

## **A. INTRODUCTION**

This chapter presents the findings of the hazardous materials assessment and identifies potential areas of concern that could pose a hazard to workers, the community, and/or the environment during or after development of the proposed Memorial Sloan-Kettering Cancer Center (MSK)/The City University of New York (CUNY)-Hunter project. This chapter also considers the management of chemical, biological, and radiological materials in the laboratories that would be part of the proposed project. The project site comprises a City-owned, approximately 66,111-square-foot parcel that formerly operated as a New York City Department of Sanitation (DSNY) incinerator and garage facility. At the time of the site reconnaissance, the western portion of the site was used as a surface parking lot and the eastern portion was unoccupied, with remnants of the former garage structure. The proposed project would entail demolition of the remaining remnants and foundations of the former DSNY facility and site-wide excavation to approximately 40 feet below-grade to facilitate the construction of a new ambulatory care center (MSK ACC) and the Hunter College Science and Health Professions Building (CUNY-Hunter Building).

AKRF performed a Phase I Environmental Site Assessment (ESA) of the project site in June 2012 in accordance with ASTM Standard E1527-05, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice*. The ESA included a review of historical land use maps, local records and previous, available environmental reports; and a review of state and federal regulatory databases relating to use, generation, storage, treatment and/or disposal of hazardous materials. AKRF completed a ~~Subsurface (Phase II)~~ Environmental Site Investigation (ESI) at the project site in October 2012 that included: the advancement of 11 soil borings with the collection of 15 soil samples; sampling of 4 existing (permanent) groundwater monitoring wells previously installed by others; and collection of non-aqueous phase liquid (NAPL) from a geotechnical boring for laboratory/fingerprint analysis. The conclusions of the Phase I ESA and Phase II Investigation are summarized in this chapter.

## **PRINCIPAL CONCLUSIONS**

The Phase I ESA identified a variety of historical uses of the project site including a Sanitation Department incinerator and garage (with vehicle fueling and maintenance). Although removal of a number of petroleum tanks and petroleum contaminated soil was conducted, contamination of groundwater remained and remediation (and monitoring) continues. The Phase I also noted that partially demolished on-site structures and/or project site fill materials may contain asbestos, lead-based paint (LBP) and/or polychlorinated biphenyls (PCB)-containing elements.

The ~~Subsurface (Phase II) Investigation~~ ESI identified field evidence (e.g., odors) of petroleum contamination in some of the collected soil and groundwater samples. A 1.5-inch layer of petroleum product was measured floating on the water table in one of the geotechnical borings. Laboratory analysis identified /petroleum-related compounds in soil and groundwater samples.

Other sampling results were typical of those found at other sites with historical urban fill materials in New York City.

The potential for significant adverse impacts associated with the identified contamination would be avoided by placing an (E) designation for hazardous materials on Block 1485, Lot 15 to ensure that appropriate procedures for any necessary subsurface disturbance are followed prior to, during, and following construction as delineated in this chapter.

In addition, the laboratories in the proposed CUNY-Hunter Building would be operated under the same state and local regulations and controls as the existing Hunter College laboratories to manage the use of chemical, biological, and radiological materials. With these measures, there would be no potential for the proposed project to have significant adverse impacts related to the use of hazardous materials.

## **B. EXISTING CONDITIONS**

### **TOPOGRAPHY AND SUBSURFACE CONDITIONS**

The surface topography at the project site slopes gently to the east toward the East River, located approximately 120 feet east of the project site. Based on reports compiled by the United States Geological Survey (USGS), Central Park, NY Quadrangle (1979), and historical on-site subsurface investigations, the project site lies at elevations between approximately 10 and 20 feet above the National Geodetic Vertical Datum of 1929 (an approximation of mean sea level).

The results of the October 2012 subsurface investigation indicated that groundwater was encountered at varying depths, generally between approximately 4.2 and 17.6 feet below-grade. Soil encountered in the borings generally consisted of sandy fill materials including ash and brick with gravel, and mica schist fragments. Bedrock was observed beneath the sand/fill materials at depths as shallow as approximately 1.5 feet below-grade. Bedrock outcrops were observed in several locations on the project site.

