Chapter 10: Hazardous Materials

A. INTRODUCTION

This chapter presents the findings of the hazardous materials assessment and identifies potential issues of concern with respect to workers, the community, and/or the environment during construction and after implementation of the Proposed Actions.

As detailed in Chapter 1, "Project Description," and illustrated in **Figure 1-2**, the project site is comprised of the following three geographic areas:

- **The Proposed Development Area**[1] consists of two superblocks (the North and South Blocks) occupied by residential, commercial, recreational buildings, and open space.
- **The Commercial Overlay Area**[2] is occupied primarily by academic, commercial and residential buildings.
- **The Mercer Plaza Area**[3] consists of a public plaza atop a below-grade NYU cogeneration facility.

The potential for hazardous materials in the Proposed Development Area, the Commercial Overlay Area and the Mercer Plaza Area was evaluated based on a March 2011 *Phase I Environmental Site Assessment* (ESA) of the Proposed Development Area, a November 2009 *Limited Hazardous Materials Evaluation* of the Commercial Overlay Area and Mercer Plaza Area, and a September 2011 *Subsurface (Phase II) Investigation of the Proposed Development Area*, all prepared by AKRF Inc. Within the Proposed Development Area, the proposed project would entail the demolition of three buildings (Coles Recreation Center, Morton Williams Supermarket and the retail building on the northern superblock) and the construction of four new buildings (including academic uses, residential units for faculty and students, a new athletic facility, a University-affiliated hotel, and retail uses) and potentially, a public school. The new construction would occur in stages and would entail subsurface disturbance for building basements, including below-grade academic uses and below-grade parking.

---

[1] The Proposed Development Area includes: Block 524, Lots 1, 9, and 66; Block 533, Lots 1 and 10; and the portions of Mercer Street and LaGuardia Place that are currently not improved as streets and that are proposed to be demapped, either entirely or below a defined limiting plane. The unimproved portions of Mercer Street and LaGuardia Place owned by the City are under the jurisdiction of the New York City Department of Transportation (NYCDOT), and are referred to in this DEIS, respectively, as the "Mercer Street Strip" and the "LaGuardia Place Strip." The City-owned portion of Bleecker Street adjacent to the South Block (none of which is proposed to be demapped) is under the jurisdiction of the New York City Department of Parks and Recreation (NYCDPR), and is referred to herein as the "Bleecker Street Strip."

[2] The Commercial Overlay Area includes: Block 546, Lots 1, 5, 8, 10, 11, 15, 20, 21, 26, 30; Block 547, Lots 1, 4, 5, 8, 14, 15, 18, 19, 20, and 25; and Block 548, Lots 1, 4, 21, 24, 40, and 45.

[3] The Mercer Plaza Area contains a portion of mapped street on the west side of Mercer Street between West 3rd and 4th Streets.

No construction involving soil disturbance is proposed in the Commercial Overlay Area as part of the Proposed Actions.[1] Although the Mercer Plaza Area is discussed as part of the Proposed Actions, no new development or subsurface disturbance is proposed in this area. Therefore, the analysis primarily focuses on the Proposed Development Area.

B. PRINCIPAL CONCLUSIONS

A Phase I Environmental Site Assessment (ESA) performed for the Proposed Development Area identified potential sources of contamination, including historical manufacturing uses, a Consolidated Edison substation, garages and auto repair shops as well as nearby historical manufacturing, auto-related uses, and dry cleaners. A fuel oil spill (Spill #0910543) was reported on the North Block of the Proposed Development Area in December 2009 due to a leak from a No. 6 fuel oil underground storage tank (UST) for an on-site residential building. The leaking UST was subsequently closed and removed, and three additional USTs used for heating residential buildings on the North Block were closed in place. Investigation of the spill indicated that contamination was generally limited to soil above the water table, with limited impacts to groundwater. Remediation is in progress, and the spill listing remains open.

Based on the concerns identified by the Phase I ESA, a Subsurface (Phase II) Investigation was performed which included the collection of soil and groundwater. Concentrations of certain semi-volatile organic compounds (SVOCs) and metals in the soil samples were somewhat elevated, but likely attributable to urban fill materials rather than a spill or release. One soil sample collected near an underground electrical transformer vault contained elevated concentrations of polychlorinated biphenyls (PCBs), which may be attributable to a release from the transformer and/or urban fill materials. No petroleum-contaminated soil (e.g., associated with Spill No. 0910543) was encountered in the proposed disturbance areas. The groundwater samples detected certain volatile organic compounds (VOCs) commonly associated with solvents at concentrations below or slightly above NYSDEC drinking water standards (though groundwater in Manhattan is not used as a source of drinking water). These VOCs were not detected in on-site soil samples, and are therefore likely attributable to regional groundwater conditions.

