coordinator will coordinate communication among Ford Motor Company, EPA and NJDEP. The major firms involved in the project include de maximis, Tetra Tech and RECON. Subcontractors include E2 Project Management (wildlife herpetologist), Vibratex (vibration monitoring/technical assistance), Emilcott Technologies (community air monitoring plan implementation/technical assistance) and Pennoni (site surveyor).

## **5. Remedial Action Pre-Mobilization Tasks**

This section summarizes activities that will happen before work (mobilization) begins at the Site. They include remedial action contractor submittals, permits, construction layout inspections and surveys, and utility locations.

## **6. Mobilization and Site Preparation**

This section includes information about site mobilization and site preparation, including site security and access, staging areas, sediment barriers, and decontamination. Mobilization to the site will occur in spring 2021 after EPA approval of the RAWP.

## **6.2 Site Preparation**

Site security will consist of fencing during construction. It will be a combination of new and existing fencing. Portable fencing will be used where necessary. Any required permanent fencing will be put in place at the end of the work.

Workers can access each of the areas from a public roadway. However, in each case, cleanup work will require some improvements.

This section has a subsection for the CMP Area, the OCDA and the PMP Area as well as new recycling center construction and current recycling center removal (6.2.1, 6.2.2, 6.2.3, 6.2.4 and 6.2.5). The subsections describe where work will occur and specifics about work in each area. Figure 3, at the end of this fact sheet, shows site layout plans for each area.

## **7. Field Tasks**

This section covers details on the main field activities for the remedial action. The topics include removal of surficial debris and vegetation, electrical utility power drops to the site, preparation of equipment staging and site support facility locations, soil excavation, site grading and capping, and materials management.

Initial tasks will include vegetation removal, recycling of metal and tires, and removal of surficial debris.

### **Off-Site Disposal**

Table 1 in Appendix H lists the proposed facilities Ford Motor Company will choose from for disposal of waste materials, subject to EPA final approval.

The list includes facilities in Ohio, Indiana, Pennsylvania, Alabama and New Jersey.

Power drops from overhead lines next to the site will provide electrical power. The drops' locations will maximize coverage of the site to limit the



length of electrical cable from the source to the equipment.

Digging up material from the PMP Area will require the construction of about 11 stockpile areas for the temporary storage of material. Each stockpile will be lined with plastic and a 1-foot layer of one-inch diameter stone. The stockpiles will be surrounded with haybales to prevent stormwater runoff. Similar temporary stockpiles of solid waste and paint waste will be constructed for the other areas, as needed.

## 8. Monitoring Activities

The RAWP's appendices cover monitoring requirements, as outlined in the Vibration Monitoring Plan (VMP) and Community Air Monitoring Program (CAMP).

## 9. Site Management

This section describes site management. Intrusive activities will take place five days a week, from Monday to Friday. The workday will start no earlier than 7:00 a.m. and run no later than 5:30 p.m. This section includes subsections on project coordination and communication, remedial action project documentation, coordination of permit and permit equivalency requirements, project meetings, and site security.

Regular union holidays will be non-working days. They include Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving, Christmas Day and New Year's Day.

Site security will include perimeter fencing and gates, site sign-in, lighting and motion sensitive cameras. Perimeter fencing will be inspected and maintained throughout the project. Lights may be motion activated or dusk to dawn. Cameras will be inspected daily.

The report indicates there will be daily safety briefings for on-site workers and weekly progress meetings, as well as meetings prior to major construction activities. Advance approval will be required for a site visitor to enter any of the work areas.

### Vibration Monitoring Plan (VMP)

Appendix C is the VMP. Heavy equipment used to complete remedial activities may produce vibrations. Vibrations could affect areas near the construction, including adjacent structures. The plan describes the activities and responsibilities to address potential impacts to the area in the immediate vicinity of the construction activities, including adjacent structures.

### Community Air Monitoring Programs (CAMP)

Appendix D is the CAMP. It was prepared to monitor air quality for the protection of on-site personnel and nearby community members. Sampling will monitor dust, particulates and total volatile organic compounds (TVOCs) in real time in the immediate work zone and along the perimeter of the work areas.

Water misting will keep the ground surface and excavated materials moist. It will be the primary dust and particulate suppression method.

## 10. Quality Assurance and Quality Control Program

This section describes the Construction Quality Plan and the Analytical Quality Plan. They are included in Appendix A and Appendix E, respectively.

