

## **13.1 INTRODUCTION**

This chapter addresses the potential for soil and groundwater contamination to exist along the Phase 2 alignment and describes changes in impacts with respect to contaminated materials under the Modified Design as compared to the 2004 FEIS Design.

The 2004 FEIS concluded that the potential for adverse impacts related to contaminated materials could occur during construction along the Phase 2 alignment, where contaminated soil and groundwater may be present as a result of past activities along the alignment. The 2004 FEIS identified measures to be implemented during construction to address this risk, including the use of Health and Safety Plans. The 2004 FEIS concluded that once construction is complete, the new subway would not result in significant adverse impacts related to contaminated materials. The Modified Design would not change the conclusions of the 2004 FEIS.

## **13.2 FEIS FINDINGS**

### **13.2.1 CONSTRUCTION IMPACTS**

The 2004 FEIS included a preliminary Environmental Site Assessment (ESA) for the full 8.5-mile length of the proposed Second Avenue Subway. In total, 724 sites were identified for potential contamination, with 143 considered candidates for further analysis, including 21 sites along the Phase 2 alignment. Soil and groundwater sampling was conducted for 11 locations along the project alignment, two of which were in the Phase 2 corridor. No contaminants with elevated levels were detected at these locations, but petroleum odors were observed at one of these locations and the 2004 FEIS concluded that further sampling would be needed.

The 2004 FEIS stated that ground areas that would be disturbed as part of the subway's construction would be evaluated and tested for contaminated materials, as appropriate, and that contaminated soils would be disposed of in accordance with all applicable local, state, and federal regulations. The 2004 FEIS indicated that once construction activities were complete, any remaining non-volatile subsurface contaminated materials would be "capped" by paved areas and potential pathways of exposure would be eliminated. Water and vapor barriers would be installed, as needed and feasible, to prevent or minimize seepage of water and vapors into the tunnel, which could include concrete tunnel liners with voids between the liner and the rock/soil sealed by injecting cement grout under pressure.

Levels of soil or groundwater contamination in areas to be disturbed by Phase 2 construction were not specifically identified in the 2004 FEIS, as this would be determined later at a time closer to initiation of construction of this phase. However, the 2004 FEIS identified potential contaminants that could be encountered and the process for addressing these contaminants. For instance, site-specific Health and Safety Plans (HASPs) were to be developed for each construction phase to detail the health and safety guidelines, procedures, and work practices that must be adhered to; all workers were required to follow all applicable local, state, and U.S. Occupational Health and

## **Second Avenue Subway Phase 2 Supplemental Environmental Assessment**

---

Safety Administration (OSHA) construction codes and regulations; and a hazardous materials management plan would be developed for testing, handling, transporting, and disposing of contaminated materials encountered during the proposed excavations, consistent with applicable regulations, which would be included in the project's CEPP. Contaminants encountered were to be disposed of and handled in accordance with applicable laws and regulations.

A testing protocol for water in the sumps was to be developed and approved by the New York City Department of Environmental Protection (NYCDEP) as part of the permit/approval and CEPP process for the construction of the Project. If any groundwater exceeded NYCDEP's sewer use limitations, it was to be treated by readily available technologies and retested before being disposed of to the sewer systems.

### **13.2.2 PERMANENT IMPACTS**

The 2004 FEIS disclosed that operation of the subway would include the use of a variety of chemicals, including fuels, lubricants, and other oils, which would be handled and stored according to all applicable city, state, and federal regulations. With these protocols in place, no adverse impacts related to contaminated materials were identified in the 2004 FEIS.

### **13.3 UPDATE OF BACKGROUND CONDITIONS**

A Contaminated Materials Screening Assessment was prepared in November 2017 for the Phase 2 alignment to update information in this corridor and account for changes in conditions since the 2004 FEIS. The screening assessment involved a database search, review of historic Sanborn maps, and visual site reconnaissance from publicly accessible areas. Conditions along the entire Phase 2 alignment were evaluated, with a focus on the proposed property acquisition sites and the areas of probable subsurface excavation. The screening assessment identified 29 sites that warrant further investigation, as compared to 21 sites identified in the 2004 FEIS along the Phase 2 alignment.

### **13.4 PHASE 2 MODIFIED DESIGN—CHANGES IN IMPACTS**

#### **13.4.1 CONSTRUCTION IMPACTS**

The updated Contaminated Materials Screening Assessment prepared in November 2017 for the Phase 2 alignment recommended that full Phase I ESAs be conducted on all proposed property acquisition sites. The Phase I ESAs would determine whether Phase II Investigations are warranted. Phase II Investigations are also recommended for the new station areas where excavation would occur adjacent or within sites identified for further investigation in order to establish appropriate handling protocols, as necessary.

Consistent with the 2004 FEIS, site-specific evaluations will be conducted for sites to be disturbed by construction activities for the Modified Design, and any contaminants encountered would be handled appropriately, and measures would be in place to protect worker and public safety. Therefore, no new or different adverse impacts related to contaminated materials during construction have been identified.

### **13.4.2 PERMANENT IMPACTS**

The Modified Design includes some changes to specific locations for ancillary facilities and entrances from those contemplated in the 2004 FEIS, and some modifications to the Phase 2 alignment. New sites have been evaluated, and some of them have the potential to be contaminated. The measures to mitigate these contaminated sites would be as described in the 2004 FEIS.

Consistent with the 2004 FEIS, with the Modified Design, the Project would establish appropriate protocols for storing and handling contaminated materials used in association with the new subway, as well as protocols for addressing migration of contaminated groundwater or vapors into the tunnels. As such, no new or different adverse impacts related to contaminated materials have been identified.

### **13.5 CONCLUSIONS**

Consistent with the approach outlined in the 2004 FEIS, further investigation of contaminated materials along the Phase 2 alignment has been conducted as the preliminary engineering design has advanced. Site-specific reconnaissance will be conducted for potential acquisition sites as the design is refined. Handling and management of contaminated materials would continue to be conducted in accordance with all applicable laws and regulations. Therefore, the Phase 2 Modified Design would not result in any new or different significant adverse impacts related to contaminated materials from those identified in the 2004 FEIS. \*