960 FRANKLIN AVENUE REZONING EIS
Chapter 10: Hazardous Materials

A. INTRODUCTION

As detailed in the 20202014 *CEQR Technical Manual*, the goal of a hazardous materials assessment is to determine whether an action may increase the exposure of people or the environment to hazardous materials, and if so, whether this increased exposure would result in potential significant public health or environmental impacts. A hazardous material is any substance that poses a threat to human health or the environment. Substances that can be of concern include, but are not limited to, heavy metals, volatile and semi-volatile organic compounds, methane, polychlorinated biphenyls and hazardous wastes (defined as substances that are chemically reactive, ignitable, corrosive, or toxic). According to the 20202014 *CEQR Technical Manual*, the potential for significant impacts from hazardous materials can occur when: (a) hazardous materials exist on a site; (b) an action would increase pathways to their exposure; or (c) an action would introduce new activities or processes using hazardous materials.

B. PRINCIPAL CONCLUSIONS

The Proposed Actions would not result in significant adverse impacts related to hazardous materials. A Phase I Environmental Site Assessment (ESA) was prepared in August 2017 in order to evaluate potential contamination of the project site. The Phase I ESA identified Recognized Environmental Conditions (RECs). As described in the 2017 Phase I ESA and a previous Phase I ESA that was prepared for the property by The ELM Group, Inc. (ELM) in 2016, soil contaminants consisting of PAHs and metals were identified on the Development Site. As part of the planned site redevelopment activities, ALC recommend that a Soil Management Plan be developed and implemented to address contaminated soils during the planned redevelopment activities.

A Phase II Environmental Site Investigation (ESI) will be necessary to adequately identify/characterize the surface and subsurface soils of the project site. Preparation of a Phase II ESA Work Plan will be required and will be sent to the New York City (NYC) Department of Environmental Protection (NYC DEP) and the NYC Office of Environmental Remediation (OER) for review and approval. A testing protocol will be established in the Phase II Work Plan to investigate site-specific RECs identified in the Phase I ESA relating to on-site soils, groundwater, and soil vapor.

The analytical results of the soil samples collected during preliminary site investigations detected several compounds throughout the Development Site at concentrations exceeding the NYSDEC Unrestricted Residential and Restricted Residential Soil Cleanup Objectives (SCOs). No volatile organic compounds (VOCs) were detected in any of the soil samples collected and therefore, the preliminary testing concluded that vapor intrusion is not a concern at the Development Site. Based on the concentrations of contaminants detected and areas impacted, the preliminary testing determined that the contaminants identified do not appear to be related to an operational release at the Development Site, but rather a

result of non-indigenous fill brought into the Development Site as part of former grading/development activities.

Based on the Phase I ESA reports, the only pathway of concern at the subject property is to human health through direct contact. This pathway can be addressed through soil removal and regrading activities as part of future development of the property or if no soil removal is proposed, then the compounds detected above the NYSDEC SCO can be addressed using engineering controls (such as a cap) and institutional controls (a deed notice, such as an (E) designation). As such, the direct contact pathway for historic fill-related metals and PAHs will need to be addressed as part of any future redevelopment plans at the Development Site. Given these preliminary findings, it is anticipated that an (E) designation for hazardous materials would be mapped on the Development Site, which would require the Applicant to comply with the requirements of the (E) designation program in accordance with the Rules of the City of New York and NYC OER.

By placing an (E) designation on the project site, where confirmed RECs have been identified relating to soil, the potential for an adverse impact to human health and the environment resulting from the Proposed Actions would be avoided. NYC OER would provide the regulatory oversight of any future supplemental sampling that may be warranted; including environmental scope, investigation, and potential remedial action during this process. Building permits are not issued by the DOB without prior NYC OER approval of the investigation and/or remediation pursuant to the provisions of Section 11-15 of the Zoning Resolution (Environmental Requirements).

The (E) designation would require that the Applicant conduct any required supplemental subsurface investigations and have an approved Remedial Action Plan (RAP), where appropriate, under the review and approval of NYC OER. The RAP provided to NYC OER to satisfy the (E) designation must also include a mandatory Construction Health and Safety Plan (CHASP).

With the inclusion of the remedial measures described above, which involve the mapping of (E) designation (E-586) on the Development Site, the Proposed Actions would not result in any significant adverse impacts related to hazardous materials.