## 11. Remedial Action Health and Safety Program

Appendix B is the site's Health and Safety Plan (HASP). It identifies anticipated hazards and prescribes control measures for use during the OU2 cleanup. This section includes subsections on setup of site work zones, decontamination procedures, and final equipment decontamination.

The purpose of the HASP is to provide health and safety guidelines for RECON employees,

subcontractors and visitors during OU2 construction activities.

## 12. Final Site Restoration and Demobilization Activities

This section covers the activities that will follow OU2 remedial activities. They include the restoration and repaving of the driveway and cul-de-sac in the CMP Area. Section 6.2.1 of the RAWP also describes these activities.

## 13. Remedial Action Project Schedule

This section describes the schedule for major parts of OU2 remedial activities. During the activities, the schedule will be updated every two weeks.

It includes:

- Beginning work: October 2, 2020.
- Completing CMP Area cleanup: April 30, 2021.
- Completing PMP Area cleanup: November 19, 2021.
- Completing OCDA Area cleanup: October 26, 2021.
- Completing new Recycling Center: February 8, 2022.
- Decommissioning existing recycling center and completing all other activities: January 19, 2022.

## 14. References

This section summarizes the document references.

## Technical Comments

TASC technical advisors have reviewed the RAWP with respect to potential community concerns and questions. TASC also reached out to interested community members and stakeholders to solicit feedback on current community questions and concerns. This section summarizes concerns described by community members and concerns identified by TASC technical advisors. Comments mostly fall into two categories – public communication and safety during remedial actions.

TASC does not submit comments to EPA directly. Community members, groups or stakeholders may choose to submit any or all of the following comments to EPA.

**Technical Comment #1:** Section 1 says that “following the issuance of the final construction documents for the Recycling Center, all applicable changes to the RAWP and appendices will be amended to reflect the RAC [Remedial Action Contractor] construction of the facility.” *Community members may want to ask EPA if there are any significant changes to the RAWP anticipated at this time and how EPA will keep the public informed of RAWP changes.*

**Technical Comment #2:** Section 4 describes the remedial action field team. *Community members may want to ask EPA about a designated community liaison or a site communication plan to keep community members up to date on site activities and answer their questions. Community members may want to recommend using already formed groups such as the Ringwood Environmental Commission or the Community Advisory Group as communication conduits to give and receive feedback about site-related communications. Community members may also have suggestions on forms of communication that they would prefer such as news outlets, publications, site tours, website updates, special meetings, fact sheet distribution or door knockers. Community members may want to ask for a hotline number for reporting immediate concerns to EPA during cleanup.*

**Technical Comment #3:** Section 6 describes site security including fencing. *Community members with knowledge of the site and current site uses may want to provide feedback to EPA about current fencing concerns (a community member commented to TASC that current fencing is entirely missing in some areas and access gates are open) and suggestions for community friendly signage. If fencing and signage is not adequate, community members may want to suggest evaluation of additional site security monitoring measures.*



**Technical Comment #4:** Section 6 provides information on site mobilization and preparation. It includes subsections 6.2.1, 6.2.2, 6.2.3, 6.2.4 and 6.2.5. Each subsection addresses a specific area: the CMP Area, the OCDA and the PMP Area as well as new recycling center construction and current recycling center removal. *These sections may be of particular interest to the community. Community members may want to provide feedback on these sections to EPA.*

#### 6.2.1 CMP Area

- Part of the work will take place in the Van Dunk Lane cul-de-sac. The driveway for the property owner to the north will be temporarily relocated (shown on Design Drawing CMP-2). Restoration of the resident's property driveway will follow, after completion of construction (Design Drawing CMP-3). *This resident may want to share any access-related concerns to their home during these activities with EPA.*

#### 6.2.2. OCDA

- The extended detention basin is sized using a 25-year storm scenario. *Community members may want to ask how this determination was made and whether a 100-year storm scenario could be applied.*

#### 6.2.4 Recycling Center Construction

- The RAWP says that Drawing 7 includes lighting for the new recycling center. This drawing is not included in the RAWP. *Community members may want to ask to see Drawing 7 and provide EPA with any lighting requests – needing more light for security, for example, or less light for nearby residents or users.*

