A. INTRODUCTION

This chapter assesses the potential for the presence of hazardous materials on the project sites (Sites A and B), the potential for exposure to hazardous materials during and following construction, and the specific measures that would be employed to protect public health, worker safety, and the environment. A "hazardous material" is generally defined as any substance that poses a threat to human health or the environment. It is often used interchangeably with "contaminated material," but should not be confused with the term "hazardous waste," which is a regulatory term.[1]

The proposed actions would permit the implementation of a large-scale, mixed-use residential and commercial development, the Hunter's Point South project, along the Hunter's Point waterfront of Long Island City, Queens. The new development on Sites A and B would include housing, retail space, community facilities, school space, public parks and other public and private open spaces, and accessory parking. Site A is approximately 30 acres in area and is located between 50th Avenue, 2nd Street, Newtown Creek, and the East River (Block 1, Lots 1 and 10; Block 5, Lot 1; and Block 6, Lots 1, 2, 14, and part of 38). The adjacent privately owned site, Site B, is approximately 7.5 acres in area located between 54th Avenue, the western side of the prolongation of 5th Street, Newtown Creek, and 2nd Street (Block 11, Lot 1).

Sites A and B have a long history of rail, industrial, manufacturing, and commercial uses. Based on the site history, contaminants on the project sites would be expected to include asbestos, lead-based paint, and polychlorinated biphenyls in buildings, as well as subsurface contamination in fill, soil, soil gas, and/or groundwater. Migration from off-site sources onto the project sites is also possible.

Development within the project sites would involve the demolition of the existing structures and excavation, disturbance, and removal for off-site disposal of some of the existing fill and soil. Dewatering of groundwater may be required. The presence of hazardous materials threatens human health or the environment only when exposure to those materials can occur. The most likely route of human exposure is through breathing volatile and semi-volatile compounds or particulate-laden air released during demolition, excavation, and construction activities. Following construction of the proposed development at Sites A and B, the principal potential pathway of concern would be the intrusion of vapors into buildings from any volatile contamination remaining in the subsurface.

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[1] "Hazardous waste" is defined in both the United States Environmental Protection Agency (EPA) regulations (40 CFR Part 261) and New York State regulations (6 NYCRR Part 371) and refers to a subset of solid wastes that are either specific wastes listed in the regulations (listed wastes) or solid wastes possessing the characteristic of ignitability, reactivity, corrosivity or toxicity (characteristic wastes).

PRINCIPAL CONCLUSIONS

As described below, a two-stage process of Phase I and Phase II Environmental Site Assessments (ESAs) on Site A first identified the potential for contamination and then confirmed and characterized the contamination through sampling. This contamination was both in the subsurface (related primarily to former petroleum underground storage tanks and historic fill) and inside buildings (primarily related to asbestos and lead-based paint). With the implementation of a variety of remediation measures, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the proposed actions. Following the construction of the proposed project, implementation and maintenance of the required engineering controls (e.g., soil cap, sub-slab depressurization systems), and establishment of institutional controls such as Restrictive Declarations and (E)-designations, there would be no further potential for significant adverse impacts related to hazardous materials.

B. METHODOLOGY

Phase I ESAs for Site A and Site B were prepared to assess the potential for contaminated materials in buildings or the subsurface from past or present uses. The Phase I ESA studies included a reconnaissance of the project sites from public rights-of-way, as well as a review of historic maps, regulatory records, and available topographic and geologic/hydrogeologic data for the project sites and surrounding area.

The Phase I ESA studies were conducted in accordance with the American Society for Testing and Materials (ASTM) Standard E1527-05. As required by the Standard, data gaps were identified during the preparation of the Phase I ESAs. In each Phase I ESA, the following was conducted:

- A visual inspection of the property and on-site facilities to identify current uses and assess existing conditions;
- Interviews with site owners, tenants, or staff whenever possible;
- A visual inspection, from public rights-of-way, of adjacent properties;
- An evaluation of land use history using available historical maps;
- A review of federal and state databases regarding hazardous materials for sites within the project site and for the surrounding area;
- A review of electronic New York City Department of Buildings files for pertinent information, including historic and current petroleum tanks;
- A review of previous studies completed (multiple studies have been performed on Site A), whenever possible; and
- A review of available geologic, hydrologic, hydrogeologic, and topographic information from existing data sources.