C. METHODOLOGY

The existing conditions described are based on an August 2017 Phase I ESA (see **Appendix 2**), which was prepared by ALC Environmental. The Phase I ESA included the Project Area and vicinity reconnaissance, Project Area and vicinity description and physical setting, historical source review and description of historical Project Area conditions, interviews, review of environmental databases and regulatory agency records, review of previous environmental reports/documentation, and review of environmental liens.

D. EXISTING CONDITIONS

Phase I Environmental Site Assessment

This section summarizes the findings of the Phase I ESA, specifically with respect to current and historical

site conditions and RECs identified for the project site. A Phase I ESA was prepared for the project site in order to identify any RECs from existing or historic land uses. The Phase I ESA was prepared in conformance with the ASTM Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process E 1527-13. The assessment was undertaken to determine whether additional investigations are necessary and whether any remedial or environmental control measures would be required on the project site for the Proposed Actions to avoid the potential for impacts pertaining to hazardous materials.

An assessment was conducted to determine whether the Proposed Actions could lead to increased exposure of people or the environment to hazardous materials and whether the increased exposure would result in significant adverse public health impacts or environmental damage. In August 2017, ALC Environmental prepared a Phase I Environmental Site Assessment (ESA) for the 120,209 sf Development Site (block 1192, lots 41, 46, 63, and 66). The Phase I ESA is included as **Appendix ~~42~~ 41** to the EIS.

Current and Historic Site Use

The Development Site is currently occupied by the Morris J. Golombeck, Inc. company, an importer and exporter of spices, seeds and herbs. The Development Site consists of several warehouse buildings and associated open parking lot. The warehouse buildings are mainly utilized for storage, packaging and shipping of spices that are imported from all over the world. Minor processing such as cleaning and grinding of spices is conducted on the premises. One of the onsite two-story buildings is utilized as an office and locker rooms. Below is a description of the current site improvements:

- Lot 41, also known as 130 Montgomery Street, consists of an irregular-shaped parcel that is improved with a three-story warehouse building. The two upper floors are used for storage of spices, and the ground floor is used for processing (i.e. cleaning, and grinding of spices). The structural improvements consist of brick facades with asphalt shingles on the top floor, and a flat roof. The interior finishes consist of brick interior walls and concrete floors. No heating or cooling is provided to this building. This building was under renovation at the time of the inspection.
- Lot 46, also known as 124 Montgomery Street, consists of an irregular-shaped parcel that is improved with five buildings. The buildings consist of three two-story buildings, two located along Franklin Avenue and one located along the western border of the lot; and a five-story building along Franklin Avenue, as well as a four-story building located on the southeastern-most section of the lot. An out-of-commission brick chimney stack rises above the buildings near the center of the site. There is an open cobblestone courtyard located in the middle of the buildings at the center of the site and an asphalt parking lot is located at the northeast corner of the site. The parking lot is located on the northern-most section of the lot and is accessible via Franklin Avenue.

  There is also a steel chamber located near the loading dock area that is used to heat up and sanitize the spices stored onsite, by removing any bacteria. The chamber circulates hot water provided by the boiler located within the single-story building located in lot 63.

  One of the two-story buildings located along Franklin Avenue consists of an office on the ground floor, and storage lockers on the second floor. Heating and hot water is provided to the office space and the locker rooms above the office via a fuel oil-fired boiler. Fuel oil is stored in an encased in concrete aboveground storage tank located in the boiler room. Cooling is provided via a central heating and ventilation air conditioning (HVAC) system consisting of outdoor air cooled condensers.

The two-story building adjacent to the office building is used solely for storage, and the remaining two-story building located along the western border is used for both storage and light processing. The four and five-story buildings are interconnected and are mainly utilized for storage, and minor processing (i.e. sifting and cleaning of the spices). Access to the upper levels is provided by two electric elevators located in each of the buildings. The four-story building has a basement level, which is used for storage of spices. This building also features two air compressors on the third floor to collect the dust generated during the processing conducted on the premises.

According to the historical Sanborn maps reviewed, all of the referenced buildings were constructed sometime between 1888 and 1908. The structural improvements consist of brick facades and flat roofs. The interior finishes consist mainly of interior brick walls and concrete floors. The second floor office building consists of hardwood floors within the office space, vinyl floor tiles in the locker rooms, and ceramic floor tiles in the hallways.