To reduce the potential for human or environmental exposure to known or unexpectedly encountered contamination during and following the Proposed Actions, a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) would be prepared and submitted to the New York City Department of Environmental Remediation (OER) for review and approval. The RAP and CHASP would be implemented during project construction. The RAP would address requirements for items such as: soil stockpiling, soil disposal and transportation; dust control; dewatering procedures; quality assurance; and contingency measures should petroleum storage tanks or contamination be unexpectedly encountered as well as vapor barriers or other measures to reduce the potential for vapor intrusion into new construction. The CHASP would identify potential hazards that may be encountered during construction and specify appropriate health and safety measures to be undertaken to ensure that subsurface disturbance is performed in a manner protective of workers, the community, and the environment (such as personal protective equipment, air monitoring including community air monitoring, and emergency response procedures).

[1] At 15 Washington Place, in the future without the Proposed Actions soil disturbance could occur as part of the potential redevelopment; soil disturbance here would not be associated with the Proposed Actions.

A Limited Hazardous Materials Evaluation of the Commercial Overlay Area and Mercer Plaza Area identified potential on-site or nearby sources of subsurface contamination, including: historical manufacturing uses, laboratories, dry cleaning, known or potential petroleum storage, and regulatory listings indicating spills and hazardous waste generation. However, the Proposed Actions would not result in an increased potential for exposure to any associated subsurface contaminants compared to the Future without the Proposed Actions since no soil disturbance is expected to occur in these areas due to the Proposed Action (only redevelopment of the ground floors of several buildings for retail uses).

Lead-based paint, asbestos-containing materials (ACM) and PCB-containing electrical and/or hydraulic equipment and fluorescent lighting fixtures may be present in the Proposed Development Area, Commercial Overlay Area and Mercer Plaza Area. Both during and following the Proposed Actions, regulatory requirements and, for NYU-owned buildings, university-wide Environmental Health and Safety (EHS) plans pertaining to ACM, lead-based paint, PCBs and chemical use and storage would be followed.

With these above-described measures, the proposed project would not result in any significant adverse impacts related to hazardous materials.

C. EXISTING CONDITIONS

SUBSURFACE CONDITIONS

Based on U.S. Geological Survey mapping, the Proposed Development Area lies at an elevation of approximately 30-40 feet above mean sea level, sloping down to the west, and the Commercial Overlay Area and Mercer Plaza Area are located approximately 35 to 40 feet above mean sea level, sloping slightly down to the northwest. Previous investigations encountered groundwater approximately 23.5 to 35 feet below grade in the Proposed Development Area, and approximately 25 feet below grade on Block 547, Lot 15 of the Commercial Overlay Area. Previous geotechnical investigations first encountered apparent bedrock at approximately 56 to 83.5 feet below grade beneath the southern portion of the Proposed Development Area. Based on USGS mapping, bedrock in the Commercial Overlay Area is at approximately 35 to 60 feet below grade and bedrock in the Mercer Plaza Area is approximately 60 feet below grade.

Based on surface topography, groundwater would be expected to flow in a westerly or northwesterly direction toward the Hudson River, approximately 4,000 feet away. However, a spill investigation within the Proposed Development Area (discussed below) indicated that groundwater flow was in a west-southwesterly direction, and that groundwater is present at an elevation of approximately 3 feet above mean sea level. Actual groundwater flow can be affected by many factors including past filling activities, underground utilities, other subsurface openings or obstructions such as basements, underground parking garages, nearby subway tunnels, and other factors beyond the scope of this assessment. Groundwater in Manhattan is not used as a source of potable water, and NYU representatives were not aware of non-potable uses of groundwater in the Proposed Development Area or Commercial Overlay Area.