These observations indicated that groundwater may be present in discontinuous areas, perched on the variable bedrock surface. Groundwater was reported to flow in an easterly direction toward the East River, located approximately 120 feet east of the project site. However, actual groundwater flow at the project site can be affected by many factors including bedrock profiles, tidal influence, past filling activities, underground utilities and other subsurface openings or obstructions such as basements, and other factors beyond the scope of this study. Groundwater in Manhattan is not used as a source of potable water.

### **PHASE I ESA FINDINGS**

The following potential hazardous materials issues were identified in the 2012 Phase I ESA:

#### ***ON-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS (RECS)***

- The Sanborn maps indicated that the project site contained a coal yard with coal sheds, small unspecified structures, and vacant land on the 1896 map; the project site was primarily vacant on the 1911 map, with the exception of a small freight station and a stable. The 1939 Sanborn map identified the Department of Street Cleaning Destructor Plant and Garage facility on the central and eastern portions of the project site. The project site was reconfigured and relabeled as the DSNY Garage and incinerator on the 1951 through 2005

Sanborn Maps and included a garage on the eastern portion, a furnace room and offices on the central portion, and a receiving area and tipping floor on the western portion. The regulatory database search and prior environmental investigations indicated that incinerator operations were discontinued in the 1960s and the facility subsequently operated as a DSNY vehicle maintenance/storage garage and vehicle fueling facility (aka Manhattan East 5/8/8A Garage) until 2003, when demolition/dismantling of the facility began. Such uses have affected the environmental conditions of the project site subsurface.

- The project site was listed on the Resource Conservation and Recovery Act (RCRA) hazardous waste generator database, the U.S. Environmental Protection Agency's (EPA) Civil Enforcement Docket database, the New York State Department of Environmental Conservation (DEC) Petroleum Bulk Storage (PBS) and DEC Spills databases with numerous aboveground storage tank (ASTs) and underground storage tanks (USTs) and multiple spills (consolidated under active regulatory status Spill No. 0001929) documenting soil and groundwater contamination.
- Remedial activities implemented at the project site by others since 2000 were summarized within the text and appended to the report and included: vacuum-enhanced free product recovery from monitoring wells; quarterly groundwater sampling; and the placement of Oxygen Releasing Compound (ORC) filter socks in monitoring wells to facilitate bioremediation of petroleum compounds. Available quarterly monitoring results from fourth quarter samples collected in 2011 through first quarter samples collected in 2012 indicated that elevated concentrations of volatile organic compounds (VOCs) remained in monitoring wells located within the south-adjacent East 73rd Street sidewalk and a monitoring well located on the southwestern portion of the project site. Petroleum product was observed in two monitoring wells located on the southwestern portion of the project site and south of the project site, across East 73rd Street. The 2011-2012 monitoring results indicated that elevated VOC concentrations remain beneath the project site subsurface, primarily in discrete areas in the southwestern portion of the project site, and to the south across East 73rd Street. The 2011-2012 monitoring report noted that the collection of quarterly groundwater samples, free product recovery, and installation of ORC socks every six months would continue, and additional monitoring wells would be installed in the vicinity of the monitoring wells located on the southwestern portion of the project site and the monitoring well located south of the project site across East 73rd Street, to delineate contamination.
- Prior studies indicated that all tanks were removed from the project site or were closed-in-place; however, DEC PBS registration records for the project site indicated several discrepancies between the tanks registered for the project site and those documented as having been removed or closed. A recent tank inventory report completed in May 2012 conducted by others indicated that four closed-in-place 550-gallon USTs (reported to formerly contain motor oil or kerosene) may remain within a former waste receiving pit on the western portion of the project site. It was noted that additional unregistered/undocumented tanks may remain beneath the project site.
- Partially demolished on-site structures and/or potential buried fill materials beneath the project site may contain asbestos, lead-based paint (LBP) and/or PCB-containing elements.