- Lot 63, also known as 962 Franklin Avenue, consists of a rectangular-shaped parcel that is improved with a single-story warehouse building. The building is accessible via the adjacent four-story warehouse building located on lot 46, and is mainly used for storage. The building also contains a boiler room which supplies hot water to the spice sanitizing chamber located on lot 46.

  According to the historical Sanborn maps reviewed, the subject building was constructed in 1938. The structural improvements on this lot consist of brick exterior facades, and a flat roof. The interior finishes consist of interior brick walls and concrete floors.

- Lot 66, also known as 972 Franklin Avenue, consists of an irregular-shaped parcel that is improved with a small single-story structure located in the southeastern section of the lot. The remainder of the parcel consists of a vacant, grassed land. No access was provided to the on-site building at the time of the site reconnaissance. According to the historical Sanborn maps reviewed, this building was constructed sometime between 1932 and 1951. The structural improvements consist of stucco and brick exterior facades, and a pitched roof with asphalt shingles.

Current and Historic Land Uses

As per the historical sources reviewed, prior to the current improvements, the Development Site was improved with multiple two-story dwellings constructed prior to 1888.

Lot 41 (130 Montgomery Street)

According to the historical Fire Insurance (Sanborn) maps reviewed, the existing three-story building was constructed sometime between 1888 and 1908, and appears to have initially been used as a warehouse building. By 1932, the building had been converted into a factory, which was occupied by the Burton Dixie Corp. - Manufacturers of Mattresses & Cotton Felts. By 1955, the property and existing three-story building were occupied by M.S. Golombeck Inc. - Spice Importers (the current Owner).

Lot 46 (124 Montgomery Street)

This portion of the Development Site was previously occupied by Consumers Park Brewery and consisted of several buildings constructed sometime between 1888 and 1908, including the three existing two-story buildings, and the two existing four and five-story buildings. Additionally, a coal shed was present on the northern section of the lot; and a two-story dwelling was located on the northern section, along Franklin Avenue. By 1932, the subject lot was occupied by the Burton Dixie Corp. – Manufacturers of Mattresses & Cotton Felts. The area previously occupied by the coal shed was converted into a single-story building used for wire cutting. This building was razed prior to 1963. The aforementioned two-story dwelling was

converted into a showroom, which was razed prior to 1951. The western-half of the four-story building was used for spring manufacturing and painting. By 1955, the subject lot was occupied by M.S. Golombeck Inc. - Spice Importers.

Lot 63 (962 Franklin Avenue)
This portion of the Development Site was previously improved with a single-story building constructed sometime between 1888 and 1908, and was previously utilized as the bottling department and barrel storage for Consumers Park Brewery. The lot was redeveloped in 1938, with the existing single-story building, which was initially used for spring manufacturing. In 1957, the building was occupied by a metal products manufacturing company. This company vacated the building prior to 1965. In 1969, the building was occupied by a manufacturer of toiletries such as hair spray, lacquers, rinses and shampoo. It is unknown how long this company operated, however by 1985 the building was occupied by a company identified as 'Quality Metal Fabricators Inc.'.

Lot 66 (972 Franklin Avenue)
This portion of the Development Site was previously improved with a four-story building located on the northernmost section of the lot, which was planned to be occupied by the Flatbush Hygienic Ice Co. However, as per the historical records reviewed, admittance was refused. By 1932, the four-story building had been expanded and was occupied by the Rubel Corp. - Ice Division. All structures were demolished prior to 1947, when the lot was converted into tennis courts and an associated small office on the southernmost section of the lot. By 1963, the tennis courts were no longer present, but the small office building remains on the southernmost section of the lot.

No other former uses were identified in association with the Development Site.

During the onsite reconnaissance, observations were made of the adjoining properties from the Development Site. These observations were made to identify recognized environmental conditions that have the potential for impacting the Development Site. The following is a list of adjoining properties and a summary of the observations made.

North
The Development Site is bounded to the immediate north by Montgomery Street, followed by a construction site at 135-145 Montgomery Street. The topography of the properties to the north is up-gradient and at slightly higher elevation than the Development Site.