HAZARDOUS MATERIALS ASSESSMENT

PHASE I ENVIRONMENTAL SITE ASSESSMENT

The scope included a reconnaissance of the Proposed Development Area and surrounding neighborhood, a review of publicly available data on the geology and hydrogeology of the area, an examination of historical maps, a review of electronic New York City Department of

Buildings records, and a review of pertinent federal and state environmental databases. The Phase I ESA identified the following:

- The Proposed Development Area historically included commercial, residential and manufacturing uses, a Consolidated Edison substation, garages and auto repair shops. The historical substation may have utilized PCB - containing electrical equipment. Historical properties with gasoline underground storage tanks (USTs) and/or fuel oil tanks were identified within the Proposed Development Area on Block 533 (Lots 1 and 10) and on Block 524 (Lot 1 and 66). Most, if not all, of these historical tanks were likely removed during or prior to excavation of the basements, parking garages and utilities associated with the current buildings. However, it is possible that historical tanks remain beneath the Site.

  Residential buildings on the northern Proposed Development Area superblock were historically heated by four, No. 6 fuel oil 20,000-gallon USTs. As noted below, one of these USTs has been closed and removed, and three have been closed in place. No petroleum storage tanks remain in service in the Proposed Development Area. Two temporary trailers containing fuel oil-fired mobile boilers were observed on the southern superblock during the July 2009 Phase I ESA reconnaissance, but were no longer present at the time of a site visit in May 2011. Three closed-status No. 2 fuel oil spills reported on the southern superblock in December 2005 and June 2008 were apparently associated with temporary mobile boilers and are not likely to have affected subsurface conditions based on spill details.
- According to NYU representatives, a spill (Spill No. 0910543) was reported to the New York State Department of Environmental Conservation (NYSDEC) in December 2009. The spill occurred on the northern superblock of the Proposed Development Area. No. 6 fuel oil was released from one of the two 20,000-gallon USTs in the boiler room south-adjacent to Washington Square Village 3 & 4. As part of the initial response, these two USTs were emptied and cleaned, preventing potential further release. An initial cleanup, installation of oil recovery wells, installation of groundwater monitoring wells and a preliminary subsurface investigation to delineate the extent of the oil spill were performed. A sub-slab depressurization system was installed to remove volatile components of fuel oil and to mitigate the potential for vapor intrusion into buildings. Subsequently, a supplemental subsurface investigation was performed and a Remedial Action Work Plan (RAWP) was prepared in May 2010. The subsurface investigations indicated that contamination was generally limited to soil above the water table, with limited impacts to groundwater. The RAWP, with an August 2010 addendum, was approved by NYSDEC in a letter to NYU dated September 1, 2010. The RAWP proposed the removal or closure in place of the leaking UST and adjacent UST, excavation of contaminated soil to the extent possible without undermining building foundations, installation of a soil vapor extraction (SVE) system, oil recovery, groundwater monitoring and community air monitoring. Remediation began in January 2011. By April 2011, the following remedial actions were completed in accordance with the RAWP: excavation and removal of the leaking UST, source removal of oil impacted soil, abandonment and closure in place of the adjacent UST, and installation of the SVE system and oil recovery wells. The 20,000-gallon USTs historically used at Washington Square Village 1 & 2 were also closed in place following the spill. The final Remedial Action Report (RAR) was submitted to NYSDEC on September 1, 2011. Upon communication with NYSDEC, a Site Management Plan, which the RAWP proposed to include in the RAR, was not required by NYSDEC at this point. The performance of the SVE system and productivity of manual oil recovery will be evaluated by the end of October 2011, and a report to NYSDEC will follow.