*OFF-SITE RECS*

- The Con Edison East 74th Street Steam Plant located on the north-adjacent block at 506 East 74th Street was listed in the DEC Spills database with numerous releases affecting soil and groundwater including hydraulic oils, fuel oils, dielectric fluids, acids, soda ash, and unspecified materials. The facility is listed on the PBS and Chemical Bulk Storage (CBS) with petroleum and chemical ASTs and USTs and RCRA databases for the generation of hazardous wastes. Releases from this facility may have affected the project site subsurface.
- The regulatory database identified one facility in the Voluntary Cleanup Program (VCP) located at 503-509 East 75th Street, approximately 630 feet north of the project site, with documented groundwater and soil vapor contamination from chlorinated solvents including tetrachloroethylene (this site is also listed as a chemical bulk storage facility for historic tetrachloroethylene USTs). Historic releases from this facility may have affected area soil and groundwater quality.
- Industrial and automotive uses on the project site block were identified in historic Sanborn maps and the regulatory database including: an auto repair shop (1939 Sanborn map) and spray painting shop (1979 through 1988 maps) west-adjacent to the project site, followed by additional auto repair facilities with buried gasoline tanks (listed in the DEC PBS, RCRA and/or DEC Spills databases) located in an assumed upgradient groundwater flow direction from the project site.

Recommendations in the Phase I ESA included continuing all remedial actions at the project site in accordance with the site-specific requirements set forth by DEC. It was also recommended to conduct a comprehensive ~~subsurface (Phase II) investigation~~ ESI to characterize soil and groundwater and determine whether the identified RECs had affected subsurface conditions at the project site in addition to the known petroleum contamination. Any asbestos-containing materials (ACM), lead-based paint (LPB), PCBs and/or underground storage tanks encountered during project site redevelopment should be characterized and disposed of in accordance with applicable local, state and federal regulations and proper soil/bedrock characterization/management be conducted and off-site disposal in accordance with applicable regulations. If dewatering is necessary during site construction, the discharge must meet New York City Department of Environmental Protection (DEP) discharge regulations.

The following potential hazardous materials issues were identified in the 2012 ~~Subsurface (Phase II) Investigation~~ ESI:

- Field observations indicated elevated photoionization detector (PID) readings and faint petroleum-like odors in two soil samples, SB-3(0.5-1.5) and SB-11(1-2), located on the southwestern and eastern portions of the project site, respectively. A faint petroleum-like odor was noted in the groundwater sampled from MW-15 (northeastern portion of the project site). A faint petroleum-like odor and slight visible sheen were observed in the groundwater sampled from monitor well MW-33 (southwestern portion of the project site). An approximately 1.5-inch layer of non-aqueous phase liquid (NAPL) (petroleum product) was measured on top of the water table in a geotechnical boring, B-102, located on the southeastern portion of the project site.
- Soil analysis indicated low levels of gasoline/petroleum-related VOCs and semivolatile organic compounds (SVOCs) at concentrations generally below or slightly above the DEC 6 NYCRR Part 375 Remedial Program Soil Cleanup Objectives (SCOs) for Unrestricted Use for soil management purposes and for Restricted Residential Use. Some elevated metals

detections, including lead and barium, exceeded the Unrestricted and Restricted Residential Use SCOs and PCBs were not detected in the soil samples analyzed.

- Groundwater analysis indicated elevated concentrations of gasoline/petroleum-related VOCs and SVOCs above the DEC Class GA Ambient Water Quality Standards in monitor well MW-33, located in the current parking lot on the southwestern portion of the project site. This is consistent with previous quarterly groundwater monitoring reports conducted under active status DEC Spill No. 0001929, which indicated a limited dissolved-phase hydrocarbon plume in this area. The most recent available monitoring report (dated May 2012) indicated that three additional monitoring wells would be installed in the vicinity of MW-33 (and one off-site well south of East 73rd Street) to delineate dissolved VOC contamination. These additional wells were not observed at the time of the Phase II Investigation.
- Elevated concentrations of some metals were detected in all of the groundwater samples, which was attributed to the sediment in the fill materials and/or from naturally occurring metals in brackish water. PCBs were not detected in any of the groundwater samples.
- Laboratory results indicated that non-aqueous liquid collected from geotechnical boring B-102 was similar to a combination of unweathered gasoline and No. 2 fuel oil/diesel fuel. Previous studies indicated former fuel oil and gasoline storage tanks (reported to have been removed) and two gasoline fill ports (within the East 73rd Street sidewalk) in the vicinity of this boring that may have contributed to petroleum contamination in this area of the project site.