**Technical Comment #5:** Section 7 includes information about the restoration of the PMP Area with indigenous vegetation consistent with the fact that it is on state parklands. Restoration will create a more diverse ecological community structure, including deep and shallow emergent plant communities that will provide habitat for vernal pool-dependent species. *If community members are interested in these plantings, they may want to share their opinions with EPA or request progress updates during this part of site work.*

**Technical Comment #6:** Section 7 says that digging up material from the PMP Area will require construction of several stockpile areas for the temporary storage of material. Stockpile storage areas will be limited to a volume of 500 cubic yards. An average hot tub holds 0.94 cubic yards, so this is equivalent to 550 average hot tubs. About 11 stockpiles will be established. Stockpiles will generally be present for three days. *Community members may want to provide EPA with their input on the locations of the stockpiles to avoid eyesores and temptation for trespassing to access the stockpiles. Community members may want to ask where off-site disposal will occur.*

**Technical Comment #7:** Section 7.4.2 says hazardous waste classification for dug-up material in the PMP Area would be based on a determination as a characteristic waste through testing for corrosivity, ignitability, reactivity and toxicity using the toxicity characteristic leaching procedure (TCLP). It also includes an explanation that most of the dug-up material will pass the testing and be reused on site. *Community members may want to ask EPA for more information about the frequency of testing for PMP Area dug-up material and whether reuse will be based sometimes on the stated assumptions instead of on actual testing.*

**Technical Comment #8:** Section 7.4.3 describes groundwater management, and specifically the dewatering of the PMP pond. The RAWP says that substantial amount of water management may be necessary. It describes that the work below the water table is premised on the permit-by-rule provisions within NJAC 7:14A-7.5. This section continues to describe that a localized discharge of dewatering is not expected to adversely affect

groundwater quality downgradient of the PMP pit. Monitoring wells currently exist downgradient of the PMP area that are available for groundwater monitoring. If excavation is required below the water table, dewatering waters will be treated through a temporary treatment system consisting of filters and granular activated carbon prior to discharge to groundwater. *Community members may want to ask for continued updates on the status of the dewatering, what the plan is if 1,4-dioxane is encountered and whether a temporary treatment system is being used.*

**Technical Comment #9:** Section 7.5 includes information on site grading and capping and refers to drawings that are not in the report. *Community members may want to ask EPA if they can access the grading drawings for each area and comment on them.*

**Technical Comment #10:** Section 7.5.2 describes the parts of the engineered cap for each area. It consists of:

- A non-woven geotextile placed beneath the cap subsoil as a demarcation layer.
- Eighteen (18) inches of subsoil, which should have a loam texture.
- Six inches of topsoil, per the specifications in The Standards for Soil Erosion and Sediment Control in New Jersey.
- Stabilization of the final cover with vegetation. Where final cover is in an upland area and not part of the restoration for riparian zone or wetlands, revegetation will use a seed mix consistent with the permanent vegetation requirements of The Standards for Soil Erosion and Sediment Control in New Jersey.

*Community members may want to ask EPA about plans for future monitoring of the caps. Who will pay for the long-term maintenance? How will EPA share monitoring information? How will EPA enforce the monitoring to ensure the caps' long-term protectiveness?*

**Technical Comment #11:** Section 7.6 provides information about materials management. Coordination of disposal to approved facilities will occur between the contractor and Ford Motor Company. Figure 2 in this report shows proposed truck access routes. *If community members have preferences for when waste will be moved off site, such as avoiding times when school buses or children are outside, they may want to share that information with EPA.*

**Technical Comment #12:** Section 9 describes site management plans, such as which days people will be working on site. *If community members are interested in site management updates, they could share this interest with EPA, and the community could work with EPA on update preferences and frequency. Community members may also be interested in asking EPA about who they should contact with site management-related questions and concerns and where they can find information on daily site management activities.*

**Technical Comment #13:** Section 9 mentions an on-site EPA representative, but it does not include any details about oversight by EPA, NJDEP or independent oversight contractors. *Community members may want to ask how often EPA or NJDEP personnel will be at the site, or if there is a plan for oversight and enforcement of federal and state environmental, health and safety regulations.*

**Technical Comment #14:** Section 9 says that the construction manager (Tom Perkins with de maximis) is responsible for emergency communications involving affected property owners, thefts or damage to site equipment. *Community members may want to ask EPA if community members should call Mr. Perkins first in the case of a site-related emergency. His phone number is 973-670-2871.*

