

**A. INTRODUCTION**

This chapter presents the findings of the hazardous materials assessments and identifies potential issues of concern that could pose a hazard to workers, the community and/or the environment associated with the proposed action. The development site is currently occupied by an asphalt-paved pedestrian walkway and a storage area for the Museum of Modern Art. The proposed project would entail the construction of a new, approximately 1,250-foot tall building with two basement levels. The building would contain museum space and residential and hotel uses and would require excavation for the basement levels and foundations. The site would be completely capped with the proposed building, and no landscaped surfaces would be present.

Environmental conditions resulting from previous and existing uses, both on-site and in the surrounding area, were assessed and documented in the *Phase I Environmental Site Assessment (ESA) Report, MoMA West 53rd Street* prepared by AKRF, Inc. for The Museum of Modern Art (MoMA) in February 2007 and the Phase II Environmental Site Investigation conducted by ATC Associates Inc. in July 2007.

The Phase I ESA and the Phase II identified an apparent underground fuel oil storage tank beneath Lot 66 and historic urban fill containing elevated concentrations of some semi-volatile organic compounds and metals beneath the development site. Due to the identified subsurface contamination, remedial measures to avoid adverse impacts during excavation for the proposed project would include conducting soil disturbance under a Construction Health and Safety Plan, proper handling and disposal of excavated soil, etc. as described below. With these measures, no significant adverse impacts related to hazardous materials would be expected during or after the proposed construction.

**B. EXISTING CONDITIONS****SUBSURFACE CONDITIONS**

Based on U.S. Geological Survey reports, the development site is approximately 65 feet above mean sea level. The Phase II site investigation indicated that urban fill, including construction and demolition debris, is present down to 10 to 11 feet below grade, with presumably native sandy or clayey soil beneath the fill, and highly weathered schist bedrock at 10 to 20 feet below grade sloping down from east to west. Groundwater was not encountered during the Phase II. Based on site topography, groundwater is estimated to be approximately 65 feet below grade. However, actual groundwater depth and flow direction are likely influenced by subsurface openings or obstructions (such as basements, underground parking garages and the subway tunnels under 53rd Street and Sixth Avenue) and other factors beyond the scope of the study. Groundwater in Manhattan is not used as a source of drinking water.

## HAZARDOUS MATERIALS ASSESSMENT

### *PHASE I ENVIRONMENTAL SITE ASSESSMENT (PHASE I ESA)*

The Phase I ESA included review of a variety of information sources including: Sanborn™ Fire Insurance maps; environmental regulatory agency databases identifying state and/or federally listed sites; and New York City databases and records (Department of Buildings and Fire Department). In addition, reconnaissance of the site and surrounding neighborhood was performed in January 2007.

The research indicated that the site was developed prior to 1892 with four- to five-story dwellings with basements. These buildings were demolished between 1988 and 2006. Buildings located on Lots 5, 66 and 69 may have contained fuel oil storage tanks (minor closed-status spills were listed relating to Lot 66). Since these tanks may not have been removed prior to demolition, they may still exist beneath the asphalt. Additionally, demolition debris from the historical on-site buildings may be present beneath the site.

The Phase I ESA recommended a subsurface investigation of the development site that would fulfill the hazardous materials-related requirements of the Lots 5-8 Restrictive Declaration (arising from the 1989 Museum of American Folk Art rezoning and amended in March 2007). The amended Declaration requires that prior to any soil disturbance on Lots 5-8, 66, 69 and 165 (the entire development site), an environmental investigation and, if necessary, remediation be performed in a manner satisfactory to the New York City Department of Environmental Protection.

### *PHASE II ENVIRONMENTAL SITE INVESTIGATION (PHASE II)*

The Phase II included a geophysical survey of the development site to identify buried tanks, the advancement of nine soil borings, and the collection of 17 soil samples from the borings.

The geophysical survey identified apparent buried fill lines extending from a fuel oil fill port in the West 54th Street sidewalk onto Lot 66, and an apparent underground storage tank on Lot 66. The extent of the tank could not be determined due to obstruction from a temporary platform constructed that had been erected prior to the Phase II investigation. Information requested from the New York City Fire Department (FDNY) indicated that a 275-gallon underground storage tank was closed and removed from Lot 66 (possibly the tank identified in the Phase I ESA as the source of several minor spills, but seemingly not the tank apparently detected during the survey). No other tanks were located during the survey. However, the effectiveness of geophysical surveys is limited by interference from buried metal, such as reinforced concrete and demolition debris.