Northeast
The intersection of Montgomery Street and Franklin Avenue is to the immediate northeast, followed by Medgar Evers College (CUNY). The topography of the property to the northeast is up- to cross-gradient and at slightly higher elevation than the Development Site.

East
The Development Site is bounded to the immediate east by Franklin Avenue, followed by Public School (P.S.) 375 Jackie-Robinson School and associated playground, known as 945 Franklin Avenue (alternately addressed as 945-1011 Franklin Avenue, 2-80 McKeever Place, 154 Montgomery Street, and 19-43 Sullivan Place). The topography of the property to the east is down- to cross-gradient and at a slightly lower elevation than the Development Site.

South
The Development Site is bounded to the south by two six-story multi-family residential buildings, known 1015 Washington Avenue and 1035 Washington Avenue. The topography of the properties to the south is down-gradient and at a lower elevation than the Development Site.

West
The Development Site is bounded to the immediate west by a narrow vacant lot (block 1192 and Lot 40, followed by the MTA's Franklin Avenue subway shuttle line, which is an open rail cut in the vicinity of the Development Site. The topography of the properties to the west is up- to cross-gradient and at a slightly higher elevation than the Development Site. However, the railroad tracks are located at a much lower elevation than the Development Site.

The current adjoining property uses do not appear to pose any environmental risks to the Development Site.

Recognized Environmental Conditions

Based on the information gathered as a result of the Phase I ESA process, ALC Environmental identified the following recognized environmental conditions (RECs) in connection with the Development Site:

- According to the historical sources reviewed, the Development Site has been utilized for industrial/manufacturing purposes since the early 1900s. Former identified tenants include Consumers Park Brewery, Rubel Corp. Ice Division, Burton Dixie Corp. - Manufacturers of Mattresses and Cotton Felts, a spring manufacturing facility, metal products manufacturing, and a chemical manufacturing facility.

  During the preparation of the ALC report, a review was conducted of the previous Phase I ESA and a preliminary Phase II Site Investigation report prepared by ELM. The report states that in December 2016, ELM conducted a Phase I ESA and preliminary soil testing at the Development Site. The Phase I ESA identified the following RECs associated with the Development Site.

  1. Kerosene Tanks: Three 100-gallon kerosene aboveground storage tanks (ASTs) were observed in the boiler room of the two-story building located adjacent to the office building within lot 46. No staining was observed on or in the immediate vicinity of the ASTs, however the floor of the boiler room consisted of a dirt floor, which presents the potential for a discharge of hazardous materials to the subsurface. As such, the kerosene ASTs were considered to be a REC.

     In conjunction with preliminary testing, one soil boring (SB-23) was advanced adjacent to the ASTs, to a depth of eight feet below grade (bgs). No visual evidence of impacts was observed and no elevated photoionization (PID) readings were recorded. Groundwater was not encountered at this location. One soil sample was collected at a depth of 4.5 feet bgs. The sample was analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), metals, pesticides, and polychlorinated biphenyls (PCBs). No compounds were detected above the NYSDEC Soil Cleanup Objectives (SCOs) for Unrestricted Use. Based on the analytical results, ELM concluded that no further investigation was recommended for this REC.

  2. Bunkered Oil AST Associated with the Boiler: The office area and one of the fumigation booths of one of the on-site buildings is heated via an oil-fired boiler room located in the former brewery boiler room. Fuel oil is stored in a bunkered concrete-encased AST located beneath a concrete

walkway within the historic boiler room. ELM was not able to determine whether the bottom of the bunker consisted of concrete or soil. This was considered to be a REC.

In conjunction with preliminary testing, one soil boring (SB-22) was advanced adjacent to the AST, to a depth of 12 feet bgs. No visual evidence of impacts was observed and PID readings ranged from 0.1 parts per million (ppm) to 12.7 ppm. Groundwater was not encountered at this location. One soil sample was collected at a depth of five feet bgs. The sample was analyzed for the NYSDEC Fuel Oil List. No compounds were detected above the NYSDEC SCOs for Unrestricted Use, except for chrysene, which was detected at a concentration of 1.1 milligrams per kilogram (mg/kg), marginally above the NYSDEC SCOs of 1 mg/kg. The report states that chrysene was detected in soil samples collected throughout the property and therefore, based on the identified concentrations, the report concluded that the presence of chrysene was not indicative of a release, but rather a result of fill material brought into the property for grading/development activities.

