Chapter 11: Hazardous Materials

A. INTRODUCTION

This chapter assesses the hazardous materials potential impacts of the proposed actions and identifies potential issues of concern that could pose a hazard to workers, the community, and/or the environment during or after development of the proposed project. As described in Chapter 1, "Project Description," the applicants, the New York City Department of City Planning (DCP) and SJC 33 Owner 2015 LLC, are proposing a series of discretionary actions (the proposed actions) that would facilitate the redevelopment of St. John's Terminal Building at 550 Washington Street (Block 596, Lot 1) (the development site) with a mix of residential and commercial uses, and public open space (the proposed project) in Manhattan Community District 2. The development site currently contains a large, four-story commercial building with a one-story annex and a basement split into three sections, and although the building spans West Houston Street and the King Street right-of-way, the basement does not extend under these. There are numerous street-level loading docks.

The proposed project would entail demolition of the existing structure and excavation for the new cellar level. The proposed cellar would be deeper than the existing basement.

A *Phase I Environmental Site Assessment* (ESA) of the development site was prepared by Blackstone Consulting LLC in July 2015 in accordance with ASTM Standard E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice*. The ESA included a visual inspection; a review of historical land use maps, local records; prior reports; and a review of State and federal regulatory databases relating to use, generation, storage, treatment and/or disposal of hazardous materials.

Based on the results of the Phase I ESA, AKRF submitted a Subsurface (Phase II) Investigation Work Plan to New York City Department of Environmental Protection (DEP) in January 2016. The Work Plan was approved by DEP in a letter dated March 16, 2016, and subsequent modifications to the Work Plan (relocation of certain borings) were approved by DEP ~~in an email dated~~ on April 25, 2016 (see **Appendix C, "Agency Correspondence"**). The investigation was performed in May 2016 and the findings were presented in a Subsurface (Phase II) Investigation report, dated June 2016. The Phase II report along with a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP), setting out procedures to be followed during development of the proposed project, were submitted to DEP and approved on July 21, 2016 (see **Appendix C, "Agency Correspondence"**).

PRINCIPAL CONCLUSIONS

The proposed project would not result in any significant adverse impacts related to hazardous materials. ~~The proposed project would entail demolition of the existing structure and excavation for the new development.~~ A Phase I ESA was prepared in July 2015 in order to evaluate potential contamination on the project site. ~~Although the~~The Phase I ESA did not identify any

Recognized Environmental Conditions (the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property related to a release~~), the excavation activities could increase pathways for human exposure, impacts would be avoided by performing the project in accordance with the following:~~). However, based on the historical on-site and surrounding area land uses, DEP determined that a Phase II report was necessary to adequately identify/characterize the surface and subsurface soils of the subject parcels.

The Phase II Investigation report was prepared by AKRF, Inc. in June 2016. The investigation included the advancement of nine borings with the collection and laboratory analysis of fourteen soil samples and five groundwater samples (three from sumps in the basements and two from temporary wells installed in borings) and the installation of four soil vapor points with the collection of a soil vapor sample from each, encountered fill material (including brick, concrete, wood, and asphalt) down to the boring depths of approximately 10 feet below grade. Groundwater was first encountered at between approximately 5 and 10 feet below grade. Laboratory analysis of the samples found no evidence of an on-site spill but rather levels of a variety of metals and other constituents consistent with the fill material. One groundwater sample contained a historical gasoline additive (presumably from an off-site source) and one soil vapor sample contained a solvent above the State guideline for indoor air.

~~Prior~~Excavation activities could increase pathways for human exposure to the ~~proposed disturbance, a Subsurface (Phase II) Investigation involving~~fill and other constituents identified by the ~~collection of subsurface samples for~~ laboratory ~~analysis~~analyses, impacts would be ~~conducted~~avoided by performing the project in accordance with the ~~DEP approved Work Plan. Based on the findings of the Phase II, a~~following:

- A Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) ~~would be~~were prepared by AKRF, Inc. and ~~submitted to~~approved by DEP on July 21, 2016. The RAP and CHASP would be implemented during the subsurface disturbance associated with the proposed project. ~~for review and approval.~~The RAP and CHASP address: proper handling, transportation, and disposal of excavated material and construction/demolition debris; stockpiling procedures; air monitoring procedures; dust control procedures; the installation of two feet of certified clean fill across portions of the site in any landscaped/grass covered areas not capped with concrete/asphalt; the installation of a demarcation layer, such as orange snow fence, under the clean soil layer, as well as the installation of a vapor barrier system, a minimum thickness of 15 mil, outside of exterior below-grade foundation walls and beneath the building slab. The existing above ground storage tanks (ASTs) would be removed prior to or as part of demolition in accordance with applicable New York State Department of Environmental Conservation (DEC) and Fire Department City of New York (FDNY) requirements, including those relating to registration and spill reporting. Similarly, the closed-in-place Underground Storage Tank (UST) would be removed, along with any associated contaminated soil.
- If dewatering is necessary for the proposed construction, water would be discharged to sewers in accordance with DEP Bureau of Wastewater Treatment Wastewater Quality Control Permit requirements.
- Prior to demolition, the building would be surveyed for asbestos by a New York City-certified asbestos investigator. All such ACM would be removed and disposed of prior to demolition in accordance with local, state and federal requirements.

- With respect to lead-based paint, demolition work would be performed in accordance with applicable requirements (including federal Occupational Safety and Health Administration regulation 29 CFR 1926.62 — Lead Exposure in Construction).
- Unless there is labeling or test data indicating that any suspect PCB-containing electrical equipment and fluorescent lighting fixtures do not contain PCBs, and that any fluorescent lighting bulbs do not contain mercury, disposal would be conducted in accordance with applicable federal, state and local requirements.

~~A Subsurface (Phase II) Investigation Work Plan was prepared and approved by DEP, and the Applicant intends to implement this work plan and submit a Phase II Report and a RAP/CHASP for DEP's approval before the Final Environmental Impact Statement (FEIS) is issued. If the Work Plan is not implemented and the RAP/CHASP is not approved by DEP prior to the issuance of an FEIS, an (E) Designation will be placed on the project site to avoid any potential significant adverse impacts related to hazardous materials. Therefore, with~~With the inclusion of ~~any remedial~~these measures ~~described in the DEP approved RAP or the placement of an (E) Designation on the project site~~, the proposed development would not result in any significant adverse impacts related to hazardous materials.

B. ANALYSIS APPROACH

As described in Chapter 2, "Analytical Framework," in the future with the proposed actions (the With Action condition), the development site is assumed to be redeveloped with one of two development programs: the proposed project or the proposed project with big box retail. In addition, under both of these scenarios, the South Site could contain either hotel or office use. In either of these scenarios, the same ground disturbance would be required, and they have the same potential for hazardous materials impacts. Therefore, the analysis in this chapter is applicable to both scenarios.

C. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

The development site is approximately 10 feet above sea level, sloping down to the west. The approximate depth to bedrock is 60-90 feet below the surface. Groundwater ~~is~~was first encountered in temporary monitoring wells at depths of approximately ~~18~~5 and 10 feet below ~~street level (three feet below~~ground surface (bgs) during the ~~basement), based on water depth in basement sumps~~field investigation. Groundwater most likely flows in a westerly direction toward the Hudson River, which is approximately 300 feet away, however, the actual flow direction can be affected by many factors including past filling, underground utilities, old bulkheads, tidal fluctuations, and other factors beyond the scope of investigations conducted to date. Groundwater in Manhattan is not used as a source of potable water (the municipal water supply uses upstate reservoirs).

HAZARDOUS MATERIALS ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT

The Phase I ESA did not identify any Recognized Environmental Conditions (the presence or likely presence of any hazardous substances or petroleum products in, on, or at a property related

to a release). The building was originally constructed as a three-story railroad freight terminal building in 1933. The fourth floor was added in stages between 1966 and 1972. The annex building was added in 1965. Based on the review of aerial photographs, topographic maps, fire insurance maps, and city directories, the northern portion of the development site was developed by the 1890s with various businesses including a lumber yard, cabinet maker, a steam laundry and various warehouses. The 1938 through 1973 city directory listings warehousing, freight distribution, and shipping businesses. No historical operations of concern for hazardous materials were identified, though prior to the current buildings the project site included a coal yard.

Operations of current tenants involve 16 diesel ASTs for backup generators and although releases of diesel have been reported, all cases were subsequently closed to the satisfaction of the DEC. Operations also involved generation of hazardous wastes, but records include required manifesting (indicating proper off-site disposal) and there have been no associated violations.

In addition to the ASTs, a 4,000 gallon UST is believed to be located beneath the sidewalk at 350 West Street (along the north side of Houston Street near the intersection with West Street). It was reportedly closed in place in 1997 with no further action required, but no soil or groundwater testing are reported in the DEC case file.