Soil borings were advanced down to bedrock, encountered approximately 10 to 20 feet below grade. Urban fill, including construction and demolition debris, was present down to 10 to 11 feet below grade. The fill was underlain by presumed native soil (mainly sand or clay) or directly by bedrock; groundwater was not encountered. Seventeen soil samples were collected and analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), Target Analyte List (TAL) metals, and polychlorinated biphenyls (PCBs). Three composite soil samples were also collected and analyzed for hazardous waste characteristics and Total Petroleum Hydrocarbons,

The laboratory analysis indicated that several SVOCs and metals (including lead and mercury) commonly present in urban fill exceeded New York State Department of Environmental

Conservation (NYSDEC) Technical and Administrative Guidance Memorandum #4046 Recommended Soil Cleanup Objectives (RSCOs). No other exceedances of NYSDEC guidance values were detected. None of the composite samples were identified as hazardous waste. Except for trace levels of acetone, a possible laboratory contaminant, in one soil sample, no VOCs were detected, though field instrumentation had indicated slightly elevated levels of VOCs near the suspect underground storage tank on Lot 66.

### **C. THE FUTURE WITHOUT THE PROPOSED PROJECT**

As described in greater detail in Chapter 1, “Project Description,” in the future without the proposed project the development site will be developed with one of two scenarios—the Previously Approved Project or the Expanded Development Scenario. In both the future with the Previously Approved Project and the future with the Expanded Development Scenario, subsurface disturbance of the development site will be required, and will be therefore be subject to the legal requirements (including NYSDEC regulations) set out below regarding off-site soil disposal, petroleum tank removal and spill reporting, as well as the Restrictive Declaration for Lots 5 to 8. Therefore, in the future without the proposed project (for both scenarios), the potential for hazardous materials impacts will be reduced by measures similar to those for the proposed project.

### **D. PROBABLE IMPACTS OF THE PROPOSED PROJECT**

Environmental assessments identified hazardous materials concerns associated with the suspect underground storage tank on Lot 66 and elevated levels of SVOCs and metals in on-site historic fill materials. Although construction of the proposed project (like construction of either the Previously Approved Project or the Expanded Development Scenario) could increase pathways for human exposure to the known and potential contaminants, in all cases legal requirements for excavation and construction activities, as well as requirements associated with the Restrictive Declaration for Lots 5 to 8, would be followed. Thus, for construction of the proposed project (like for construction of either the Previously Approved Project or the Expanded Development Scenario), impacts would be avoided by performing construction activities in accordance with the measures set out in NYCDEP’s January 22, 2009 letter, as summarized below (see Appendix B):

- All activities involving disturbance of existing soils would be conducted in accordance with a Remedial Action Plan/Health and Safety Plan (RAP/HASP) that would detail measures to manage excavated soil (e.g., stockpiling and disposal procedures), reduce the potential for exposure (e.g., dust control), and identify and manage known contamination (e.g., petroleum storage tanks or contaminated soil) and unexpectedly encountered contamination. Soil disturbance would not occur without written NYCDEP approval of the RAP/HASP.
- The suspect underground storage tank on Lot 66, as well as any other underground storage tanks encountered during site development would be properly registered, if required, with the NYSDEC, and the New York City Fire Department. The tanks would be properly assessed, closed and removed in accordance with applicable requirements prior to, or as part of initial construction activities for the project.
- The RAP will specify that all material that needs to be disposed of (e.g., any contaminated soil and excess fill) would be properly handled and disposed of off-site in accordance with all applicable regulations. Excavated soils that are temporarily stockpiled on-site would be

covered with polyethylene sheeting while disposal options are determined. Additional soil testing would be conducted prior to soil disposal if required by the disposal facility.

- Since the development site would be entirely capped by the foundations for the proposed building and would not include landscaped surfaces, capping landscaped surfaces with clean fill would not be required.
- If dewatering is required for construction, testing would be performed to ensure that the groundwater would meet NYCDEP sewer discharge requirements. If necessary, pretreatment would be conducted prior to discharge to the City's sewer system, as required by NYCDEP permit/approval requirements.

With the implementation of these measures, no significant adverse impacts related to hazardous materials would result from construction activities on the development site. Following construction, there would be no potential for the proposed project (or the Previously Approved Project or Expanded Development Scenario) to have significant adverse impacts. \*