3. Historic Transformer House: Based on a review of historic Sanborn maps, a former transformer house was located at the Development Site in 1932 and 1951. No indication of the former transformer house was observed during ELM's December 29, 2016 inspection and no pertinent information was provided by the Owner (Mr. Golombeck). This was considered to be a REC.

   In conjunction with preliminary testing, two soil borings (SB-5 and SB-13) were advanced in the footprint of the former transformer, to a depth of 8 feet bgs. No visual evidence of impacts was observed and PID readings ranged from 1.2 ppm to 12.1 ppm. Groundwater was not encountered at this location. One soil sample was collected at a depth of 0.5 feet bgs at SB-5 and from two feet bgs at SB-13. The two samples were analyzed for PCBs. Additionally, the sample collected at SB-13 was analyzed for VOCs and metals. No compounds were detected above the NYSDEC SCOs for Unrestricted Use, except for lead, mercury, and nickel, which were marginally above their respective NYSDEC SCOs. The report states that these compounds were detected in soil samples collected throughout the property and therefore, based on the identified concentrations, the report concluded that the presence of mercury, lead, and nickel was a result of fill material brought into the property for grading/development activities.

4. Floor Drains in Basement: A total of seven drains were observed within the basements of the on-site four- and five-story buildings. As per information provided by the Owner, the drains were no longer in use and had since been sealed with concrete. ELM was not able to determine whether or not the drains discharged into the municipal system. Based on this information and the fact that the Development Site was utilized for industrial purposes since as early as the 1900s, the presence of drains was considered a REC.

   In conjunction with preliminary testing, seven soil borings (SB-14- SB-16, and SB-18- SB-21) were advanced in the footprint of the former floor drains, to a depth of four feet bgs. No visual evidence of impacts was observed and PID readings ranged from 0 ppm to 14.3 ppm. Groundwater was not encountered at this location. One soil sample was collected at a depth of three feet bgs at SB-15, one sample was collected from 1.5 feet bgs at SB-16, and one sample was collected from 0.5 feet bgs at SB-18. The samples were analyzed for PCBs, VOCs, and TAL metals.

   Several Polycyclic Aromatic Hydrocarbons (PAHs), including benzo(a)anthraces, benzo(a)pyrene, benzo(b) fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-CD)pyrene, were detected above the NYSDEC SCO for unrestricted and restricted use in sample collected from SB-18. In addition, nickel was detected above the NYSDEC SCO for unrestricted use in the sample collected from SB-15; and copper, lead, mercury, nickel, and zinc were all detected above the

NYSDEC SCO for unrestricted use, except for mercury which also exceeded the SCO for restricted use. The report concluded that the compounds identified were a result of fill material brought into the property for grading/development activities.

5. Dry Well in Basement: A possible dry well was identified in the basement of one of the buildings located within lot 46. A metal plate was covering the dry well and therefore hindered a thorough inspection of the dry well. ELM was not able to obtain any information pertaining to the potential dry well or its historical uses. This potential dry well was considered a REC.

   In conjunction with preliminary testing, one soil boring (SB-17) was advanced adjacent to the dry well, to a depth of eight feet bgs. No visual evidence of impacts was observed and PID readings ranged between four ppm and 9.4 ppm. Groundwater was not encountered at this location. One soil sample was collected at a depth of six feet bgs. The sample was analyzed for VOCs, TAL metals, and PCBs. No compounds were detected above the NYSDEC SCOs, except for mercury and nickel. Mercury was detected above the NYSDEC SCOs Unrestricted and Restricted Uses, and Nickel was detected above the Unrestricted Use.

   The report states that these two compounds were detected in soil samples collected throughout the property and therefore, based on the identified concentrations, the presence of mercury and nickel was a result of fill material brought into the property for grading/development activities.

6. Historic Boiler Room Associated with the Former Brewery Operations: As per the historical Sanborn maps reviewed and information provided by the Owner, a larger boiler room associated with the former onsite brewery operations was formerly located in one of the buildings located in lot 46. Mr. Golombeck stated that several large tanks previously located in the boiler room were removed when the property was converted into a spice factory. Three 100-gallon kerosene ASTs were observed in the boiler room. No staining was observed on or in the immediate vicinity of the ASTs, however the floor of the boiler room consisted of a dirt floor, which presents the potential for a discharge of hazardous materials to the subsurface. At the time of the site visit, the boiler room was used for storage of construction materials and small chemical containers including paints, greases, and sealants. The boiler room was considered to be a REC.