**Technical Comment #15:** Section 9.2 says that the project coordinator (Craig Coslett with de maximis) will generate a monthly progress report and submit it to EPA. *Community members could ask EPA if it is possible to make these progress reports public.*



**Technical Comment #16:** Section 9.4 says that “project meetings will be held throughout the implementation of the RA [remedial action] to review the progress of activities, planning of new activities, review of safety and health issues, and any changes to the schedule.” *Community members may want to ask EPA if community representatives will attend these meetings.*

**Technical Comment #17:** Section 9 includes sanitation practices, social distancing and masking. *Community members may want to ask EPA if workers will take more precautions when interacting with community members or local organizations to reduce potential opportunities for COVID-19 exposure.*

**Technical Comment #18:** Section 12 describes final restoration and demobilization activities. They include removal of traffic control signs, removal of construction-related trash and debris, repair or replacement of fence/gate sections as needed, and restoration, repaving of the driveway and cul-de-sac on Van Dunk Lane, and sweeping of dust and particulates from Upper Ringwood roadways as necessary. *The community may want to consider if there are any other final activities needed, or if they would like EPA to provide its input on final activities before the completion of all site work.*

**Technical Comment #19:** Figure 13-1 provides the project schedule. It is illegible unless viewed electronically so that the text can be expanded. Community members have expressed concern about schedule components conflicting with endangered species activities. *Community members with computer access may want to review it and share any questions or concerns with EPA, or ask to be informed of the achievement of particular schedule milestones. Given that schedule updates will happen every two weeks, community members may want to ask EPA to provide updated schedules to their homes. Community members may also want to ask for further clarification about how activities will be adjusted to account for endangered species concerns.*

**Technical Comment #20:** Appendix B, Section 6 has the external exposure box checked for “Ionizing Radiation.” It does not have the absorption box checked for “Chemically Toxic.” *Community members may want to ask EPA about the source of the ionizing radiation risk and if there really is no absorption risk from any of the chemicals.*

**Technical Comment #21:** Appendix C, VMP sections 3.1, 3.2 and 3.3 discuss the proximity of residential properties in the vicinity of the three areas and historical subsidence areas. *Community members may want to ask EPA about who to contact with concerns about vibrations, including damages, and communication with residents regarding high-vibration activities. Community members may want to ask EPA if vibration, in addition to historical subsidence, poses a risk to adjacent residential properties and, if so, how parties will manage or mitigate that risk. Community members may want to ask EPA if vibration protection can be put in place if needed to protect residents and if settlement is mainly a roadway concern or is also a concern for structures.*

**Technical Comment #22:** Appendix C, VMP Section 4 discusses pre-construction inspections. These inspections will take place on areas surrounding work zones. These areas may include residential structures and other aboveground infrastructure such as garages and sheds. *Community members may want to ask EPA how parties will coordinate the inspections with homeowners.*

**Technical Comment #23:** Appendix C, VMP Section 11 discusses post-construction completion. It says that there will be inspections for all locations that had pre-construction inspections. *Community members may want to ask EPA how parties will coordinate the inspections with homeowners.*

**Technical Comment #24:** Appendix D includes the CAMP. There will be three perimeter air monitoring stations in each active work area. Stations will be set up around the work area, with one upwind and two near the perimeter at downward locations. Actual monitoring station arrangement will be reviewed and modified

daily, based on the location of work and wind direction. *Community members may want to review the sample air monitoring station location maps (shown in Figure 4 at the end of this fact sheet) to make sure they are comfortable with this arrangement. They may also want to request communications about the actual placement locations of the stations during cleanup activities, including the distance the air monitors are located from the actual work. If community members know of sensitive populations or locations that should be monitored more closely, this information could help inform monitor placement.*

**Technical Comment #25:** Section 8.2 identifies benzene as a chemical hazard to be monitored. Section 9 indicates that benzene will be monitored in work zone air using real-time equipment. Appendix D, Section 3.1 seems to indicate that only total volatile organic compounds (TVOCs) will be monitored as a whole, not benzene or other specific volatile organic compounds (VOCs). *Community members may want to ask EPA to explain the air monitoring plan and whether benzene will be included in air monitoring.*