The two sites were studied to determine whether current or past hazardous materials conditions may have affected the sites. Factors that were considered when making these determinations included the likelihood and probable severity of the potential hazardous materials conditions, as well as physical, geological, or hydrogeological (groundwater) conditions that may have affected the migration of hazardous materials. Results from the Phase I ESAs indicated the potential for subsurface contamination within both sites, based on the presence of known and suspected underground storage tanks, on-site and off-site petroleum spills, previous site uses, and historic

landfilling (Site A). Therefore, a Phase II Investigation was performed on Site A to determine the presence of environmental contaminants in soil and groundwater. A Phase II Investigation was recommended for Site B, but has not yet been conducted. Results of the investigations are summarized below.

C. EXISTING CONDITIONS

RESULTS OF INVESTIGATIONS

PHASE I ENVIRONMENTAL SITE ASSESSMENT—SITE A

Site A is currently partially vacant and partially occupied by a water taxi landing, a tennis facility, and surface parking. In addition, a construction contractor currently uses a portion of Site A for temporary storage of construction materials. A tunnel ventilation facility, owned by Amtrak, is currently under construction at 2nd Street, between Borden and 54th Avenues, adjacent to Site A.

A review of historic fire insurance (Sanborn) maps for Site A indicated the project area historically consisted of rail yards of the Long Island Rail Road, lumberyards, manufacturing of dry ice, carbonating gas, and concrete blocks, a sugar refinery, dockyards, and a newspaper publishing plant. Two underground petroleum storage tanks were located on Site A and several underground solvent storage tanks were located on an adjacent site to the east (Site B). These off-site former tanks could have resulted in the release of products to the soil and/or groundwater and migration towards the study area. Historic Sanborn maps show the addition of fill material to areas along the East River and Newtown Creek, expanding the upland boundary of Site A over time.

A site inspection identified multiple underground and aboveground petroleum storage tanks, vent and fill pipes for petroleum storage tanks, large stockpiles of construction and demolition debris, potential polychlorinated biphenyl and/or mercury containing fluorescent light fixtures, potential asbestos-containing materials, and potential lead-based paint. However, no testing of the suspect materials was conducted in the Phase I ESA. A review of Federal and State regulatory databases identified open petroleum spill cases, hazardous materials storage, and a regulated solid waste transfer facility (concrete recycling) at Site A and at adjacent properties. Their current and/or historic presence could have affected soil and/or groundwater beneath Site A.

Data gaps were identified as part of the Phase I ESA (e.g., incomplete site access and not conducting interviews with any of the site occupants). In each case, there is a possibility that addressing these data gaps might identify additional environmental issues associated with the site.

PHASE II ENVIRONMENTAL SITE ASSESSMENT—SITE A

Using the findings of the Phase I ESA for Site A and noting the identified contaminants of concern, further study in the form of “intrusive” (building and subsurface) investigations, also known as “Phase II” investigations, was conducted for Site A. The Phase II was performed in accordance with a scope of work approved by the New York City Department of Environmental Protection (NYCDEP). The scope of work included:

- Geophysical survey at suspected historic underground storage tank locations and locations suspected to contain historic subsurface structures;

- Collection of 55 soil samples where the results of the Phase I ESA indicated potential concern, with laboratory analysis of the samples;
- Excavation of test pits at suspected locations of the former boiler house and power house for the former sugar refinery at the south end of the site;
- Collection of 21 groundwater samples for laboratory analysis;
- The field screening of soil gas samples from 16 locations and the collection of five soil gas samples for laboratory analysis;
- Collection of eight sediment samples along the shoreline in the East River for laboratory analysis; and
- Limited visual asbestos inspection of the Tennisport facility.

The findings of the Phase II ESA for Site A are described below.