- A geotechnical study of the southern superblock indicated the presence of urban fill material down to depths of approximately 8 to 26.5 feet below grade.
- Dental offices were located on the first floors of Washington Square Village 1 & 3. Interviews with dental personnel indicated that both offices captured used silver/mercury fillings in amalgam traps for pickup and recycling by private contractors.
- Chemical storage in the Proposed Development Area included household cleaning and maintenance materials and paints, generally in containers of a gallon or less. The chemicals were generally neatly stored and labeled. A puddle of unknown dark liquid was noted near a floor drain in the cleaning chemical storage room of Morton Williams Supermarket, and apparent greasy water was noted in a sump in the supermarket's basement.
- Waste requiring specialized disposal, such as used fluorescent lights and oily rags, was removed by NYU Environmental Health & Safety from the portions of the Proposed Development Area managed by NYU (i.e. the non-commercial spaces). Excess cooking grease in two on-site restaurants and Morton Williams Supermarket was removed by private contractors. Employees of the third restaurant, Favela Cubana, were not certain how excess grease was removed.
- Two approximately 180-gallon plastic tanks of sodium hypochlorite (a swimming pool disinfectant) were observed in Coles Recreation Center. Regulatory databases indicated that three 500-gallon aboveground storage tanks and two 300-gallon USTs of sodium hypochlorite were removed in the 1990s. NYU representatives indicated that Right-to-Know reports for Coles Recreation Center are filed with NYCDEP in accordance with the requirements of Title III of the Superfund Amendments and Reauthorization Act (SARA).
- Based on their ages, the Proposed Development Area buildings may include asbestos-containing materials (ACM). Except for Coles Building, these buildings may also contain lead-based paint and PCB-containing electrical equipment and fluorescent lighting fixtures (including capacitors and potting compounds). Additionally, fluorescent lights may include mercury-containing components. A hydraulic cardboard box baler in the Morton Williams supermarket may also utilize PCB-containing hydraulic fluid. Hydraulic garbage compactors in the residential buildings on the northern superblock are not likely to contain PCBs based on their reported installation date.
- NYU representatives indicated that all buildings owned by NYU are operated under university-wide environmental health and safety (EHS) plans including: NYU Emergency Response Plans, NYU EHS Emergency Procedures Manual, NYU Safety Procedures, NYU Hazardous Waste Emergency Response Procedures, Asbestos Management Plan and Lead Management Plan.
- The area surrounding the Proposed Development Area was also historically mixed-use with commercial, residential, manufacturing and academic uses including garages with buried gasoline tanks, a chemical store and factory, auto repair shops and filling stations. Dry cleaners were located west of the northern superblock across LaGuardia Place and east of the southern superblock across Mercer Street, with a minor (five-gallon) spill of the solvent perchloroethylene reported at the dry cleaner to the east in July 1989. Several active-status petroleum spills were reported in close proximity to the Site.
- Underground Con Ed electrical transformer vaults were observed on Bleecker Street between the two Proposed Development Area superblocks and on adjacent sidewalks. A slight surface sheen was noted on water in the vault located north-adjacent to the Proposed Development Area. Con Ed electrical manholes were observed in on-site roadways and in

sidewalks adjacent to the Proposed Development Area. The electrical equipment within these structures could potentially contain PCBs. Two closed-status spills were reported for Con Ed manholes potentially adjacent to the Proposed Development Area. However, no impact to soil or groundwater was noted; releases from such structures tend to remain within the vault.

SUBSURFACE (PHASE II) INVESTIGATION

The Phase II investigation was conducted in accordance with a Work Plan approved by NYCDEP in a July 12, 2011 letter and included the collection and laboratory analysis of 14 soil and 4 groundwater samples from 7 borings installed in the Proposed Development Area. This investigation identified the following:

- No VOCs or pesticides were detected in the soil samples in exceedance of NYSDEC 6 NYCRR Part 375 Soil Cleanup Objectives for Restricted – Residential Use (RRSCOs). The soil samples contained concentrations of certain SVOCs and metals above their respective RRSCOs, likely attributable to urban fill materials rather than a spill or release. One soil sample collected near an underground electrical transformer vault contained PCBs at a concentration above RRSCOs but well below the hazardous waste threshold, which may be attributable to a release from the transformer and/or urban fill materials. Overall, the soil concentrations were not indicative of a spill or release and no petroleum-contaminated soil (e.g., associated with Spill No. 0910543) was encountered.
- The groundwater samples detected certain VOCs commonly associated with solvents at concentrations below or slightly above NYSDEC Class GA Ambient Water Quality Standards (drinking water standards – though groundwater in Manhattan is not used as a source of drinking water). These VOCs were not detected in on-site soil samples, and are therefore likely attributable to regional groundwater conditions. Similar findings are common throughout New York City. Certain SVOCs and metals were detected in exceedance of Class GA standards in the groundwater samples, likely due primarily to soil particles in the unfiltered samples. Metal concentrations in filtered groundwater samples were significantly lower, with fewer metals exceeding Class GA standards (and these few exceedances were likely due to naturally occurring metals and/or regional groundwater quality). No pesticides or PCBs were detected in the groundwater samples in exceedance of Class GA standards.