**Technical Comment #26:** Appendix D, Table 2 provides TVOC action levels for the perimeter air monitoring location. Based on the analysis, the TVOC action level is based on ethylbenzene. It is unclear how this calculation was made, given that the action level of 4 parts per million is greater than the site-specific screening level for ethylbenzene of 38 parts per billion or 0.038 parts per million. *Community members may want to ask for an explanation of the TVOC action level and understand how it is low enough to protect their air.*

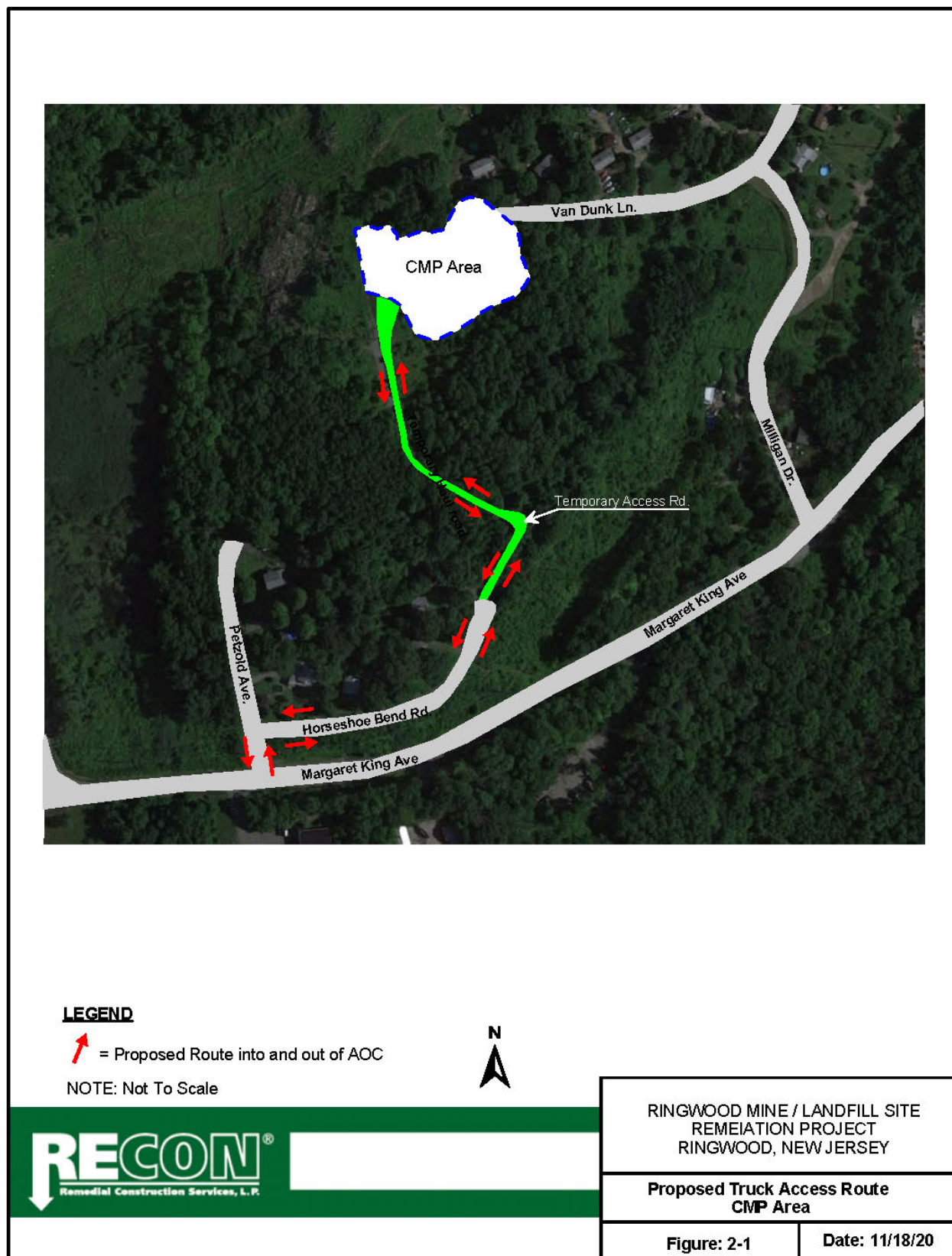
**Technical Comment #27:** Appendix H, the Transportation & Disposal Plan, indicates that RECON's project team will communicate with the Borough about traffic control measures and school bus schedules in Upper Ringwood. *Community members may want to communicate any transportation-related concerns or suggestions to Borough leadership and EPA.*

