Chapter 8: Hazardous Materials

A. INTRODUCTION

This attachment 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 redevelopment. The Proposed Project would include the demolition of the current NYBC building followed by construction of a new mixed-use 16-story laboratory building. Both the Proposed Project and No Action building would entail demolition of the existing structure followed by similar excavation for new construction.

PRINCIPAL CONCLUSIONS

The Proposed Actions would not result in significant adverse impacts related to hazardous materials. Based on the assessment contained in the DEIS, the potential for significant adverse impacts related to hazardous materials resulting from the Proposed Actions would be avoided through compliance with the completion of a New York City Office of Environmental Remediation (OER) approved Subsurface (Phase II) Investigation and implementation of a RAP Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP). To ensure that these investigations are undertaken, a hazardous materials (E) Designation (E-612) would be placed on the project site, which requires approval by the OER prior to obtaining NYC Buildings Department (DOB) permits for any new development entailing soil disturbance. The potential for significant adverse impacts during operation would be precluded through compliance with applicable regulatory requirements, such as those relating to the facility's use, handling, storage, transport, or waste management of hazardous materials. Regulatory programs also address worker safety, emergency planning, community right-to-know, and fire safety.

With certain measures, including a Phase II Investigation Work Plan and HASP, completion of the investigation, and a Remedial Action Plan (RAP) and Construction Health and Safety Plan (CHASP) enforced as an (E) Designation (E-612), no significant adverse impacts related to hazardous materials would be anticipated to occur during construction. Following construction of the Proposed Project significant adverse impacts during operation would be avoided through compliance with the myriad regulations and guidelines applicable to the facility's laboratories and other operations.

METHODOLOGY

As described in Chapter 12, "Hazardous Materials," of the 2020 *CEQR Technical Manual*, the purpose of a hazardous materials assessment is to determine whether a proposed action could lead to potential increased human exposure to hazardous materials and whether the increased exposure could lead to significant public health or environmental impacts. This assessment made use of a September 2019 Phase I Environmental Site Assessment (ESA) of the Development Site by AKRF, Inc., in accordance with ASTM Standard E1527-13, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Practice* (see **Appendix C**). The ESA

included a visual inspection; a review of historical land use maps and local records; and a review of State and Federal regulatory databases relating to use, generation, storage, treatment, and/or disposal of hazardous materials.

Additionally, as the new building (like the existing building and the No Action building) would include multiple laboratory facilities, some of which would involve hazardous microorganisms and chemicals, including a replacement Biological Safety Level (BSL)-3 Laboratory that would handle microbes that can cause serious or potentially lethal disease through inhalation, the assessment addresses the potential for significant public health or environmental impacts related to future operations which would be operated under the same federal, state and local regulations and controls as the existing laboratories. The proposed building would also include certified clean room facilities that would be approved under Current Good Manufacturing Practice (cGMP) guidelines for use in the small-scale production of cellular therapies, trial vaccines, and other materials used in connection with clinical trials. These facilities would replace similar clean room facilities in the Blood Center's existing building, which are used for the production of cellular therapies and other biological products. These certified clean room facilities are found at many life sciences laboratories both in the City and around the country. They would not require hazardous chemicals different in type or amount than what would otherwise be used in the building if there was no clean room facility. Furthermore, clean room facilities would be exempt from regulation under the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) for pharmaceutical products (40 CFR 63 Subpart GGG) since they would not be a major source of hazardous air pollutant (HAP) emissions (defined as 10 tons per year or more of an individual HAP, or 25 tons per year or more of any combination of HAPs).

B. EXISTING CONDITIONS

TOPOGRAPHY AND SUBSURFACE CONDITIONS

Topography at the Development Site was relatively level. Based on the U.S. Geological Survey, Central Park, NY Quadrangle (2013) map, the Development Site is approximately 45 feet above mean sea level. The water table is anticipated to be approximately 15 to 25 feet below grade based on nearby subsurface investigations (based upon the Phase I ESA) and groundwater is assumed to flow in an easterly to southeasterly direction toward the East River, located approximately 500 feet away. However, actual groundwater flow can be affected by many factors including the adjacent subway tunnels beneath Second Avenue, underground utilities, and other factors beyond the scope of this study. Groundwater in Manhattan is not used as a source of drinking water.