   In conjunction with preliminary testing, two soil borings (SB-23 and SB-24) were advanced in the former boiler room adjacent to the kerosene ASTs and empty drum storage area, to a depth of eight feet bgs. No visual evidence of impacts was observed and no elevated PID readings were recorded.

   Groundwater was not encountered at this location. One soil sample was collected at a depth of 4.5 feet bgs at SB-23. The sample was analyzed for the NYSDEC Fuel Oil List. No compounds were detected above the NYSDEC SCOs for Unrestricted Use. Based on the analytical results, ELM concluded that no further investigation was recommended for this REC.

7. Historic Boiler Room Associated with the Former Ice Manufacturing Operations: As per the historical Sanborn maps reviewed, a historic boiler room associated with the former operations of Rubel Corporation on the southern portion of the Subject Property was identified in 1932. No specific information pertaining to this boiler room was located and there were no indications of this former boiler during Elm's site visit. The former boiler room was considered to be a REC.

   In conjunction with preliminary testing, two soil borings (SB-1 and SB-2) were advanced in the footprint of the former boiler room, along the eastern property boundary, to a depth of four feet bgs. No visual evidence of impacts was observed and PID readings ranged between 0.5 ppm and 8.8 ppm.

Groundwater was not encountered at this location. One soil sample was collected at a depth of one-foot bgs at SB-2. The sample was analyzed for the NYSDEC Fuel Oil List. No compounds were detected above the NYSDEC SCOs for Unrestricted Use. Based on the analytical results, ELM concluded that no further investigation was recommended for this REC.

8. Historic Coal Shed and Storage Area: A former coal shed and storage area was identified on the 1908 Sanborn map for the Subject Property. The coal shed and storage area was formerly located immediately north of the former brewery boiler room. No indications of this former area were identified during ELM's December 2016 site visit. This was considered a REC.

   In conjunction with preliminary testing, four soil borings (SB-8 and SB-11) were advanced in the footprint of the former coal shed and storage area, to a depth of eight feet bgs. No visual evidence of impacts was observed and no elevated PID readings were recorded. Groundwater was not encountered at this location. One soil sample was collected at a depth of 1.5 feet bgs at SB-9.

   Several (PAHs), including benzo(a)anthraces, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-CD)pyrene, were detected above the NYSDEC SCO for Unrestricted and Restricted Uses. In addition, several metals including barium, copper, mercury, and zinc were detected above the NYSDEC SCO for Unrestricted Use, and cadmium and lead were detected above the NYSDEC SCO for Restricted Use. The report concluded that the compounds identified were a result of fill material brought into the property for historic grading/development activities.

9. Former Engine Room/Machine Shop: A former engine room/machine shop was identified on the 1932 and 1951 Sanborn maps for the Development Site. The engine room/machine shop was formerly located in the current spice storage area, adjacent to the office building. No indications of this former engine room/machine shop were identified during ELM's December 2016 site visit. This was considered a REC.

   In conjunction with preliminary testing, two soil borings (SB-6 and SB-7) were along the northern exterior wall of the former engine room/machine shop, to a depth of 12 feet bgs. No visual evidence of impacts was observed and PID readings ranged from 0 ppm to 10.8 ppm. Groundwater was not encountered at this location. One soil sample was collected at each boring at a depth of one-foot bgs. The samples were analyzed for TAL metals.

   Lead, nickel, and zinc were detected above the NYSDEC SCO for Unrestricted Use, and mercury was detected above Unrestricted and Restricted Use in SB-6. Lead, mercury, and zinc exceeded the NYSDEC SCO for Unrestricted Use in SB-7. The report concluded that the compounds identified were a result of fill material brought into the property for historic grading/development activities.

10. Brick Smoke Stack: A brick smoke stack was observed adjacent to the former brewery boiler room during ELM's December 2016 site visit. According to the owner, the smoke stack is no longer used and has been out-of-use for many years. No staining or evidence of a release was identified on or in the immediate vicinity of the smoke stack. However, no information was available regarding the use or age of the smoke stack. This was considered a REC.