- A geophysical survey was conducted in the northern part of the site to search for suspected underground storage tanks in this area. Two geophysical anomalies were detected during the geophysical survey; however, further investigation has not been conducted.
- The completion of 25 soil borings and two test pits encountered significant amounts of fill material consisting mainly of fragments of brick, concrete, and cinders in the near surface soils across Site A. Except for the easternmost portion of the Site A, the fill extended from the surface to at least the water table over much of the site, which ranged from 8 to 10 feet below grade surface (bgs), except at higher elevations where the water table was 28 feet bgs. In addition, there are a number of large stockpiles of soil intermixed with construction and demolition (C&D) debris at the south end of Site A.
- Except for two borings near an active petroleum underground storage tank (UST) at the Tennisport complex, none of the fill or native soil exhibited evidence of petroleum or volatile organic compound (VOC) contamination (i.e., staining, odors, or elevated readings from field instrumentation). The chemical laboratory analysis of 55 soil samples generally revealed only the presence of low levels of metals and semivolatile organic compounds (SVOCs) typically found in urban fill.
- The installation of 15 permanent groundwater wells and collection of 21 groundwater samples found no field evidence of impacted groundwater (i.e., floating petroleum product or odors). Except for some metals, analysis of groundwater samples collected from permanent wells indicated that the groundwater quality met applicable New York State Class GA groundwater (drinking water) standards/guidance values. Dissolved levels of iron, magnesium, manganese, and sodium exceeded the associated Class GA groundwater standard or guidance value for most wells; however, the presence of these metals in the groundwater is typical of groundwater in close proximity to and impacted by saline water (i.e., East River) and therefore is believed to be representative of the area background groundwater quality. Significantly elevated chloride levels above the GA standard were also detected in site groundwater indicative of saline conditions.
- A soil gas survey at 16 locations across the site found no evidence of elevated organic vapors based upon field measurements. Laboratory analysis of select soil gas samples revealed trace levels of methane that would pose no significant health concern, and low levels of VOCs at two locations that slightly exceeded New York State Department of Health (NYSDOH) Guidance Values for sub-slab vapor concentrations, which would apply

to sites with future buildings (i.e., currently, there is no NYSDOH guidance for evaluating VOCs in soil gas).

- The collection of four-foot-long sediment core samples at eight shoreline locations in the adjacent East River encountered no visible field evidence of sediment contamination except for the southernmost sample (SD-1) collected closest to Newtown Creek. Chemical laboratory analysis of sediment from the upper two feet of each core generally found some SVOCs and metals at concentrations exceeding New York State sediment guidance values. However, the results are generally similar along the Site A waterfront and similar to reported sediment quality for the East River. The petroleum-impacted sediment quality at location SD-1 likely reflects the historical industrial usage of and impacts to the Newtown Creek, where historically petroleum refinery operations were present.
- A visual survey identified a number of potential asbestos-containing materials (ACMs) at the buildings comprising the Tennisport complex that included roofing materials, duct insulation, window and door caulking, floor tiles, and an asphalt underlay observed beneath tennis courts. A prior 2006 survey confirmed the presence of ACM in many of these materials.

PHASE I ENVIRONMENTAL SITE ASSESSMENT – SITE B

Site B is currently occupied by low-rise manufacturing buildings used by a beverage distribution facility, and by a television network for other uses. Independent of the proposed actions, the existing beverage distribution facility will relocate its operations to the Bronx in 2008.

A review of historic fire insurance (Sanborn) maps for Site B indicated the site historically consisted of garages with two gasoline underground storage tanks (USTs), auto repair shops, sugar refineries, a manufacturer of cartons with four USTs containing solvents, and a lumberyard. An inspection of Site B and the surrounding area identified petroleum staining on the concrete floor within the on-site vehicle maintenance building, multiple underground and aboveground petroleum storage tanks, potential polychlorinated biphenyl and/or mercury containing fluorescent light fixtures, potential asbestos-containing materials, and potential lead-based paint; however, no testing of the suspect materials was conducted during the Phase I ESA.

A review of Federal and State regulatory databases identified on-site petroleum releases (MTBE and hydraulic fluid) and hazardous materials storage. An inactive regulated solid waste transfer facility (concrete recycling) located to the west on Site A and a significant petroleum release is located immediately to the north of the site, at the Long Island Rail Road yard across 54th Avenue. These conditions could have affected soil and/or groundwater beneath Site B.

Data gaps were identified as part of the Phase I ESA (e.g., incomplete site access and not conducting interviews with some of the site occupants). In each case, there is a possibility that addressing these data gaps might identify additional environmental issues in association with the site.

POTENTIAL CONTAMINANTS OF CONCERN

As a result of the Environmental Site Assessments, a variety of potential contaminants of concern were identified. Soil and groundwater can become contaminated as a result of past or current activities on the project site or on adjacent areas. Many industrial activities use, store, or generate contaminated materials that can be spilled, dumped, or buried nearby. Other activities common in mixed-use neighborhoods—such as auto repair shops—can also result in

contamination due to improper management of raw product and/or waste materials, or inadvertent spills.

Subsurface soil and groundwater contamination may remain undetected for many years, without posing a threat to nearby workers, residents, passersby, or other receptors. However, excavation, earthmoving, dewatering, and other construction activities can expose the contaminants, provide a pathway of exposure and, if such contaminants are not properly managed, introduce potential risk to construction workers and others nearby.