PHASE I ESA FINDINGS

PHASE I ESA – NEW YORK BLOOD CENTER (NYBC) 310 EAST 67TH STREET, AKRF, INC. SEPTEMBER 2019

AKRF conducted a Phase I ESA of the Development Site in September 2019. The Phase I ESA consisted of a review of available records; a Site reconnaissance; interviews with a Site representative; a review of historical fire insurance maps; and an evaluation of regulatory database listings for the Development Site and neighboring properties. It identified the following Recognized Environmental Conditions (RECs):

- The Development Site (310 East 67th Street) was identified in the regulatory databases as a Small Quantity Generator (SQG) of hazardous wastes consistent with its medical/laboratory

facilities. Historical handling associated with these uses and facility maintenance activities could have affected subsurface conditions at the Development Site.

- Regulatory records did not indicate any currently registered aboveground storage tanks (ASTs); however, a 2,000-gallon diesel AST was located in a tank room in the basement that is associated with an emergency generator system and is currently operational. No obvious leaks or breaches were noted in connection with the tank. Oil burner applications dated 1950, 1972, and 1973 and fuel oil installation approvals were noted dated 1964 and 1976 in electronic Building Department files, indicating the potential for historical petroleum bulk storage at the facility. Undocumented releases from tanks could have affected subsurface conditions at the Development Site.
- Historical land use maps, site reconnaissance findings, and city directories identified nearby industrial and automotive uses between circa 1892 and 2007. The regulatory database information indicated a closed spill of dielectric fluid associated with a transformer vault and adjacent areas immediately north of the Development Site and two nearby petroleum bulk storage (PBS) facilities.

The following non-REC environmental concerns were identified:

- Building components and/or buried foundation elements and demolition debris from earlier structures could include petroleum storage tanks, polychlorinated biphenyls (PCBs), asbestos containing materials (ACM) and/or lead-based paint.

MANAGEMENT OF HAZARDOUS MICRO-ORGANISMS AND CHEMICALS

Laboratories in the existing NYBC building handle bio-hazardous materials, radioactive materials, and other chemicals associated with its operations, as would the Proposed Project, albeit at a somewhat larger scale. The as-of-right development would also include similar operations. All aspects of such use are subject to strict regulation and NYBC has internal staff, procedures and controls to implement these regulations and promote safety within their facility, in particular with the principles and practices set out in the US Centers for Disease Controls (CDC) *Biosafety in Microbiological and Biomedical Laboratories* (BMBL).

There is no national framework to integrate or coordinate regulations related to the management of microorganisms and chemicals in order to effectively address workplace and environmental statues. Rather, 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 (US) Occupational Safety and Health Administration (OSHA) defines employers' requirements in minimizing hazardous exposures to their personnel. The US Department of Transportation (USDOT) regulates the transport of hazardous materials. The New York State Department of Environmental Conservation (DEC) enforces US Environmental Protection Agency (EPA) regulations and in some cases has made them more restrictive. NYC Department of Environmental Protection (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 containers of cryogenic liquids (such as liquid nitrogen) or gases under pressure.

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 the federal Resource Conservation and Recovery Act (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.

Disposal of potentially infectious waste is regulated in New York under regulations of the DEC, NYC DOHMH and the NYC Department of Sanitation (DOS)). Title 15 of Article 27 of the Environmental Conservation Law, 6 NYCRR Subparts 360-10 and 360-17, and Part 364 regulations, in conjunction with the Public Health Law 1389 aa-gg and 10 NYCRR Part 70 govern the activities of the regulated community to properly manage regulated medical wastes/infectious wastes. The 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. The DOHMH 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. The DOS through the Administrative Code of the City of New York § 16-120.1 requires that generators of regulated medical waste ensure the proper disposal of these materials and to efficiently track the disposal of this waste, requires generators to submit an Annual Solid Waste Removal Plan.

LAWS THAT REGULATE OCCUPATIONAL SAFETY AND HEALTH

OSHA defines employers' requirements in minimizing hazardous exposures to their personnel. 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. Records must be kept of all accidents and the facility would be subject to inspection by OSHA, which also investigates worker complaints and accidents.

In laboratories where hazardous chemicals are used, occupational laws mandate adequate ventilation. Where employee exposure would exceed permissible exposure limits, lab ventilation and engineering control, such as fume hoods, are required. Fume hoods are enclosures maintained under negative pressure and continuously vented.

LAWS FOR LABORATORY FIRE SAFETY

The New York City Fire Code specifies many safety requirements for laboratories. These requirements must be met before FDNY would issue an operating permit for the laboratory. FDNY inspects laboratories at least annually to ensure compliance with the permit requirements. The FDNY also regulates the storage of cryogenic liquids (such as the existing and future liquid nitrogen storage) and compressed gases.