LIMITED HAZARDOUS MATERIALS EVALUATION

The scope of the *Limited Hazardous Materials Evaluation* was similar to that for the *Phase I ESA* except reconnaissance of the Commercial Overlay Area and Mercer Plaza Area was limited to public rights-of-way since many of the buildings were privately owned and not accessible. In any event, no subsurface disturbance is proposed in the Commercial Overlay Area or the Mercer Plaza Area. The following were identified:

- Historical uses in the Commercial Overlay Area included residential, commercial, institutional (churches and NYU buildings) and manufacturing uses. Unspecified manufacturing was historically noted on all Commercial Overlay Area blocks. The Mercer Plaza Area was occupied by a public plaza. This area was historically developed with buildings until being mapped as a City street in the mid-20th century for a proposed street widening project that was not undertaken.

- The following were noted for the Mercer Plaza Area, which occupies the west side of Mercer Street between West 3rd and West 4th Streets, east-adjacent to the western portion of Block 535:
  - An NYU heating plant is located beneath the plaza. This facility was identified in regulatory databases with nine aboveground and underground storage tanks (ASTs and USTs) containing No. 2 fuel oil, No. 6 fuel oil and lube oil. These tanks were listed as active or closed in place and ranged from 275 to 30,000 gallons in size. Four closed-status and two active-status petroleum spills, some involving soil contamination, were reported.
  - Fill ports or suspect fill ports for petroleum storage tanks were noted on the west-adjacent portion of Block 535. Buried gasoline tanks were historically present to the west on Block 535, Lot 8.
  - Regulatory databases identified Block 535, Lots 1 and 36 to the west as generators of hazardous waste including chromium, selenium and mercury waste and spent halogenated solvents.
  - Regulatory databases identified a dry cleaner approximately 200 feet southwest of Block 535, and an active petroleum spill with potential subsurface impact approximately 150 feet west of Block 535.
- The following were noted for Block 546:
  - Fill ports and vent pipes for petroleum storage tanks were noted in front of Lots 15 and 21. Regulatory databases identified two active 5,000-gallon fuel oil ASTs on Lot 15.
  - Regulatory databases identified an academic building generating hazardous waste (including heavy metal waste and spent halogenated and non-halogenated solvents) approximately 200 feet east of Block 546, and an active petroleum spill with potential subsurface impact approximately 300 feet southeast of Block 546.
- The following were noted for Block 547:
  - A printer and NYU laboratories were historically located on Lot 1. This lot was identified in regulatory databases as a generator of hazardous waste including heavy metal waste, various chemicals, used electroplating bath solutions, polychlorinated biphenyl (PCB)-containing transformers and PCB-contaminated solid waste, and spent halogenated and non-halogenated solvents. A removed US Environmental Protection Agency Violation (Violation – All Requirements) was noted for this facility in 1993. A wall plaque noting that the building on Lot 1 was historically used for chemistry research was observed during the site visit.
  - The building on Lot 8 is used by the NYU Biology and Chemistry departments. The building may therefore contain laboratories where various chemicals are used. The NYU Biology and Chemistry departments are operated under university-wide EHS plans.
  - Lot 15 was listed in regulatory databases as a generator of hazardous waste including lead waste and corrosive and reactive solid waste.
  - Regulatory databases indicated that three No. 2 fuel oil ASTs ranging from 1,500 to 5,000 gallons in size have been closed and removed from Lots 15, 18 and 19. Lot 20 was listed with an active 4,000-gallon No. 6 fuel oil AST.

- The following were noted for the portion of Block 548 located within the Commercial Overlay Area:
  - A photo studio on Lot 1 may have performed on-site film processing, which utilizes various chemicals. Regulatory databases identified an active 6,500-gallon No. 6 fuel oil AST on this lot.
  - Concrete-filled fuel oil fill ports for petroleum storage tanks were noted in front of Lots 4 and 21. Fill ports and vent pipes were noted in front of Lots 24 and 40. Regulatory databases listed an active 7,500-gallon No. 6 fuel oil AST on Lot 24, and an active 5,000-gallon No. 2 fuel oil AST on Lot 40.
  - A dry cleaner was noted on the ground floor of the building on Lot 40.
  - Dry cleaners were observed outside the Commercial Overlay Area north-adjacent to Lot 24 and approximately 300 feet northeast of Block 548. One of these dry cleaners was also shown on historical Sanborn maps. Regulatory databases identified two additional dry cleaners approximately 300 feet north of Block 548, as well as MRC Management, a generator of hazardous waste including spent halogenated solvents, ignitable and corrosive solid waste, and chromium and selenium waste, approximately 400 feet east of Block 548.
- The surrounding area was historically a mixture of residential, commercial, manufacturing uses and parkland (Washington Square Park). Properties in close proximity to the Commercial Overlay Area included a metalworking shop, garages with buried gasoline tanks and auto repair. Regulatory databases identified petroleum storage and spills in close proximity to the Commercial Overlay Area.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