Recommendations in the Phase II Investigation included that all remedial activities at the project site (and off-site) continue to be conducted in accordance with applicable regulations, including DEC spill closure procedures and any site-specific requirements set forth by DEC. In addition, any petroleum storage tanks remaining beneath the project site should be closed and removed in accordance with applicable regulations prior to or during redevelopment. The implementation of a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) prior to subsurface disturbance to provide contingency measures addressing potential USTs, contaminated soil/bedrock and design of an appropriate vapor barrier/waterproofing and any soil or fill excavated as part of future site development activities should be managed in accordance with applicable regulations and tested in accordance with the requirements of the intended receiving facility. Testing of groundwater prior to excavation to evaluate the need for pre-treatment prior to discharge for compliance with DEP discharge permit/approval requirements is necessary. Redevelopment plans should incorporate a vapor barrier to reduce the potential for vapor intrusion from VOCs in the groundwater beneath the project site. Excavation of the project site for development could reveal more significant soil and/or groundwater contamination in areas not tested as part of the Phase II investigation that could require further investigation and/or remediation in accordance with all applicable regulations and noted that further subsurface investigations would be necessary to delineate the extent of the free-phase petroleum product observed on the southeastern portion of the project site to evaluate appropriate remediation measures to address the contamination and to achieve spill closure with DEC.

## **MANAGEMENT OF LABORATORIES AND CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL MATERIALS**

As a research institution, Hunter College currently operates over 250 research and teaching laboratories (at its 68th Street and Brookdale campuses) that handle numerous chemical,

biological, and radiological materials, some of which can be hazardous. These materials have long been used in Hunter College laboratories, and proven safeguards have been developed to prevent harmful consequences from improper management and disposal of these materials. Overall, most laboratory chemicals are purchased in small quantities and their use is managed by trained professionals, and this would be the case in the new CUNY-Hunter Building.

Most biological and radiological agents that are used at the Hunter College laboratories are directed to teaching and research activities in the fields of biochemistry, chemistry, physics, psychology, anthropology, and many medical related sciences and this would be case at the new CUNY-Hunter Building. Management of all laboratory regulated materials—including handling, storage, and disposal—would conform with regulatory mandates. To this aim, Hunter College and CUNY have developed institutional controls to implement these regulatory mandates and to promote safety.

#### *CUNY AND HUNTER COLLEGE INSTITUTIONAL CONTROLS*

##### *Office of Environmental Health and Safety*

The Hunter College Office of Environmental Health and Safety (EHS), a unit within the Hunter College Office of Finance and Management, provides stewardship in the protection of human health, occupational safety, and the safeguard of the environment in a manner that is consistent with regulatory mandates and the academic and research goals of the college. Hunter College strives to promote a cultural environment of shared responsibility within the college community that effectively identifies hazards and manages the risk of injury and disease. To aid in this effort, EHS offers a comprehensive program that incorporates chemical and biological safety, radiation safety and occupational safety programs, as well as guidance in achieving adherence to regulatory compliance.

##### *CUNY Office of Research Compliance*

The Office of Research Compliance, a unit within The Office of the Vice Chancellor for Research at CUNY, ensures University compliance with federal, state, and local regulations and ethical standards with regard to all aspects pertaining to the responsible conduct of research. Vital to its mission of promoting research excellence is the creation and implementation of key University policies. These policies address a wide variety of research issues and regulatory requirements, spanning all areas of research at CUNY. The research compliance division of the Office of the Vice Chancellor for Research at CUNY provides oversight, administrative support, and educational training concerning regulatory and ethical issues related to research.

##### *The Institutional Biosafety Committee*

The Hunter College Institutional Biosafety Committee (IBC) has the responsibility to assure the safe use of recombinant DNA (rDNA) as outlined by the National Institutes of Health (NIH); to assure the safety of Hunter College personnel and others working with rDNA and/or biological materials; and to limit the environmental impact of rDNA and biological agents, including pathogens utilized by investigators at the college. IBC follows recommendations and/or regulations outlined in the NIH Guidelines for Research involving Recombinant DNA molecules, the 5th edition BMBL (Biosafety in Microbiological and Biomedical Laboratories) and the Federal Register 42CFR73.

### *The Principal Investigators*

The Principal Investigator (PI) is the lead scientist for a particular well-defined science (or other research) project, such as a laboratory or clinical study; it is often used as a synonym for “head of the laboratory.” The PI is responsible for the safe conduct of research and management of chemicals and research materials.