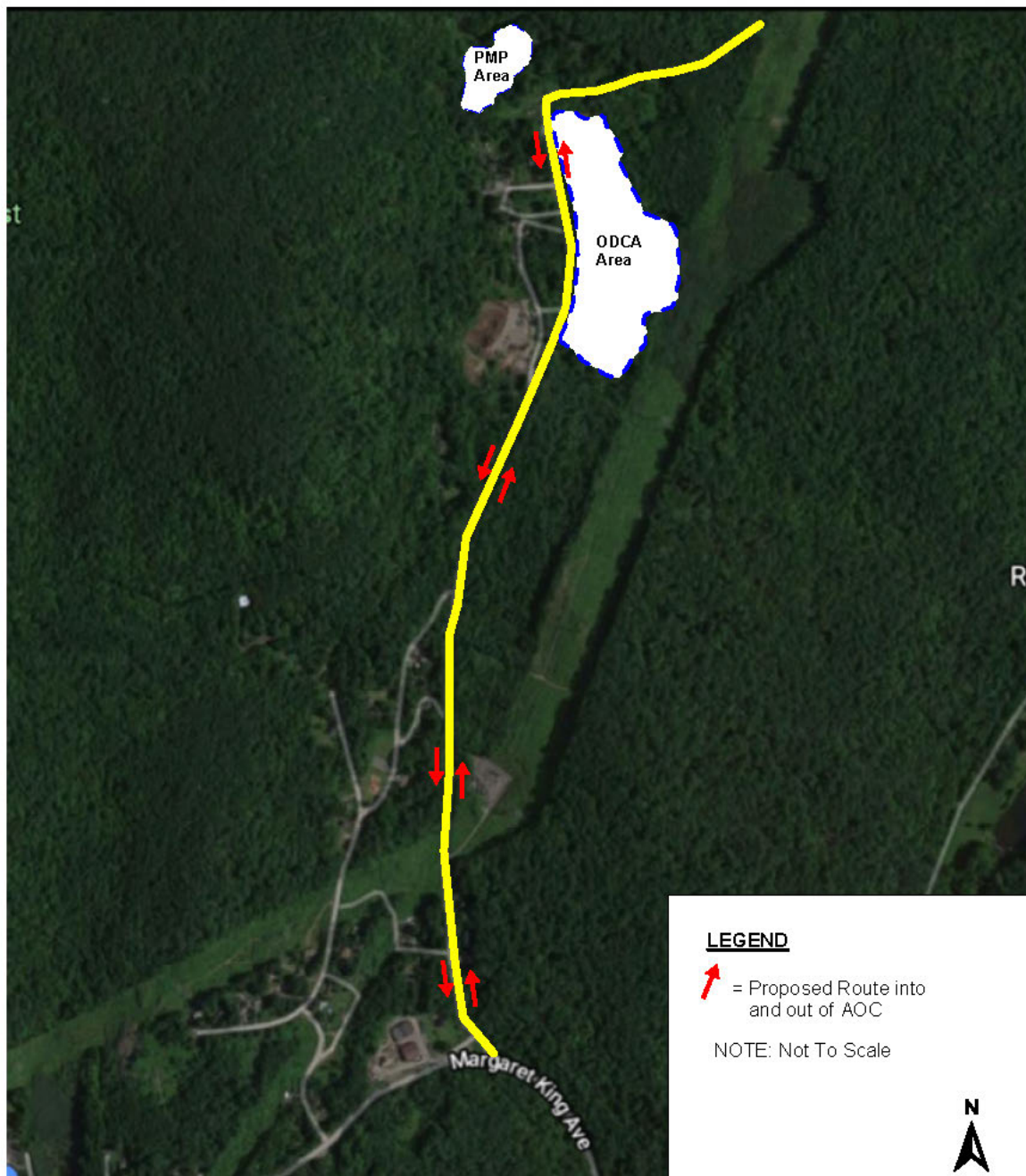
**Technical Comment #28:** Appendix H, Transportation & Disposal Plan, Section 3 describes area traffic routes. Site-related vehicular traffic will use Peters Mine Road to access work areas for the PMP Area and the OCDA. Traffic will access the CMP Area from Horseshoe Bend Road. *Community members may want to ask EPA who residents should contact with traffic-related concerns or feedback during cleanup activities.*

