4.11.1 INTRODUCTION

Contaminated materials are potentially harmful substances that may be present in soil, groundwater, or building materials and may pose a threat to human health or the environment. These materials are frequently encountered during construction activities in areas that have been subject to past development, including from filling and industrial uses. This chapter assesses the potential for the presence of contaminated materials at the Farley Complex and Development Transfer Site, the potential for exposure to these materials during and after the construction of the Project, and the specific measures that would be employed to protect public health, worker safety, and the environment.

This evaluation focuses on construction activities since this work would disturb building materials, the soil and, in some locations, groundwater. The chapter also describes the measures that would be implemented to avoid potential impacts both during construction and once the Project is completed and operational.

4.11.2 METHODOLOGY

The analysis begins by considering the location, type, and extent of contaminated materials that may be present at the project site. The discussion of current environmental conditions at and beneath the Farley Complex is based on information provided in several Phase I Environmental Site Assessments (ESAs): one primarily of the above grade space prepared by AKRF, Inc. of New York, New York updated May 2005, that included the review of previous reports prepared by ATC Associates, Inc. in 2000/2001 regarding testing of building materials for asbestos, lead-based paint (LBP), polychlorinated biphenyls (PCBs), and subsurface soil; another of the subgrade space prepared by Day Environmental Inc. of Rochester, New York, dated April 14, 2006 that included a detailed site inspection and review of various earlier studies; and most recently of the Farley Complex and of the Development Transfer Site prepared by Ecology & Environment, Inc. (E & E) in March 2007. All ESAs were prepared in accordance with American Society for Testing and Materials (ASTM) Standard Practice E 1527.

The objective of a Phase I ESA is to identify the presence or likely presence, use, or release of hazardous substances or petroleum products, defined in the ASTM E 1527-00 as Recognized Environmental Conditions (RECs). AKRF's Phase I ESA included preliminary evaluations of other potential environmental issues or conditions that are not required by ASTM E 1527, such as radon, asbestos-containing materials (ACM), LBP and PCB-containing equipment.

The Phase I ESAs were conducted to determine past and present uses of the property and to identify potential sources of contamination based on historic and/or current land usage and/or as a result of incidents such as prior release events. This information was obtained through the review of historical maps, regulatory agency databases, other records and previous reports, reconnaissance of the site and adjoining properties, and interviews with persons familiar with

property history and usage. Historical information sources for the Phase I ESAs included Sanborn® Real Estate Atlases and Fire Insurance Maps (Sanborn Maps) from 1890 to 1996, U.S. Geological Survey (USGS) topographic maps dating from 1897 to 1995, and aerial photographs dating from 1943 to 1995. The U.S. Environmental Protection Agency (EPA) and NYSDEC databases reviewed were:

- National Priority List (NPL);
- Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) list;
- CERCLIS No Further Remedial Action Planned (NFRAP);
- Resource Conservation and Recovery Act (RCRA) hazardous waste treatment, storage, and disposal facilities list;
- RCRA Corrective Action;
- Emergency Response Notification System (ERNS);
- Major Oil Storage Facilities list (more than 400,000 gallons);
- Hazardous Waste Generators and Transporters list;
- Historic Utility Facilities;
- Chemical and Petroleum Bulk Storage Facilities list (under 400,000 gallons);
- Hazardous Material Spills, including Leaking Underground Storage Tank (LUST) sites;
- Toxic Release Inventory Sites list;
- Air and Toxic Wastewater Discharge Sites; and
- Civil Enforcement Docket Sites (sites involved in environmental enforcement actions).

4.11.3 EXISTING CONDITIONS

FARLEY COMPLEX

LAND USE HISTORY

The Farley Complex consists of two buildings constructed over the Pennsylvania Station Rail Yard; the original structure (the Farley Building), including the excavations for the tracks, was constructed between 1910 and 1913 and the Western Annex was constructed in 1934. The Farley Complex has been used by the USPS as a mail processing and distribution center since its construction.

The site is essentially flat, sloping slightly downwards from north to south and from east to west, at a (street level) elevation of approximately 30 feet above mean sea level. Depth to bedrock is approximately 10 feet below street level; as a result, there is likely to be little or no soil in most areas of the site as the original excavations for the tracks would have removed all the original soil and some bedrock. Groundwater, if present, would be expected to be first encountered at approximately 20 to 30 feet below grade and to flow towards the Hudson River, but the depth and flow direction may be dependent on subsurface openings such as rail, subway and vehicle tunnels. Groundwater in Manhattan is not used as a source of drinking water.