The PI collaborates with the Office of Environmental Health and Safety to help identify and mitigate laboratory risks. The PI is responsible for the evaluation and control of laboratory materials and equipment, and for the safe operation of the laboratory.

### **REGULATORY MANDATES**

There is no national framework to integrate or coordinate regulations related to the management of chemicals in order to effectively address workplace and environmental statutes. Numerous federal, state, and local agencies have laws that address the management of chemicals.

#### *Laws That Regulate the Management of Chemicals*

Numerous federal, state, and local agencies have responsibilities for the regulation of chemicals. The United States Occupational Safety and Health Administration (OSHA) defines employers’ requirements in minimizing hazardous exposures to their personnel. In the State of New York, OSHA protections to public sector employees like those of Hunter College are granted through the New York State Department of Labor PESH Act. PESH rules provide standards that limit the amount of hazardous chemicals workers can be exposed to, require the use of certain safe practices and equipment, and require employers to monitor hazards and keep records of workplace injuries and illnesses. The U.S. Department of Transportation (USDOT) regulates the transport of hazardous materials. DEC enforces EPA regulations and in some cases has made them more restrictive. DEP requires all institutions using hazardous (flammable, corrosive, reactive, or toxic) chemicals to submit an annual inventory. New York Administrative Code Title 29, New York City Code (The NYC Fire Code) regulates the storage, handling, use, transportation of hazardous and combustible materials used in laboratories including flammable and combustible liquids, flammable solids, oxidizing materials, unstable reactive materials, corrosive materials and other hazardous materials such as tanks under pressure. Applicable requirements and implementation methods are described more specifically below.

#### *Laws for Emergency Planning and Community Right-to-Know Provisions of Superfund and Reauthorization Act (Title III)*

The Emergency Planning and Community Right-to-Know Act (EPCRA) was created to help communities plan for emergencies involving hazardous substances. The Act establishes requirements for federal, state and local governments, Indian tribes, and industry regarding emergency planning and “Community Right-to-Know” reporting on hazardous and toxic chemicals. There are four major provisions of EPCRA: Emergency Planning, Emergency Release Notification, Hazardous Chemical Storage Reporting, Toxic Chemical Release Inventory. Facilities covered by EPCRA requirements must submit an Emergency and Hazardous Chemical Inventory Form to the Local Emergency Planning Committee (LEPC), the State Emergency Response Commission (SERC), and the local fire department annually. In New York City, a facility where a hazardous substance is present at or above the threshold reporting quantity for such substance shall file a facility inventory form with the DEP (TIER II inventory).

*Laws That Regulate the Management of Hazardous Waste*

Storage, transport, and disposal of hazardous chemical waste are regulated under RCRA and similar New York State hazardous waste regulations (6NYCRR Parts 370-374). All generators of hazardous wastes must register with DEC and receive a generator's identification number. Generators must file manifest forms each time hazardous wastes are transported from the site, as well as annual reports: failure to file these is punishable by fines and other penalties. Large generators of hazardous wastes are subject to additional requirements, including the preparation of a contingency plan for releases of hazardous waste. All transport of chemicals must meet the requirements of USDOT for the particular type and quantity of that chemical.

Hunter College follows all EPA and DEC rules and regulations regarding hazardous waste management. Hunter College stores hazardous waste in a designated area of the laboratory (Hazardous Waste Accumulation Area or Satellite Accumulation Area-SAA) inside specially labeled containers. Containers are selected to ensure that corrosion or leakage does not occur and are regularly inspected to ensure they are in sound condition. Waste is consolidated into a central accumulation facility by EHS personnel where licensed private vendors collect, transport, and dispose of the waste in accordance with all applicable federal and state regulations.

*Laws That Regulate Occupational Safety and Health*

OSHA defines employers' requirements in minimizing hazardous exposures to their personnel. In the State of New York, OSH Act protections to public sector employees like those of Hunter College are granted through the PESH Act. PESH rules provide standards that limit the amount of hazardous chemicals workers can be exposed to, require the use of certain safe practices and equipment, and require employers to monitor hazards and keep records of workplace injuries and illnesses. For example, PESH laboratory regulations mandate that workers using hazardous materials receive appropriate training in safety procedures, that employers make available appropriate safety equipment, and that safety data sheets (SDS) for all hazardous chemicals be available to chemical users. It also requires a Chemical Hygiene Plan in compliance with laboratory standard regulations.