**Technical Comment #29:** Appendix H, Transportation & Disposal Plan, Section 4 says that any changes to the Transportation & Disposal Plan or to traffic routes will be subject to approval by the Borough. *Community members could ask EPA and Borough leadership about how parties will share these changes with community members.*




**Figure 2: Proposed Truck Access Routes to Each Area**





**LEGEND**

 = Proposed Route into and out of AOC

NOTE: Not To Scale



RINGWOOD MINE / LANDFILL SITE  
REMEIATION PROJECT  
RINGWOOD, NEW JERSEY

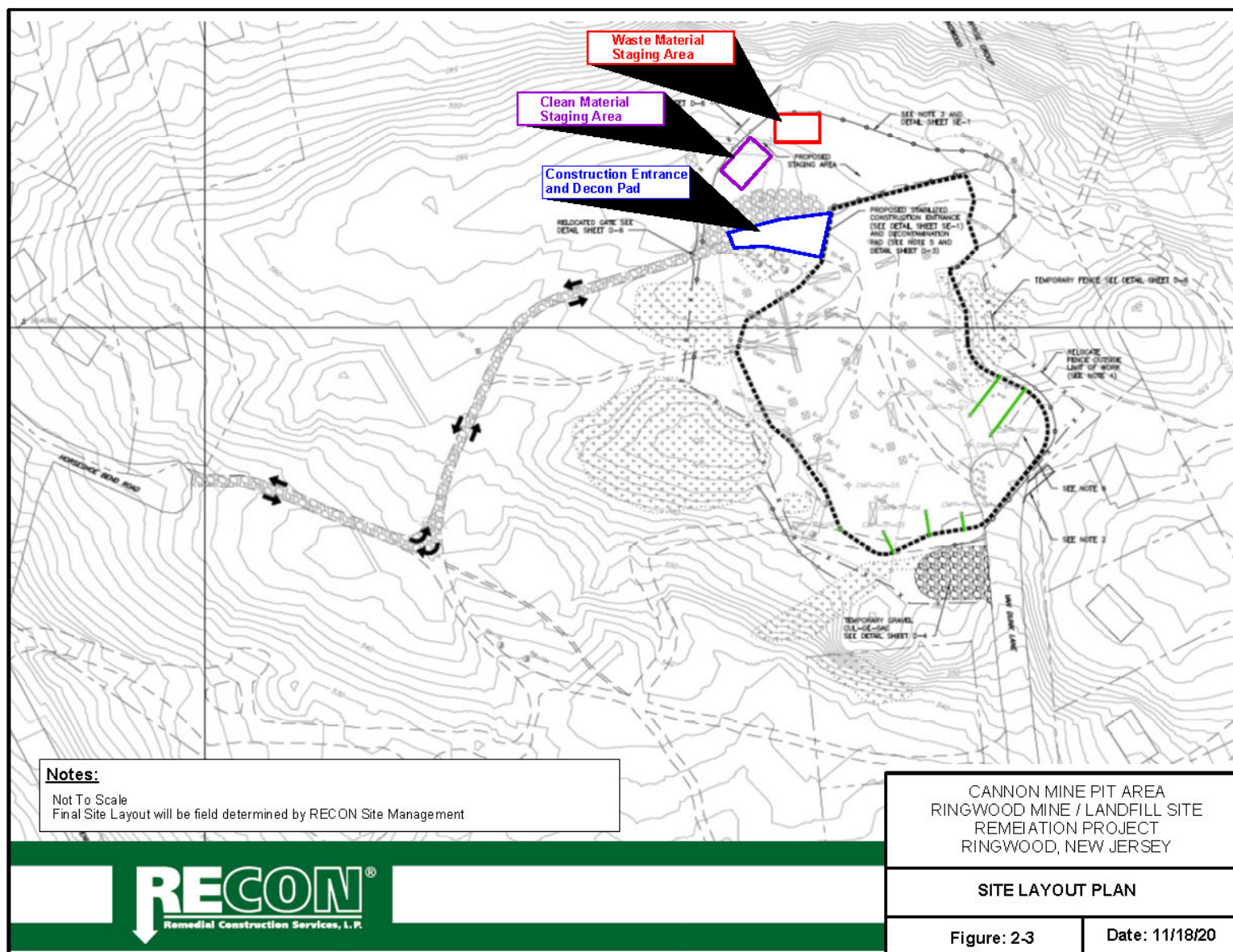
**Proposed Truck Access Route  
PMP and ODC Areas**