Based on prior testing, the building is known to include asbestos-containing materials (ACM) and lead-based paint (LBP). Given the age of the building, it may well contain polychlorinated biphenyls (PCBs), since these are often found in older transformers and hydraulic equipment.

SUBSURFACE (PHASE II) INVESTIGATION

The Subsurface (Phase II) Investigation, which included the advancement of nine borings with the collection and laboratory analysis of fourteen soil samples and five groundwater samples (three from sumps in the basements and two from temporary wells installed in borings) and the installation of four soil vapor points with the collection of a soil vapor sample from each, encountered fill material (including brick, concrete, wood, and asphalt) down to the boring depths of approximately 10 feet below grade. A geophysical survey identified the presence of multiple utilities/conduits beneath the sidewalks along the northern, eastern and western perimeters of the building, but no anomalies consistent with underground petroleum tanks were noted.

A summary of the laboratory analysis results is as follows:

Soil Analysis

Compared to State Cleanup Objectives for exposed soils in multi-family residential settings (6 NYCRR Part 375-6.4(b)2), there were no exceedances for volatile or semivolatile organc compounds (VOCs or SVOCs). However, there were exceedances for chromium, lead, and mercury, likely attributable to the fill materials, and not indicative of a spill.

Groundwater Analysis,

One sample contained a gasoline-related VOC, methyl tert-butyl ether (MTBE), at a level slightly exceeding the groundwater/drinking water standard (though groundwater in Manhattan is not used as a source of drinking water). Six SVOCs and thirteen metals also exceeded these standards in the unfiltered samples, but only magnesium and sodium (likely naturally occurring) exceeded them in filtered samples. One PCB (Aroclor-1260) was detected in a sump sample at a level above the standards. These findings (except for the magnesium and sodium) were likely

attributable to entrained fill material and did not indicate a spill. Pesticides were not detected in the samples.

Soil Vapor Analysis

The only exceedance of a State indoor Air Guidance Value AGV was for the chlorintaed solvent trichloroethene (TCE) detected in one sample. However, other VOCs commonly associated with petroleum and certain solvents (for which there are no AGVs) were also detected at concentrations not atypical of current/former commercial/industrial neighborhoods.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

In the future without the proposed project, the project site would be redeveloped with commercial buildings. Demolition and excavation for the No Action project would require all the measures described below (with the exception of the first bullet) to avoid significant adverse impacts due to the potential presence of hazardous materials.

E. THE FUTURE WITH THE PROPOSED ACTIONS

The proposed project would entail demolition of the existing structure and excavation for the new development. The proposed cellar would be deeper than the existing basement. Although these activities could increase pathways for human exposure, impacts would be avoided by performing the project in accordance with the following:

- ~~Prior to the proposed disturbance, a Subsurface (Phase II) Investigation involving the collection of subsurface samples for laboratory analysis would be conducted in accordance with the DEP-approved scope of work. Based on the findings of the Phase II, a~~ A RAP and associated CHASP ~~would be~~) were prepared by AKRF, Inc. and ~~submitted to~~approved by DEP on July 21, 2016. The RAP and CHASP would be implemented during the subsurface disturbance associated with the proposed project. ~~for review and approval.~~The RAP ~~would address requirements for items such as: soil stockpiling, soil disposal~~ and CHASP address: proper handling, transportation~~; dust control; quality assurance;~~, and ~~contingency measures should additional underground petroleum storage tanks or soil/groundwater contamination be unexpectedly encountered. The RAP would also address any measures required to be incorporated into the new building, such as a vapor barrier. The CHASP would include measures for worker~~disposal of excavated material and ~~community protection, including personal protective equipment, dust control and~~ construction/demolition debris; stockpiling procedures; air monitoring ~~The~~ procedures; dust control procedures; the installation of two feet of certified clean fill across portions of the site in any landscaped/grass covered areas not capped with concrete/asphalt; the installation of a demarcation layer, such as orange snow fence, under the clean soil layer, as well as the installation of a vapor barrier system, a minimum thickness of 15 mil, outside of exterior below-grade foundation walls and beneath the building slab. The existing above ground storage tanks (ASTs) would be removed prior to or as part of demolition in accordance with applicable New York State Department of Environmental Conservation (DEC) and Fire Department City of New York (FDNY) requirements, including those relating to registration and spill reporting. Similarly, the closed-in-place Underground Storage Tank (UST) would be removed, along with any associated contaminated soil.

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