In laboratories where hazardous chemicals are used, occupational laws mandate adequate lab ventilation. Where employee exposure exceed permissible exposure limits, lab ventilation and engineering control, such as fume hoods, are required in in order to assure appropriate chemical hygiene and to meet lab safety and occupational standards. Fume hoods are enclosures that are maintained under negative pressure and continuously vented to the outside. Their function is to protect workers from potentially harmful chemical fumes. By providing continuous exhaust from laboratory rooms, they also prevent any fumes released within the laboratory from escaping into other areas of the building or through windows to the outside.

*Laws for Laboratory Fire Safety*

The New York City Fire Code specifies many safety requirements for chemical laboratories. These requirements must be met before FDNY would issue an operating permit for the laboratory. FDNY re-inspects laboratories at least annually to ensure that the permit requirements continue to be met.

*Laws for the Management of Biological Materials and Cell Culture*

NIH and CDC, which are both part of the U.S. Department of Health and Human Services, are the primary federal agencies that oversee biomedical research. Their guidelines include the Fifth



Edition of the NIH/CDC “Biosafety in Microbiological and Biomedical Laboratories” (BMBL) and the April 2002 edition of the “NIH Guidelines for Research Involving Recombinant DNA Molecules.” These guidelines specify appropriate containment procedures for research activities involving recombinant DNA, pathogenic agents, and other biohazards. The guidelines are mandatory for federally funded institutions. A number of other federal agencies regulate certain activities associated with biological and medical research. OSHA has standards for persons handling blood-borne pathogens. The U.S. Department of Agriculture (USDA) oversees research and the handling of organisms that affect plants and animals. USDOT sets and enforces standards for the road transport of biomedical materials. The International Air Transport Association (IATA), an international trade organization of airlines, sets standards for the transport of biological materials by airplane through rules published in their “Dangerous Goods Regulations.” The New York City Health Code and the New York Public Health Law regulate blood handling/donations/transfusions, reportable diseases and conditions, and handling of recombinant DNA.

*Laws That Regulate Possession, Use, or Transfer of Biological Select Agents or Toxins (or simply Select Agents) That Have The Potential to Pose a Severe Threat to Public Health and Safety*

The USA PATRIOT Act regulates access to certain identified biological agents, known as “Select Agents.” Hunter College has instituted policies to meet the requirements of the USA PATRIOT Act and subsequent bioterrorism legislation as they apply to their laboratories and the materials found in the laboratories. For example, background checks are required of people who have access to Select Agents. When present, the location and quantities of these materials are frequently checked and inventoried.

*Laws That Regulate the Transport of Biological Materials*

USDOT and IATA rules apply to the transport of biological materials. There are two classifications of biological materials with differing requirements. The lower risk category includes materials deemed unlikely to pose an infection risk in the event of an accident during transport. The higher risk category includes high risk infectious materials. Irrespective of the category, the personnel sending and receiving these materials must receive training on the packing and handling of the biological materials. Hunter College regularly trains staff, certifying them to safely package and ship biological materials using an approved shipper.

*Laws That Regulate the Management of Infectious Waste*

Disposal of potentially infectious waste is regulated by New York State under regulations of the New York State Department of Health (DOH) and DEC. Two state laws (L 1988 C 654 and C 655) provide for additional enforcement of infectious waste regulations, and civil and criminal penalties for violations.

Infectious waste includes cultures of infectious agents, blood and blood products, tissues and other body parts, contaminated animal carcasses, sharps (needles) used in patient care and research, and other such materials. DEC regulations require generators, transporters, and disposal facilities to keep records of all shipments. Permitting requirements have been established for transporters of infectious wastes, including minimum liability insurance requirements. DOH regulations require that infectious wastes be stored and transported in containers that are leak-proof, puncture-resistant, and able to resist ripping, tearing, or bursting.

They require conspicuous labeling of all infectious wastes, including the name of the source of the wastes. The regulations also specify approved methods of disposal or treatment.