POTENTIAL FOR SITE CONTAMINATION

The site reconnaissance performed for the AKRF Phase I ESA included an assessment of the following elements: current use of building; type of heating system; current water and sanitary connections; the presence of vent pipes and fill caps associated with petroleum storage tanks; electrical transformers; areas of dumping or filling; potential ACM; potential LBP; chemical storage; groundwater monitoring wells; and fluorescent light fixtures. The site reconnaissance performed for the Day Environmental Phase I ESA was limited to the below grade spaces: platforms, tracks, tunnels, etc.

The locations of potential contaminants that could be encountered through the proposed Project can be categorized as being either subsurface (e.g., ballast, soil, soil gas, groundwater, bedrock) or above grade (e.g., building materials). Potential subsurface contaminants include but are not limited to volatile organic compounds (VOCs); semi-volatile organic compounds (SVOCs); metals, pesticides and PCBs. Potential above grade contaminants include, but are not limited to ACMs, LBP, PCBs, and mercury.

Subsurface Contaminants

Per the ATC Reports reviewed as part of the Phase I ESAs and the records reviewed by Day Environmental, subsurface contamination (including PCBs) of yard ballast has been documented, and in at least some areas, removed. It is reasonable to assume that there is a potential for encountering similar contamination in other subsurface areas of the project site as well.

There is no evidence that petroleum tanks were ever utilized by the USPS at the Farley Complex and it appears that, at most, small oil tanks were present at track level. Day Environmental's site reconnaissance identified oily liquid in an elevator shaft in the tunnel area and staining of ballast in many areas. Other contaminants, such as VOCs, SVOCs, metals and PCBs could have resulted from spills on railroad lines. Pesticides and herbicides could have been applied along railroad lines as well.

Non-railroad activities that could have resulted in subsurface contamination include post office printing, silk screening and painting operations, and potentially a former dry cleaner and foundry that may historically have been present in the Farley Complex. However, since such activities would likely have occurred well above track level in buildings served by the municipal sewer system, there is a low potential for subsurface contamination associated with these activities.

Asbestos-Containing Materials

Certain building materials used in the construction of the existing buildings contain asbestos. Asbestos fibers are potentially harmful if they become airborne and are inhaled. EPA prohibited the use of asbestos in spray-on fireproofing in 1972 and in thermal insulation in 1978. In addition, normally non-friable asbestos-containing products (i.e., those that when dry, cannot be crumbled, pulverized, or reduced to powder by hand pressure) that are typically stable could be damaged during the abatement process, and would be considered friable ACM thereafter. Three asbestos surveys were conducted at the Farley Complex in February 2000, September 2000, and February 2001. These surveys indicated that ACM is present throughout the Farley Complex. All exposed asbestos has reportedly been removed. All asbestos that is still in place is maintained under an ACM management plan.

Lead-Based Paint

Buildings and other structures constructed prior to 1960 may contain LBP. Dust from LBP may cause learning disabilities and other adverse health effects when inhaled or ingested. Although the use of LBP in residences was banned by the Consumer Products Safety Commission in 1978 and by New York City in 1960, the use of LBP was common in New York City prior to this ban and continued in non-residential structures into the 1970s. Three LBP surveys were conducted at the Farley Complex in February 2000, September 2000, and February 2001. These surveys indicated that LBP is present throughout the Farley Complex. All LBP that is still in place is maintained under an LBP management plan.

Polychlorinated Biphenyls

PCBs are frequently present in transformers, electrical feeder cables, hydraulic equipment, and fluorescent light ballasts that were manufactured prior to 1978. Disposal of such items must be in accordance with applicable federal and State regulations, so as to minimize human and environmental contact with PCBs. PCBs do not readily break down in the environment, and thus could remain in place for long periods of time. With regard to construction, PCBs can present risks to workers and public health and safety, through direct contact or ingestion of soil containing PCBs. A limited PCB survey was conducted at the Farley Complex in September 2000. The survey confirmed the potential presence of PCBs at the Farley Complex in the hydraulic equipment, trash compactors, switch gear, and fluorescent lighting ballasts.

Petroleum Storage Tanks

There is a total of approximately 500 gallons of petroleum storage at the Farley Complex. This storage does not have secondary containment; hence, there is some potential for historical spills/leaks that may have resulted in subsurface contamination. There were no reported spills or releases in the regulatory databases reviewed.