Figure: 2-2

Date: 11/18/20



**Figure 3: Site Layout Plans**





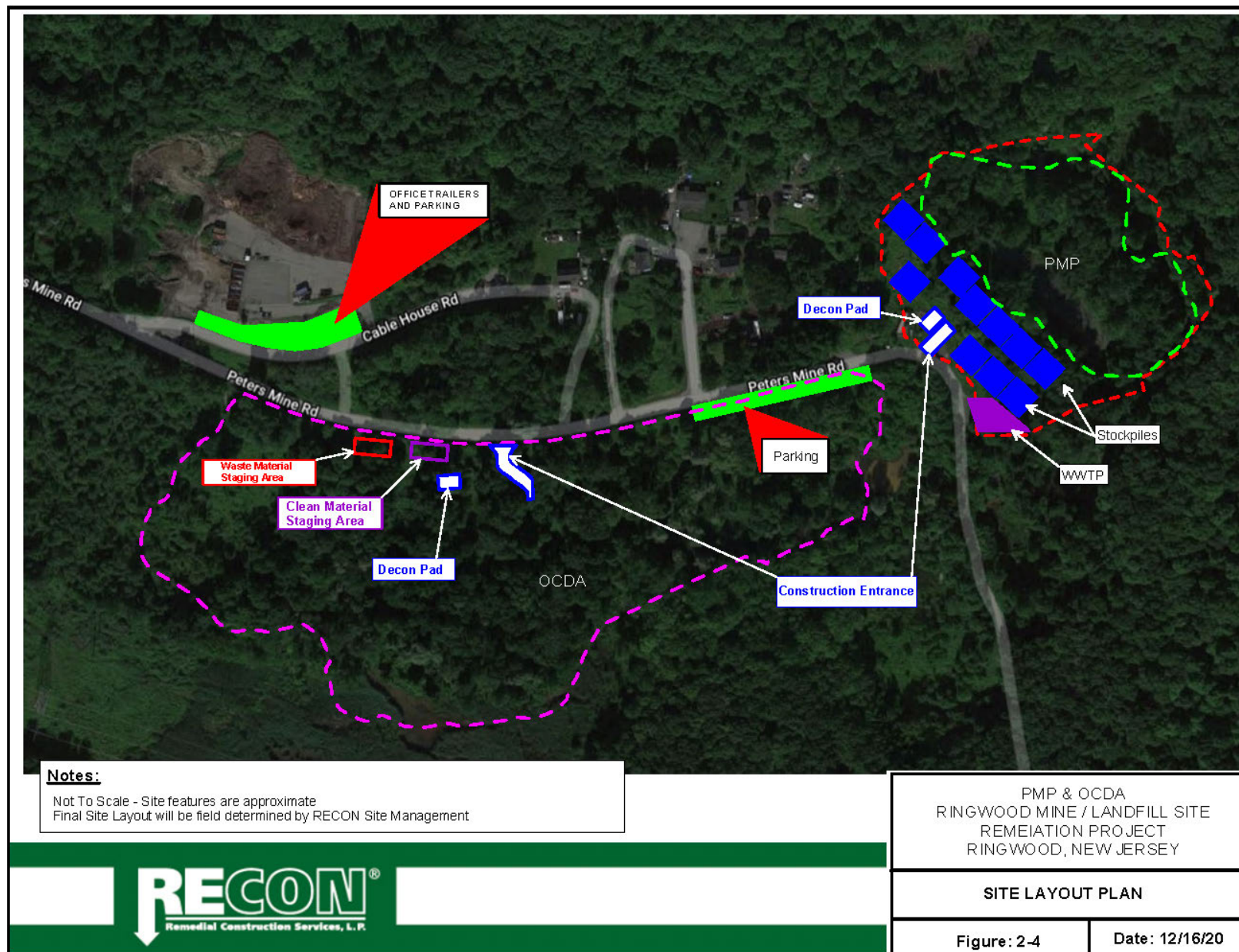


Figure 4: Sample Air Monitoring Locations (RAWP Attachment B)