Infectious laboratory waste is stored in approved containers inside Hunter College laboratories. Prior to collection by trained housekeeping staff, the waste is decontaminated using chemicals (e.g., bleach) or an autoclave. Housekeeping staff place the waste in approved waste storage rooms prior to collection and disposal by contractors subject to federal, state, and local transport requirements.

#### *Laws That Regulate the Management of Pathogenic and Potentially Lethal Agents*

New York Public Health Law regulates blood handling/donations/transfusions, reportable diseases and conditions, handling of live pathogenic organisms, and handling of recombinant DNA, including Sections 2100 through 2112, 3100, 3120 through 3124, 3200 through 3203, and 3220 through 3223. These issues are additionally governed under New York City Health Code Articles 11, 15, and 17.

Hunter College laboratory personnel have specific training in handling pathogenic and potentially lethal agents, and are supervised by competent scientists who are experienced in working with these agents. All procedures involving the manipulation of infectious materials are conducted within biological safety cabinets or an equivalent level of protection.

#### *Laws That Regulate Radionuclides*

The New York City Health Code (Title IV, Article 175) regulates medical research laboratories handling radioactive materials. The facility's license allows authorized registered users to transfer, receive, possess, and use the radioactive materials listed in the institutional license, and to use such radioactive materials for scientific studies (non-human use) in places designated in the license.

Hunter College's Radiation Safety Officer supervises the use, storage and disposal of radioactive materials. Any radioactive wastes with short half-lives (such as I-125 and P-32) are stored until their radioactivity decays to acceptable levels. Wastes with longer half-lives or which cannot be stored on-site are properly labeled, containerized, and transported for off-site disposal at a permitted radioactive waste disposal site.

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

In the future without the proposed project, existing uses on the project site would remain, and subsurface disturbance would not occur.

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

The greatest potential for exposure to any contaminated materials would occur during subsurface disturbance associated with construction of the proposed project. However, the potential for adverse impacts associated with these activities would be minimized by adhering to the following protocols:

- All remedial activities at the project site (and off-site) would continue to be conducted in accordance with applicable regulations, including the DEC spill closure procedures and any site-specific requirements set forth by DEC.

- A site-specific Remedial Action Plan (RAP) and site-specific Construction Health and Safety Plan (CHASP) should be submitted for review and approval prior to ground disturbance.
- Additional subsurface investigations would be conducted, including the collection and laboratory analysis of subsurface soil and groundwater samples to delineate the extent of the free-phase petroleum product observed within a geotechnical boring on the southeastern portion of the project site to evaluate appropriate remediation measures to address the contamination.
- Future development entailing soil (or bedrock) disturbance could encounter contaminated soil and/or bedrock. If evidence of contaminated soil or rock (e.g., petroleum product, stains or odors) is encountered, these materials (and all other materials requiring off-site disposal) would be disposed of in accordance with applicable federal, state and local regulations. If any USTs are encountered, they would be properly assessed, and removed in accordance with state and local regulations. Soil and/or bedrock intended for off-site disposal would be tested in accordance with the requirements of the receiving facility. Transportation of material leaving the site for off-site disposal would be in accordance with federal, state, and local requirements covering licensing of haulers and trucks, placarding, truck routes, manifesting, etc. If more significant soil and/or groundwater contamination is discovered during excavation activities, such contamination would require further investigation and/or remediation in accordance with all applicable regulations
- Any demolition debris containing suspect ACM, LPB, PCBs and/or underground storage tanks encountered during redevelopment would be characterized and disposed of in accordance with applicable local, state and federal regulations.
- Redevelopment plans should incorporate a vapor barrier to reduce the potential for vapor intrusion from VOCs in the groundwater beneath the project site.
- Prior to excavation activities, testing would be performed to evaluate the need for pre-treatment prior to discharge for compliance with DEP discharge permit/approval requirements.

In addition, the laboratories in the proposed CUNY-Hunter Building would be operated under the same state and local regulations and controls as the existing Hunter College laboratories (described above in Section B, “Existing Conditions”) to manage the use of chemical, biological, and radiological materials.

With the implementation of the procedures described above relating to project construction and the use of hazardous materials in the proposed facility, no significant adverse impacts related to hazardous materials would be expected to occur as a result of the proposed project. Following construction, there would be no potential for the proposed project to have significant adverse impacts. \*