Mercury-Containing Switching Devices

The steam system control switches located in various mechanical rooms in the Farley Complex may contain mercury.

DEVELOPMENT TRANSFER SITE

LAND USE HISTORY

Prior to the construction of One Penn Plaza, historic Sanborn maps from 1905 through 1951 indicated that the property was primarily occupied by storefronted residential/hotel buildings. However, an auto yard occupied the eastern edge of the site fronting West 33rd Street.

POTENTIAL FOR SITE CONTAMINATION

Subsurface Contaminants

The auto yard mentioned above included underground storage tanks (gasoline). Similar installations were located further east on the block, associated with a bus garage. However, the 8-level underground parking garage excavated as part of the One Penn Plaza development would have removed any underground storage tanks or associated residual contamination in soil or bedrock.

Asbestos-Containing Materials

Interviews with building management conducted during the ESA did not provide conclusive evidence of the presence or absence of ACM. Given the build year of 1966, it would be reasonable to assume that there may be some existing ACM. However, while subsequent renovations may have removed some or all of any original ACM, there is a possibility that ACM may exist within the structures of the parking garage.

Lead-Based Paint

Based on interviews with building personnel, the building's structural steelwork is reportedly not coated with LBP. No other LBP issues were observed during the site inspection conducted for the ESA; however, there is a possibility that LBP may exist within the structures of the parking garage that were not accessible during the site inspection.

PCB-Containing Equipment

Building management representatives were not aware of any PCB-containing equipment at the site. This is consistent with the findings of a previous Phase I ESA undertaken at One Penn Plaza by Warren & Panzer Engineers (2006).

Mercury-Containing Switching Devices

The steam station switches at One Penn Plaza contain mercury switches. No specific information was available for the Development Transfer Site; however, it is assumed that these materials may be present.

Petroleum Storage Tanks

There are no petroleum storage tanks at the Development Transfer Site.

Other Hazardous Materials

There is no significant hazardous materials storage at the Development Transfer Site.

4.11.4 NO ACTION ALTERNATIVE

In the No Action Alternative, the USPS would continue to occupy and use a portion of the Farley Complex. Commercial development in the Western Annex, to accommodate new retail and office uses (similar to that which would happen with the Preferred Alternative) would require interior demolition/renovation work as well as exterior work. Any ACM, LBP or PCB-containing materials that would be disturbed by this work would be managed, as required by applicable regulations, as described in Section 4.11.5, "Preferred Alternative," below. For the remainder of the Farley Complex, there would be no greater potential for significant adverse impacts related to hazardous materials than exists under existing conditions.

In the No Action Alternative, the Development Transfer Site would remain in its current usage. As such, there would be no greater potential for significant adverse impacts related to hazardous materials than exists under existing conditions.

4.11.5 POTENTIAL IMPACTS OF THE PREFERRED ALTERNATIVE

FARLEY COMPLEX

Construction of the proposed Project would involve a variety of activities inside the building that could encounter LBP, ACM, and electrical equipment containing PCBs and/or mercury. There may also be minimal subsurface disturbance during construction, which could encounter PCBs, petroleum-related compounds, and other contaminants. This section describes both the potential impacts that could result during construction of the Project.

PREVENTATIVE MEASURES TO MINIMIZE IMPACTS

Different types of contaminants and media (i.e., whether the contaminants are found in a building, in soil, rock, or groundwater) require different management approaches. Most contaminants are only transmitted when airborne or attached to dust. For this reason, all work with the potential to generate dust (e.g., demolition or excavation) would be performed in accordance with the requirements of the Occupational Safety and Health Administration (OSHA) (e.g., permissible exposure limits — PELs — contained in 29 CFR 1910.1000) to protect workers (who have the greatest potential for exposure because of their close proximity to the work areas), and with New York State Department of Health procedures for dust control (per NYSDOH's Generic Community Air Monitoring Plan) to protect the public. Additional city, state and federal requirements apply to LBP and asbestos disturbance.

Steps would be undertaken to protect the safety of the public, community residents, construction workers, and the larger environment. As described in this section, these include further investigations to better determine the nature and extent of contamination in areas where the Project might encounter it, and prescribed construction measures to manage contaminated materials during construction. All of these measures would be set out in the Project's specifications, both to meet all applicable legal requirements and to minimize potential impacts.