Demolition of existing structures that have asbestos-containing materials, lead-based paints, or polychlorinated biphenyl-containing electrical equipment also has the potential to release contaminants, if these materials are not properly managed. Based on the types of contaminants that are typically found in New York City—including those associated with rail yards—some of the potential contaminants of concern are described below.

The following list provides a summary of potential categories of contaminants and is not a comprehensive list of all contaminants that may be encountered:

- **Volatile organic compounds (VOCs):** These include aromatic compounds—such as benzene, toluene, ethylbenzene, xylene, and methyl tertiary butyl ether, which are found in petroleum products (especially gasoline)—and chlorinated compounds, such as tetrachloroethene (also known as perchloroethylene or "perc") and tricholoroethene, which are common ingredients in solvents, degreasers, and cleansers. Volatile organic compounds represent the greatest potential for contamination since, in addition to soil and groundwater contamination, they can generate organic vapors.
- **Semivolatile organic compounds (SVOCs):** The most common semi-volatile organic compounds in urban areas are polycyclic aromatic hydrocarbons (PAHs), which are constituents of partially combusted coal- or petroleum-derived products, such as coal ash and fuel oil. PAHs are commonly found in New York City urban fill material. In addition, petroleum-related SVOCs could be present and associated with petroleum storage tanks currently or formerly located on the project site.
- **Polychlorinated biphenyls (PCBs):** Commonly used as a dielectric fluid in transformers, some underground, high-voltage electric pipelines, and hydraulically operated machinery, PCBs are of special concern at electrical transformer yards and rail yard/train maintenance locations where leakage into soil may have occurred. PCBs and/or polychlorinated biphenyl-containing materials were once widely used in manufacturing and industrial applications (e.g., hydraulic lifts, transformers, and plastics manufacturing). PCBs tend to travel only short distances in soil, except in unusual circumstances (e.g., large spills of polychlorinated biphenyl-containing oils over many years, commingled with solvents).
- **Metals (e.g., lead, arsenic, cadmium, chromium, and mercury):** Metals at levels above natural background levels are frequently present in fill material throughout the New York metropolitan area. These metals tend not to migrate far in soil; therefore, they would be of greatest concern at the site where they were originated.
- **Fuel oil and gasoline from storage tanks:** Several known aboveground storage tanks and underground storage tanks for fuels, including heating oil and gasoline, were reported to be present. Some of the tanks are known to have leaked, and others have possibly leaked despite no record of a spill to date. Some of the spills have been cleaned up in accordance with state regulations, but others have not because they have not yet been discovered or because cleanup, which can take several years, is ongoing.

- **Fill materials of unknown origin:** In the past, waste materials, including coal and incinerator ash, demolition debris, and industrial wastes, were commonly used as fill in urban areas. Even fill material consisting primarily of soil may exhibit elevated levels of polycyclic aromatic hydrocarbons, metals, and other contaminants. Such materials are potentially present throughout the project site.
- **Asbestos:** Asbestos was a common component of building materials, especially insulation, fireproofing, tile flooring, plaster, sheetrock, tile ceiling, mastic, and roofing materials. In addition to materials within existing structures, subsurface utility lines may be coated with asbestos or encased in "transite," an asbestos-containing material. Asbestos was widely used before 1980. Because of the age of many of the buildings on the project sites, asbestos-containing materials are almost certainly present.
- **Lead-based paint (LBP):** The use of lead-based paint in New York City residential buildings was banned in 1960. Its use in other buildings and outdoors was severely restricted by the Consumer Products Safety Commission in 1977. Lead-based paint that is released as dust (or as a fume if heated) is potentially hazardous, especially to children. Older buildings on the project site are likely to contain lead-based paint.

TOPOGRAPHY, GEOLOGY, AND GROUNDWATER

The surface topography of the project sites varies from one to 10 feet above mean sea level and generally slopes down to the west towards the East River. Portions of Site A contain piles of recycled concrete (C&D material) generated from the concrete recycling activities. The maximum height of these piles of material is approximately 20 feet above mean sea level. Historic fill is present on Site A immediately beneath a large portion of the site and varies in thickness. Historic fill is likely to be present on Site B but no site-specific information (e.g., soil borings) is available. The historic fill beneath Site A and likely to be beneath Site B is of unknown origin and, like most fill material historically used in New York City, contains varying amounts of debris.