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 BMBL. These guidelines specify appropriate containment procedures for research activities involving 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 US 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 and transfusions, reportable diseases and conditions, and handling of recombinant DNA. Articles 11 and 15 of the New York City Health Code regulate reportable diseases and conditions, and handling of live pathogenic organisms.

Regulations associated with blood donations, transfusions and immunohematology testing are stipulated in New York State Public Health Law, Sec. 3121(5) Title: SubPart 58-2 – Blood Banks and Laboratories Performing Immunohematology Testing.

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." NYBC has policies to meet the requirements of the USA PATRIOT Act and subsequent bioterrorism legislation as they apply to their facilities. 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.

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, sharps (needles), 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.

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. All procedures involving the manipulation of infectious materials must be 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 authorizes registered users to transfer, receive, possess, and use the radiative materials listed in the institutional license, and to use such radioactive materials for scientific studies (non-human use) in places designated in the license.

C. THE FUTURE WITHOUT THE PROPOSED PROJECT

In the Future without the Proposed Project (No Action Condition), the Development Site would be redeveloped with a new building as-of-right containing laboratories and medical offices.

This would entail demolition of certain existing buildings/foundations and excavation to construct the cellar and sub-cellar levels. Demolition could disturb hazardous materials (such as asbestos containing materials) within the existing buildings and excavation could increase pathways for human exposure if performed without appropriate controls. However, the potential for adverse

impacts associated with these demolition/construction activities would be minimized by adhering to the following regulatory requirements:

- Prior to demolition, a comprehensive asbestos survey of the existing building would be conducted including sampling of all suspect ACM. Based on its findings, all identified ACMs would be removed and disposed of in accordance with applicable Federal, State, and local requirements.
- Disposal of suspect mercury-containing or suspect PCB-containing equipment would be performed in accordance with applicable regulatory requirements. Any aboveground tanks, drums or containers of petroleum, chemicals, medical/biological, and radiological wastes would be properly disposed of in accordance with applicable federal, state and local regulations.
- Prior to demolition, all remaining chemical, biological, and radioactive materials as well as empty tanks/containers would be removed and if not to be reused in the new facility, disposed of in accordance with all applicable requirements. All areas where these materials were previously used or stored would then be carefully inspected and cleaned as necessary in accordance with applicable requirements. In particular, radioactive material regulations (including 6 NYCRR Part 380) require notification of DEC at least 30 days before vacating premises where radioactive materials were stored, and performance of a survey and any necessary decontamination to verify acceptable residual levels.
- 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).
- The existing emergency generator diesel tank would be emptied and removed in accordance with DEC and FDNY requirements prior to redevelopment. During excavation any unforeseen tanks would be properly assessed, closed, and removed in accordance with state, and local requirements (including those relating to spill reporting and tank registration). Soil 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.
- Based on the depth of excavation, dewatering might be required. If it were, it would be performed in accordance with DEP requirements for discharge to sanitary/combined sewers. Pretreatment would be performed if necessary to meet the DEP requirements.

OPERATION OF THE AS-OF-RIGHT FACILITY

Although the quantities of hazardous materials used in this newly constructed facility would generally be larger than those associated with the current operations at the project site, their management would be subject to the same requirements outlined above for existing uses and would in this way avoid the potential for adverse impacts associated with facility operations. The facility would include a variety of laboratories including a BSL-3 laboratory handling microbes that can cause serious or potentially lethal disease through inhalation, and associated equipment/operations (e.g., liquid nitrogen storage). However, as with the similar laboratory in the existing building, impacts would be avoided through strict compliance with the applicable regulatory requirements and guidelines. Although the exact materials used will depend on future activities: below are some of the more likely chemical, biohazardous and radioactive materials and waste management procedures that would be associated with the new facility (see **Appendix**

C for an expanded inventory list associated with the NYBC facility). The facility's Environmental Health and Safety Officer would maintain all required licenses, permits, approvals, records, plans (e.g., for spill cleanup), etc., with updates as materials/quantities change.

BIOHAZARDOUS MATERIALS

All activities would continue to follow both applicable regulatory requirements and the guidelines established by the CDC and NIH. The new building would not be designed for activities involving biohazards greater than BSL-3. Laboratory personnel would have specific training in handling pathogenic and potentially lethal agents and would be supervised by competent scientists who are experienced in working with these agents.

All procedures involving the manipulation of infectious materials would be conducted within biological safety cabinets or other physical containment devices, and by personnel wearing appropriate personal protective clothing and equipment.