    In conjunction with preliminary testing, one soil boring (SB-9) was advanced adjacent to the smoke stack, to a depth of eight feet bgs. No visual evidence of impacts was observed and no elevated PID readings were recorded. Groundwater was not encountered at this location. One soil sample was collected at a depth of 1.5 feet bgs at SB-9. The sample was analyzed for PAHs and TAL metals.

Several PAHs, including benzo(a)anthraces, benzo(a)pyrene, benzo(b) fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-CD)pyrene, were detected above the NYSDEC SCO for Unrestricted and Restricted Uses. In addition, several metals including barium, copper, mercury, and zinc were detected above the NYSDEC SCO for Unrestricted Use, and cadmium and lead were detected above the NYSDEC SCO for Restricted Use. The report concluded that the compounds identified were a result of fill material brought into the property for grading/development activities.

Based on the presence of the multiple RECs described above, on March 21 and 22, 2017, ELM performed a preliminary Phase II Site Investigation at the Development Site to address the identified RECs. As described above, the preliminary Phase II Site Investigation consisted of the installation of soil borings in the vicinity of the identified areas of concern at various depths, with the deepest soil boring advanced to a depth of 12 feet bgs. A total of eleven (11) soil samples were collected throughout the Development Site and submitted for laboratory analysis. No groundwater was encountered at any of the soil boring locations during soil boring advancement.

The analytical results of the soil samples collected detected several compounds throughout the Development Site at concentrations exceeding the NYSDEC Unrestricted Residential and Restricted Residential SCOs. As described above, the exceedances are limited to PAHs, including benzo(a)anthraces, benzo(a)pyrene, benzo(b) fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-CD)pyrene, and metals (lead, mercury, cadmium, nickel, barium, copper, and zinc). No VOCs were detected in any of the soil samples collected and therefore, ELM concluded that vapor intrusion is not a concern at the Development Site.

Based on the concentrations of contaminants detected and areas impacted, ELM determined that the contaminants identified do not appear to be related to an operational release at the Development Site, but rather a result of non-indigenous fill brought into the Development Site as part of historic grading/development activities. ELM stated that based on the location of the Development Site and the fact that groundwater was not encountered in the deepest soil borings installed to 12 feet bgs, there is a limited risk of impact to groundwater from the detected metals and PAHs. VOCs were not detected in any of the soil samples collected and therefore vapor intrusion is not a concern at the Development Site. Based on the findings described above, the only exposure pathway is through direct contact with on-site soils. ELM stated that this pathway could be addressed through soil removal and regrading activities as part of future development of the Development Site, or through the implementation of engineering and institutional controls.

In addition, the following conditions were observed:

- On July 18, 20, and 24, 2017, ALC conducted testing of suspect Asbestos Containing Materials (ACM) at the Development Site. The bulk samples were analyzed by Metro Analytical laboratories (ELAP #12003), located at 255 West 36th Street, Suite 101, New York, NY 10018. By definition, building materials containing greater than one percent asbestos are classified as ACM. Several building components such as roofing materials, pipe insulation, and vinyl floor tiles tested positive for the presence of asbestos. Details are provided in section 6.3.2 of the Phase I ESA (see **Appendix 2**).
- On July 29 and August 2, 2017, ALC conducted testing of window caulking material found in the onsite buildings for the presence of PCBs. A total of 13 samples were collected and submitted for laboratory analysis. None of the samples collected yielded results above the standard of 50 ppm for PCBs in window caulking.

- An aboveground storage tank encased in concrete is located in the on-site two-story office building. The referenced tank is connected to the boiler. A fill port and a vent pipe, associated with the existing heating oil AST was identified on the exterior of the boiler room and were both free from staining. The size of the AST is not known, and the condition of the AST or the bottom of the AST could not be determined. However, as described in Section 4.9 of the ELM Phase I ESA, soil samples were collected in the immediate vicinity of the AST. No VOCs were identified. Additionally, no compounds were detected above the NYSDEC SCOs except for one SVOC (chrysene). As described above, this compound was identified throughout the Development Site and therefore is not indicative of impacts associated with the tank, but rather the result of fill material brought into the property for grading/development activities. Therefore, at the present time, the onsite AST does not represent a REC.
- No Vapor Encroachment Conditions that could not be ruled out were identified for the Development Site or surrounding sites within the distances specified by ASTM Practice 2600-10. A Vapor Encroachment Screen report is included in Appendix 15.5 of the Phase I ESA.