FURTHER INVESTIGATIONS

As ongoing engineering work advances, the specific areas where excavation or building disturbance would be needed would be identified, and additional investigation would be undertaken to determine the potential for contamination at these locations. This investigation may include additional documentary research as well as possible physical testing of building materials and soil. Where testing is to be performed, detailed protocols would be developed including field and laboratory methods, quality control sampling, sample custody procedures, field decontamination procedures and site-specific Health and Safety Program (HASP) plans.

After completion of any testing, a detailed report would be prepared that summarizes the findings of field activities and compares the analytical results with the appropriate federal, state, and city standards and guidelines. Although the need for and level of cleanup is frequently determined on a case-by-case basis, since the proposed Project could require the removal of ballast and soil from only limited areas, widespread remediation would not be required. Rather, management procedures would be limited to proper handling and disposal of these potentially contaminated materials under appropriate health and safety measures so that the work would be performed safely.

MEASURES TO MANAGE CONTAMINATED MATERIALS DURING CONSTRUCTION

Once contamination is known or suspected to exist in areas where excavation or disturbance would be required, appropriate measures would be followed to safely manage these areas. For any limited subsurface disturbance that may be required, this would include health and safety procedures to minimize exposure to workers and the public, including monitoring for dust, and potentially other compounds such as VOCs, both inside and outside of the work zone, as well as procedures for stockpiling, testing, loading, transporting, and properly disposing of the material. HASPs specific to the work being performed would address both the known contamination issues and contingency items. HASPs would be developed in accordance with OSHA requirements and guidelines. The HASP would define the appropriate designated personnel to ensure that all requirements of the HASP plans are implemented and the training and qualifications required for on-site personnel. The training would enable personnel to recognize and understand the potential hazards to health and safety, provide them with the knowledge and skills necessary to perform the work with minimal risk to health and safety, and ensure that they can safely avoid or escape from emergencies. It would also define site work zones and the monitoring necessary to identify potential exposure of the field personnel or the public to potential environmental hazards.

Waste (e.g., excavated soil/ballast or building materials removed during building demolition or renovation activities) can be classified as "hazardous waste" if it contains one of the federally "listed wastes" in the EPA's regulations set out at (40 CFR Part 261) or if it possesses one of four hazardous characteristics: ignitability, reactivity, corrosivity, or toxicity. New York State has similar requirements for identification and management of hazardous wastes (6 NYCRR Parts 370 – 376), but the state regulations include waste materials containing PCBs above 50 parts per million as a hazardous waste. The cleanup of PCBs is primarily regulated by the EPA under the Toxic Substances Control Act (TSCA) and its PCB-related implementing regulations (40 CFR Part 761). Wastes containing hazardous materials require special handling, storage, transportation, and disposal methods to prevent releases that could impact human health or the environment. NYSDEC requires the implementation of fugitive dust control measures at sites that contain elevated concentrations of SVOCs and metals (TAGM 4031, Fugitive Dust Suppression and Particulate Monitoring Program). To confirm the effectiveness of the dust control measures, Community Air Monitoring Plans that are approved by the New York State Department of Health are implemented, if applicable. Depending on the nature of the material, federal, State, and local requirements require the use of special containers or stockpiling practices for on-site storage of the material to prevent the release of hazardous materials to the environment. The federal, state, and local Departments of Transportation have requirements for transportation of wastes containing hazardous materials. Facilities that receive hazardous materials require federal, state, and local permits to accept the waste. The waste facilities require representative waste sampling and laboratory analysis prior to accepting material for disposal.

Should above ground or underground petroleum storage tanks be encountered and need to be removed to complete the proposed Project, the removal is regulated by NYSDEC (6 NYCRR Part 613.9), which requires that tanks no longer in use be closed in place or removed according to specific requirements. Contaminated soils surrounding the tanks, separate phase product on the water table, or contaminants dissolved in the groundwater must also be removed (6 NYCRR Part 611.6).

Although it is not expected, it is possible that contaminated groundwater could be encountered during excavation activities. NYSDEC has promulgated drinking water standards and uses them

as reference values for groundwater. Although these (Class GA Standards) standards are intended for public drinking water supplies, they are generally applied by the NYSDEC to groundwater and are also used to evaluate overall water quality. The DEP, Bureau of Wastewater Pollution Control has established requirements limiting the concentrations of certain constituents in effluent discharged to the municipal sewer system. DEP's requirements are based, for the most part, on the effect of the contaminants on the receiving waters or treatment plant. Prior to discharging to the sewer, a permit from DEP is required that would require testing of the water (with pre-treatment if levels were above the DEP's allowable limits) prior to discharge to the sewer system.