RADIOACTIVE MATERIALS

NYBC is licensed to use radioactive isotopes such as iodine (I-125), tritium (H-3), carbon (C-14), phosphorus (P-32), and sulfur (S-35). The only isotope currently in use is S35.

Laboratories in the new building may obtain Food and Drug Administration (FDA) certification for the small-scale production of trial vaccines and other materials in preparation for clinical trials. This would include the use of some of the chemicals listed in Appendix C.

WASTE MANAGEMENT

All chemical, biological, and radioactive wastes would be managed through a centralized system under the direction of the facility's Environmental Health and Safety Officer. Wastes would be properly containerized in properly sealed storage containers with appropriate labeling and handling procedures and, as required, collected from individual laboratories, and stored prior to off-site disposal in appropriate storage areas/rooms. Appropriately licensed contractors would regularly remove wastes for treatment and/or disposal off-site, e.g., regulated medical wastes would be taken to a central collection location, picked up by a permitted medical waste hauler, and taken off-site for treatment/disposal by autoclave or incineration. Any radioactive wastes with short half-lives (such as I-125 and P-32) would be stored until its radioactivity decayed to acceptable levels. Wastes with longer half-lives would be properly labeled, containerized, and transported for off-site disposal at a permitted radioactive waste disposal site.

D. THE FUTURE WITH THE PROPOSED PROJECT

The Proposed Project would include the demolition of the current NYBC building followed by construction of a new mixed-use 16-story (plus cellar and sub-cellar) laboratory building.

The potential for significant adverse impacts would be avoided by following the same procedures relating to demolition/construction and operations as was described above in the "Future without the Proposed Actions," as well as the following measures:

- To investigate the potential concerns for subsurface contamination identified by the Phase I ESA, a Subsurface (Phase II) Investigation would be conducted, including the collection and analysis of soil, groundwater, and soil gas samples. A Sampling Protocol (incorporating a Health and Safety Plan [HASP]) was submitted to DEP for review and was approved (subject to the

performance of additional borings) by DEP in a letter dated November 6, 2020. As part of the (E) Designation requirements, the Sampling Protocol and HASP would be submitted to OER for approval prior to conducting the investigation.

- Based on the findings of the Subsurface Investigation, a Remedial Action Plan (RAP)/ Construction Health and Safety Plan (CHASP) would be developed in conjunction with OER for implementation during the soil disturbing activities associated with excavation/construction. The RAP/CHASP would specify procedures for identifying and managing contaminated soil and/or underground storage tanks (including procedures for stockpiling and off-site transportation and disposal of contaminated soil), and appropriate health and safety procedures, including the need for dust control and air monitoring. The RAP would also include any necessary requirements for the new building to include vapor control (should there be subsurface vapors that could otherwise migrate into the new building) and for the quality of imported soil used in any new landscaped areas (if applicable). The CHASP would include procedures including (contingency and emergency response procedures) to protect both construction workers and the community during soil disturbance, including the need for air monitoring.
- Because the Subsurface (Phase II) Investigation cannot be conducted during the CEQR process, due to the presence of the existing building, to ensure that it occurs, an (E) Designation (E-612) for hazardous materials would be placed on the zoning map pursuant to Section 11-15 of the New York City Zoning Resolution for the Development Site resulting in the oversight and management of remedial actions by OER. The (E) Designation would ensure that testing and mitigation will be provided as necessary before any future development and/or soil disturbance in accordance with OER requirements.

The facility would include a variety of laboratories and associated equipment/operations (e.g., liquid nitrogen storage), which would be subject to the same requirements outlined above for existing uses and would in this way avoid the potential for adverse impacts associated with facility operations. The facility would include a BSL-3 laboratory handling microbes that can cause serious or potentially lethal disease through inhalation. However, as with the similar laboratory in the existing building (and the similar laboratory that would be in the No Action building), impacts would be avoided through strict compliance with the applicable regulatory requirements and guidelines.

With the implementation of these procedures, no significant adverse impacts related to hazardous materials would result from the construction or operation of the facility associated with the Proposed Actions.

E. CONCLUSIONS

With the measures outlined above included as part of the Proposed Actions, including the (E) Designation (E-612) for hazardous materials, no significant adverse impacts related to hazardous materials would be anticipated to occur. Following approval of a Phase II Investigation Work Plan and HASP and completion of the investigation, a Phase II Investigation report would be submitted to OER along with a RAP and CHASP, as required, based on the results of the investigation prior to intrusive activities associated with the Proposed Project. Following construction of the Proposed Project significant adverse impacts during operation would be precluded through compliance with the myriad regulations and guidelines applicable to the facility's laboratories and other operations. ✶