No additional conditions were observed at the Development Site that would potentially present a significant environmental concern or REC.

E. THE FUTURE WITHOUT THE PROPOSED ACTIONS (NO-ACTION CONDITION)

In the future without the Proposed Actions, also known as the "No-Action Condition," the Development Site would be redeveloped with a new as-of-right residential development pursuant to the site's existing R6A zoning. As such, it is anticipated that construction related to the as-of-right development involving soil and groundwater disturbance could potentially create or increase pathways for human exposure to the hazardous materials present on-site. Since no institutional controls (e.g., (E) designations or Restrictive Declarations that require the owner of a property to assess potential hazardous material impacts prior to construction) currently exist on the Development Site, such disturbance would not necessarily be conducted in accordance with the procedures (e.g., for conducting testing before commencing excavation and implementation of health and safety plans during construction) described in the following section. However, the local, State, and Federal regulatory requirements pertaining to any identified petroleum tanks and/or spills, requirements for disturbance and handling of suspect LBP and ACM, and requirements for off-site disposal of soil/fill, would need to be followed. As such, without the Proposed Actions the potential for controls on the site redevelopment would not be as stringent as under the Proposed Actions, as described below.

F. THE FUTURE WITH THE PROPOSED ACTIONS (WITH-ACTION CONDITION)

In the future with the Proposed Actions, the development potential of the Development Site would change to allow for new land uses at higher densities. Based on the findings of this hazardous materials assessment, in the absence of implementation of the RAP and CHASP and on-site remediation, the future development of the Proposed Actions would have the potential to increase the exposure of people or the environment to hazardous materials. Implementation of the RAP, CHASP and on-site remediation would avoid the potential for increased exposure detrimental to the health and safety of workers and neighbors due to construction, and the future residents or employees of buildings at the project site. This work would be undertaken under the auspices of one or more of the NYSDEC, NYC OER, and NYC DEP.

Additional investigation and remediation would be undertaken prior to construction at the Development Site. Development on the site would take place pursuant to the requirements of an (E) designation that would require a RAP, CHASP, and remedial plan prior to construction. (E-586) text related to hazardous materials is as follows:

Task 1: Sampling Protocol

The Applicant shall submit to OER the Phase I report for the site along with a proposed soil and groundwater testing protocol, including a description of methods and a site map with all sampling locations clearly and precisely represented.

If OER determines that site sampling is necessary, no sampling should begin until written approval of a protocol is received from OER. The number and location of sample sites shall be selected to adequately characterize the site, the specific source of suspected contamination (i.e., petroleum based contamination and non-petroleum based contamination), and the remainder of the site's condition. The characterization should be complete enough to determine the appropriate remediation protocol (if any required) after review of sampling data.

Task 2: Remediation Determination and Protocol

A written report with findings and a summary of the data shall be submitted to OER after completion of the testing phase and laboratory analysis for review, approval, and a determination by OER as to whether remediation is necessary. If OER determines that no remediation is necessary, written notice shall be given by OER and no further action shall be required.

If remediation is determined to be necessary by OER, a proposed remediation plan shall be submitted to OER for review and approval. Once approved, the applicant shall undertake and complete such remediation in accordance with the OER-approved remediation plan. The Applicant shall provide proper documentation that the work has been satisfactorily completed.

A construction-related health and safety plan (CHASP) shall be submitted to OER and implemented during excavation and construction activities to protect workers and the community from potentially significant adverse impacts associated with contaminated soil and/or groundwater. The CHASP shall be submitted to OER for review and approval prior to implementation.

All demolition would be conducted in accordance with applicable requirements for disturbance, handling and disposal of suspect lead-paint and asbestos-containing materials.

With the requirements of an (E) designation there would be no impact from the potential presence of contaminated materials. The implementation of the preventative and remedial measures outlined in the (E) designation would reduce or avoid the potential for significant adverse hazardous materials impacts from the Proposed Development. Therefore, no further analysis is required at this time.