ASBESTOS-CONTAINING MATERIAL MANAGEMENT PLAN

Building demolition/renovation has the potential to disturb ACMs. Proper removal, disposal, and handling of ACMs is required under Article 30 of the State of New York State-Labor Law; New York State Asbestos Regulations, 12 NYCRR-Part 56 Asbestos Regulations (i.e., ICR #56), and the asbestos control requirements of DEP set out in Title 15 of the Rules of the City of New York. Handling and disposal of asbestos would conform to OSHA (29 CFR 1926.1101), U.S. Department of Transportation (49 CFR 171, 172 and 173) and EPA (40 CFR Part 61) requirements. Appropriate engineering controls (e.g., dust control) will minimize asbestos exposure and would be implemented prior to demolition/renovation. Any disturbance of ACMs by demolition, construction or renovation activities for the proposed Project would be subject to federal, state, and New York City environmental and occupational safety requirements that apply to the disturbance of ACMs and would be managed pursuant to an ACM management plan to comply with all applicable requirements and mitigate potential environmental hazards.

LEAD BASED PAINT MANAGEMENT PLAN

Surfaces coated with LBP require proper abatement of the lead paint prior to disturbance that would generate lead-containing dust or vapors (lead vapors could be generated through the cutting or welding of lead painted materials, such as structural steel). If lead-coated surfaces are present, an exposure assessment would be performed to determine whether lead exposure would occur during the demolition. If the exposure assessment were to indicate the potential to generate airborne dust or fume lead levels exceeding health-based standards, a higher personal protection equipment standard would be employed to counteract the exposure. In all cases, appropriate methods to control dust and air monitoring, as required by OSHA, would be implemented during demolition activities. Any LBP that would be disturbed by demolition, construction or renovation activities for the proposed Project would be managed in accordance with an LBP management plan to mitigate potential environmental hazards.

PCB-CONTAINING EQUIPMENT MANAGEMENT PLANT

Suspected PCB-containing equipment (e.g., transformers, electrical feeder cables, hydraulic equipment, and fluorescent light ballasts) would be surveyed and evaluated prior to building demolition or utility relocation. PCB-containing equipment that would be disturbed by the work would be removed and disposed of in accordance with applicable federal (40 CFR Part 761), state (6 NYCRR Parts 360 – 376), and local requirements. Any Farley Complex PCBs that would be disturbed by construction or renovation activities would be managed in accordance with a PCB management plan to mitigate potential environmental hazards. Numerous transformers and other kinds of electrical equipment are present at track level. Staining, possibly associated with releases from transformers, was also noted at track level. Historical releases

from PCB-containing equipment (potentially including train-mounted equipment) is evidenced by the known subsurface PCB contamination, noted above. Any disturbance of contaminated soil or ballast would be managed in accordance with a site specific HASP and applicable federal, state, and city requirements.

MERCURY-CONTAINING SWITCHING DEVICES

If demolition or renovation activities would require the removal of these switches, qualified and knowledgeable personnel would determine whether mercury is present prior to their removal. Any recycling or disposal of the mercury and equipment would be performed in accordance with applicable federal and state solid and hazardous waste requirements.

DEVELOPMENT TRANSFER SITE

Although a garage with fuel tanks previously existed at, and immediately east of, the Development Transfer Site, any residual soil contamination from that or other previous uses would have been removed during the construction of the eight below-grade levels of parking, which extend well into bedrock. As such, even if new construction were to require additional excavation, there is a low potential for encountering subsurface hazardous materials. Should ACMs or LBP be present within the existing above-ground structures or below-grade parking areas, their removal or disturbance would be addressed in conformance with applicable federal, state, and local requirements. Should PCB-containing equipment be found, it would be managed according to all applicable requirements. Should the mercury-containing switches at the Development Transfer Site be removed, such removal would be done in compliance with all applicable requirements.

CONCLUSIONS

With the implementation of the measures set out above, no significant adverse impacts related to contaminated materials would be expected to occur as a result of the proposed Project. Although construction of the proposed Project may not remove all contaminated materials such as asbestos and lead paint from the Farley Complex and the subsurface, public health would be protected with the continued implementation of appropriate procedures. ✷