In the future without the Proposed Actions, the following is anticipated to occur in the Proposed Development Area: during Phase 1 (by 2021), an approximately 4,500-square-foot playground (Adrienne's Garden) would be developed in a portion of the existing LaGuardia Landscape on the LaGuardia Place Strip north of Bleecker Street; during Phase 2 (by 2031), the Morton Williams supermarket building would be demolished and replaced with a new, approximately 175,000-square-foot as-of-right academic building with ground-floor retail.

In the future without the Proposed Actions, two changes are expected to the Commercial Overlay Area. It is expected that by 2021, NYU will develop an additional 20,000 gsf of academic uses at an existing academic building at 25 West 4th Street, and redevelop the existing 74,000-gsf residential building at 15 Washington Place into a 129,000-gsf academic building. Soil disturbance could occur as part of the redevelopment of 15 Washington Place.

Land use conditions in the Mercer Plaza Area are not expected to change in the future without the Proposed Actions. The underground cogeneration plant that was completed in 2010 will continue to provide reliable, low-emission power for the NYU campus. Mercer Plaza—the public plaza created by the University and opened in 2010—will continue to serve both NYU and non-NYU populations.

Based on the existing studies, subsurface contamination and hazardous materials in buildings (such as asbestos-containing materials [ACM] and lead-based paint) may be present. Renovation and (in the Proposed Development Area) demolition and excavation activities could disturb these hazardous materials and potentially increase pathways for human or environmental

exposure. The amount of soil disturbance in the Proposed Development Area would be less than that associated with the proposed project, and controls on its performance would, at a minimum, comply with applicable legal requirements (including NYSDEC regulations), e.g., relating to maintenance of petroleum storage tanks and handling of ACM, lead-based paint and potential PCB-containing equipment. Specifically, procedures would include:

For Renovation/Demolition:

- Prior to any renovation/demolition activities with the potential to disturb petroleum storage tanks that have been closed in place or any unexpectedly discovered tanks, any such tanks would be closed (if necessary) and removed, along with any contaminated soil, in accordance with applicable requirements including NYSDEC spill reporting requirements. All tanks, including any discovered unexpectedly, would be registered, if required, with NYSDEC and/or the New York City Fire Department.
- Unless information or test results exist to indicate that damaged suspect ACM do not contain asbestos, these materials would be sampled by a NYC-certified asbestos investigator to determine whether they are ACM, and any damaged ACM materials would be removed or repaired by a licensed asbestos abatement contractor in accordance with applicable regulations. Known and suspect ACM would be maintained in good condition in accordance with applicable regulatory requirements. Unless information exists to indicate that suspect ACM do not contain asbestos, prior to renovation/demolition with the potential to disturb the suspect ACM, an asbestos survey would be completed and all ACM that would be disturbed by the activity would be removed and disposed of in accordance with applicable regulatory requirements.
- Any renovation/demolition activities with the potential to disturb lead-based paint would be performed in accordance with the applicable Occupational Safety and Health Administration regulation (OSHA 29 CFR 1926.62—Lead Exposure in Construction). Additional requirements even if no disturbance is planned (e.g., tenant notification, inspections and abatement) apply to residential buildings and certain other sensitive uses (e.g., schools and day care facilities).
- Unless labeling or laboratory testing data indicates that suspect PCB-containing hydraulic and electrical equipment and fluorescent lighting fixtures do not contain PCBs, and that fluorescent lights do not contain mercury, disposal would be performed in accordance with applicable regulatory requirements.
- Disposal of any chemicals would be in accordance with applicable requirements.