The findings of a geotechnical study of Site A by TRC Engineers indicate that Site A is underlain by heterogeneous and variably thick fill deposits consisting of construction debris and soil. Fill thicknesses vary from 10 to 58 feet. Approximately half of the test borings encountered variably thick, highly compressible organic silt (recent river deposits). Approximately one-quarter of the test borings revealed up to a 42-foot-thick cobble and boulder layer. The above mentioned soil types are underlain by competent residual, alluvial and/or glacial soils. Gneiss/schist rock was encountered at all of the geotechnical test borings at depths ranging from 38 to 77 feet below current grades.

The findings of the Phase II ESA indicate that the depth to groundwater across Site A ranges from six to 24 feet below ground surface. Groundwater on Site A generally flows in a westerly direction towards the East River with a groundwater depression in the area of the Queens-Midtown Tunnel influencing the groundwater flow direction. Groundwater on Site B is likely to flow in a southerly direction towards the adjacent Newtown Creek. Groundwater flow direction may be affected by other factors, including subsurface obstructions such as utilities and easements that act as a groundwater drain and affect groundwater flow.

D. THE FUTURE WITHOUT THE PROPOSED ACTIONS

Without the proposed actions, the project sites are not anticipated to experience substantial change from the current conditions. The associated building demolitions on Site A will likely not occur. Building materials potentially containing hazardous materials, including asbestos, lead-based paint, and/or electrical and hydraulic equipment potentially containing polychlorinated biphenyls, will not be disturbed, and therefore, will not pose an exposure threat to human or environmental receptors. In the event that development independent of the proposed actions were to occur on any lot that has the potential for hazardous material contamination, such development could result in the exposure of construction workers and nearby residents to hazardous materials. Without the proposed actions, remediation of any subsurface contamination may not occur to the extent that would otherwise occur if the proposed actions were implemented.

E. PROBABLE IMPACTS OF THE PROPOSED ACTIONS

Based on their ages, the structures located on the project sites may contain lead-based paint and/or asbestos-containing building materials. In addition, polychlorinated biphenyls (PCBs) also may be present in hydraulic and/or lighting fixtures. Implementation of the Hunter's Point South project on Site A, and redevelopment pursuant to the proposed rezoning on Site B, would involve demolition of existing structures and a variety of excavating activities for site grading, foundation work, and placement of utilities that would encounter contamination within fill and soil. Dewatering of groundwater may be required during construction; however, groundwater will not be used for drinking purposes.

The adverse impacts on Sites A and B are principally associated with the following uses and concerns:

- The presence of underground and aboveground petroleum storage tanks;
- Records of a portion of the project sites being a former regulated solid waste transfer facility (concrete recycling);
- Records of petroleum spills on the development site and adjacent sites; and
- Historical site usage for auto repair and maintenance.

The greatest potential for exposure to any constituent of concern would be during demolition and construction, especially those activities related to excavation, storage, transport, and disposal of potentially contaminated soil and fill materials.

The following preventative measures would be used to avoid the possibility of adverse impacts from any contamination discovered in the areas of concern:

- All activities involving disturbance of existing soils would be conducted in accordance with a NYCDEP-approved Remedial Action Plan (RAP), including a site-specific Construction Health and Safety Plan (HASP), which would detail measures to reduce the potential for exposure (e.g., dust control) and to identify and manage known contamination and unexpectedly encountered contamination.
- Based on the filled shoreline setting and the potential for elevated levels of methane to accumulate in buildings constructed over the fill, a vapor barrier and sub-slab depressurization system would be incorporated into the design plan for proposed on-site buildings.

- Erosion and sediment control measures and storm water management measures would be implemented during redevelopment activities to protect nearby surface water from contaminants potentially entrained in storm water runoff.
- To eliminate the potential for exposure of future site occupants to site soil fill contaminants, a minimum of two feet of clean soil underlain by a demarcation liner would be placed on the new open space areas that would not be covered by paved surfaces or permanent structures associated with site development. The on-site reuse of the existing stockpiled soil and C&D material should be maximized during site development to reduce off-site disposal of this material and the import of clean structural fill. A site-specific Beneficial Use Determination (BUD) may be required from NYSDEC to allow for the on-site or off-site reuse of excess fill material.
- A Site Management Plan, which specifies the procedures for the proper management of remaining contaminated subsurface fill materials after the site is developed, would be prepared to ensure that future site occupants and construction workers are protected and contaminated materials are properly managed during any future site excavation activities. The plan would also address the maintenance and monitoring requirements for the sub-slab depressurization systems installed for onsite buildings.
- Prior to or during construction activities, any underground and aboveground storage tank systems would be removed and disposed of in accordance with applicable Federal, State, and local regulations. If associated contaminated soil and/or groundwater are discovered during the tank removal, they would be remediated according to the requirements of the NYSDEC Spill Response and Remediation (Spills) program. Post removal endpoint soil samples would be collected to ensure that soil exceeding applicable guidance values/standards is removed. All contaminated materials removed from the site would be properly transported and disposed of offsite in accordance with all applicable Federal, State, and local regulations.
- Although no significant groundwater impacts were detected at Site A, a post-development groundwater monitoring plan may be necessary to assess potential long-term groundwater impacts associated with fill materials. In addition, discharge permits would be obtained from NYCDEP (sewer discharge) and/or NYSDEC (surface water or groundwater discharge) and treatment would be implemented, as required, for any dewatering during the construction activities.
- If future site development activities require removal of sediments in the East River, the excavated sediments would be fully characterized for proper off-site disposal.
- Proper handing and disposal of asbestos-containing materials is governed by Federal requirements (Occupational Safety and Health Administration 29 CFR 1926.1101, Department of Transportation 49 CFR 171-173, and EPA 40 CFR 61), New York State requirements (Labor Law Article 30 - Asbestos or Products Containing Asbestos Licensing and 12 NYCRR Part 56 Asbestos Regulations), and New York City requirements (Rules of the City of New York Title 15—Handling and Disposal of Asbestos). Appropriate engineering controls (e.g., wetting and other dust control measures) to minimize asbestos exposure would be implemented prior to and throughout demolition/renovation activities.
- 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 indicates the potential to generate airborne dust or fumes with 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.

- Suspected PCB-containing equipment, such as hydraulic equipment and fluorescent light ballasts, would be surveyed and evaluated prior to building demolition. Suspected 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 regulations. Unless suspected PCB-containing equipment is labeled to be "non-PCB," it must be tested or assumed to contain PCBs and disposed of at properly licensed facilities.

Although some hazardous materials would likely still remain in the subsurface following construction and the proposed site development, there would be no exposure pathways due to the presence and continued maintenance of specified engineering controls. Therefore, the proposed project would not have a significant adverse impact with respect to hazardous materials.

MECHANISMS TO ENSURE PREVENTIVE MEASURES WILL BE FOLLOWED

Under the proposed actions, the City of New York would acquire Site A. The New York City entity in control of Site A will enter into a Memorandum of Understanding (MOU) with NYCDEP to ensure that appropriate testing and remediation activities are performed prior to and/or during development on Site A. If development of Site A were to occur through disposition of the property to a private entity, the Memorandum of Understanding will require the private entity to record a Restrictive Declaration against the property. The Restrictive Declaration will restrict the manner in which the property may be redeveloped and ensure that additional testing and/or preventative measures, as described above, will be performed prior to demolition or soil disturbance activities on the property. A draft Restrictive Declaration will be submitted to the NYCDEP's Legal Affairs office for review and approval. Once approved, the MOU will require that the Restrictive Declaration is recorded against the property to ensure the required measures are implemented and that future redevelopment proceeds in a manner protective of public health.

Site B is privately owned and will remain so. Therefore, an (E) Designation will be placed on the property requiring that pre-development activities include implementation of a Phase II sampling protocol and remediation to the satisfaction of NYCDEP before the issuance of a building permit. With this measure in place, no significant adverse impact related to hazardous materials would occur as a result of development on Site B.

These mechanisms will reduce or avoid the potential that significant adverse impacts would result from the proposed actions on the development sites.

CONCLUSIONS

Contamination in the subsurface (e.g., related primarily to filling activities and underground storage tank leaks) and inside buildings (e.g., primarily related to asbestos, lead-based paint, and PCB-containing equipment) has been identified. To avoid potential significant adverse impacts that might occur from exposure of construction workers, passersby, or future residents, workers, or visitors to the sites, preventative measures would be implemented on Sites A and B. Measures to be implemented on Site A would be set forth in an MOU between the New York City entity in control of Site A and NYCDEP to ensure that appropriate testing and remediation activities are performed prior to and/or during development of Site A. If development of Site A were to occur through disposition of the property to a private entity, the MOU will require the private entity to

record a Restrictive Declaration against the property requiring the preventative measures described above. For privately owned Site B, an (E) Designation would be recorded against the property as one of the proposed actions, requiring future testing and remediation, as appropriate, on the site. Adhering to the procedures described above would effectively protect site workers, the surrounding community, and the environment from exposure to hazardous materials during and after redevelopment activities. ✷