For Soil Disturbance:

- If dewatering is required for the construction of the as-of-right building on the Morton Williams site, testing would be performed to ensure that the water would meet NYCDEP sewer discharge requirements. If necessary, pretreatment would be conducted prior to discharge to the City's sewer system, per NYCDEP permit/approval requirements.
- All excavated soil and fill materials requiring off-site disposal would be handled and disposed of in accordance with applicable regulatory requirements. Should contaminated soil and/or petroleum tanks be encountered, applicable regulatory requirements (e.g., those relating to spill reporting and tank registration) would be followed to address removal of the tanks and any associated soil or groundwater contamination.

- As with demolition, if tanks are discovered, they would be registered, if required, with NYSDEC and/or the New York City Fire Department and closed and removed, along with any contaminated soil, in accordance with applicable requirements including NYSDEC spill reporting requirements.
- If construction would involve disturbance of underground transformer vaults or electrical manholes, and disposal of potentially PCB-containing electrical equipment is necessary, such equipment would be tested and disposed of in accordance with applicable requirements.

Other:

- Remedial activities for active Spill No. 0910543 specified in the NYSDEC-approved RAWP were completed by April 2011. Any subsequent site management necessary (e.g., future operation of the SVE system, oil recovery, and quarterly groundwater monitoring) would be performed in accordance with NYSDEC requirements.

E. FUTURE WITH THE PROPOSED ACTIONS

In the Proposed Development Area, the proposed project would involve demolition of Coles Recreation Center, the Morton Williams supermarket building on the South Block and the LaGuardia Retail building on the North Block, followed by soil disturbance for the construction of four new buildings (including academic uses, residential units for NYU faculty and students, a new athletic facility, a University-affiliated hotel, retail uses, and a public school). The ground floors of up to seven buildings in the Commercial Overlay Area would be redeveloped with neighborhood retail uses; however, no soil disturbance would occur. The Mercer Plaza Area would be demapped as a City street and would become NYU property, but no physical changes (or associated potential for hazardous materials impacts) would occur in this area.

In the future with the project, the ground floors of up to seven buildings in the Commercial Overlay Area would be redeveloped with neighborhood retail uses. At 15 Washington Place, the projected retail redevelopment would likely be conducted at the same time as the planned redevelopment of the building from residential to academic uses. While soil disturbance could occur at that location, it would occur absent the proposed project, and therefore is not attributable to the Proposed Actions.

As noted above, based on the existing studies, subsurface contamination and hazardous materials in buildings (such as asbestos-containing materials and lead-based paint) may be present. Renovation and (in the Proposed Development Area) demolition and excavation activities could disturb these hazardous materials and potentially increase pathways for human or environmental exposure. Impacts would be avoided by performing the renovation, demolition and/or construction-related procedures outlined above for "The Future without the Proposed Actions" with the following additions relating to subsurface disturbance in the Proposed Development Area:

- Following NYCDEP's review and approval of the Phase II report, based on the findings of the Phase II, a Remedial Action Plan (RAP) and associated Construction Health and Safety Plan (CHASP) would be prepared (and submitted to OER for review and approval) for implementation during project construction. The RAP would address requirements for items such as: vapor barriers or other measures to reduce the potential for vapor intrusion into new construction; soil stockpiling, soil disposal and transportation; dust control; dewatering procedures; quality assurance; and contingency measures should petroleum storage tanks or

contamination be unexpectedly encountered. The CHASP would identify potential hazards that may be encountered during construction and specify appropriate health and safety measures to be undertaken to ensure that subsurface disturbance is performed in a manner protective of workers, the community, and the environment (such as personal protective equipment, air monitoring requirements including community air monitoring, and emergency response procedures).

- The Proposed Actions would not involve the creation of wet labs (laboratories involving the use of chemicals and/or biological materials). Following the Proposed Actions, no fuel oil heating tanks would be used in the Proposed Development Area (the buildings would be heated by natural gas or the NYU cogeneration facility). Following construction for the Proposed Actions, regulatory requirements and, for NYU-owned buildings, university-wide EHS plans pertaining to ACM, lead-based paint, PCBs and chemical use and storage would continue to be followed. Any petroleum storage tanks associated with emergency generators and petroleum storage tanks in the Commercial Overlay Area and Mercer Plaza Area would be managed in accordance with the applicable requirements to prevent spills or releases.

With these measures, the proposed project would not result in any significant adverse impacts related to hazardous materials. ✷