

12.0 HAZARDOUS MATERIALS

12.1 INTRODUCTION

The *CEQR Technical Manual* defines hazardous materials as “any substance that poses a threat to human health or the environment.” This chapter evaluates whether the Proposed Action could result in an increased exposure of humans and the environment to hazardous materials that have the potential to result in significant health impacts or environmental degradation during construction or operation. For example, impacts might result from increasing exposure to hazardous or contaminated materials already present on a site, or from the introduction of hazardous or contaminated materials to a site where such exposure may occur. As described in Chapter 1, Project Description, the Proposed Action would provide a base of operations for three existing garages at one new location; and it would replace the existing MN 1 Garage with a salt shed.

12.2 METHODOLOGY

A Phase I Environmental Site Assessment (ESA) was performed in accordance with CEQR and ASTM E 1527-05 guidelines to determine the potential presence of hazardous materials at each of the project sites and the surrounding areas (Appendix B). Environmental Data Resources (EDR), Inc. conducted a review of the federal and state environmental record sources to provide data about underground storage tanks, spills, Brownfields and other potential sources of environmental contamination. Information gathered from these sources was used to provide data for the land use history of the site and its environs, site topography and hydrogeology and existing conditions.

The study area for hazardous materials was defined as the area within a 1.25 mile radius search from the center of the two properties, which is larger than the 1,000 ft study area for hazardous materials assessment recommended in the *CEQR Technical Manual*. This was done to ensure that the one mile radius search distance for both properties was inclusive of the search requirements for all federal and state databases in accordance with ASTM E 1527-05 guidelines.

12.3 LAND USE HISTORY

Provided in this section is a description of the uses on each project site over approximately the last century. Sanborn Fire Insurance maps (1894, 1905, 1922, 1950, 1968, 1976, 1977, 1978, 1979, 1980, 1983, 1985, 1987, 1988, 1990, 1992, 1993, 1994, 1995 and 1996) were utilized to identify historical uses of the sites. Aerial photographs (1943, 1953, 1966, 1976, 1985, 1995, and 2004) were reviewed to supplement the information provided by the Sanborn maps.

12.3.1 UPS Equipment Staging Lot (Proposed MN 1/2/5 Garage)

In 1894, the northern portion of the existing UPS Equipment Staging Lot, located at 500 Washington Street, contained a lumberyard and a place to stock tin. Small stores lined Washington Street, Spring Street and West Street/Route 9A and a hotel was located on the southwestern corner of the site. Stables were located in multiple locations. By 1905, the lumberyard and iron storage remained; however, some of the stores had residential dwellings built on top of them and many of the stores were used as storage areas. A second hotel was built on the southeast corner of the lot. It remained the same until an automobile parking lot was constructed between 1922 and 1943. Since 1943, aerial photographs and Sanborn maps show that the site remained an automobile parking lot through 1996. Historical topographic maps were also reviewed and are consistent with the Sanborn maps and aerial photographs.

In 1895, the land east and north of the UPS Equipment Staging Lot was mostly small stores and stables. By 1905, there were residential dwellings mixed with the stores, an increase in the number of stables and some light industrial activity. The surrounding areas remained largely the same until 1950. By this time, a service road separated the UPS lot from St. John's Center, which occupied the entire area to the north. A loading dock for St. John's Center was eventually constructed to replace the service road. Immediately to the east on Washington Street, multiple stores were removed and replaced with the New York Union Motor Truck Terminal No. 2 and office space. By 1995 the truck terminal was operated by UPS, the current occupant.

12.3.2 MN 1 Garage (Salt Shed Site)

A review of Sanborn Fire Insurance maps and aerial photographs indicates that in 1894, Clinton Market was located at the existing MN 1 Garage at 553 Canal Street/297 West Street. By 1905, the property was taken over by the New York City Department of Street Cleaning to house equipment. Between 1966 and 1968, the New York City Department of Street Cleaning changed its name to the DSNY. DSNY has continued to utilize the garage to store, refuel, wash and perform maintenance on DSNY vehicles that service Manhattan Community District 1. Historical topographic maps were also reviewed and are consistent with the Sanborn maps and aerial photographs.

In 1894, the land immediately north and east of the existing MN 1 Garage site was used for small stores, and a storage facility for coal and wood. Located immediately south of the site was a park (Canal Park). By 1905, many of the stores became mixed with residential dwellings. The storage facility for coal and wood no longer existed, however, there were many stores used for storage. There was also some light industry that mixed with the commercial uses and residences. Construction of the Holland Tunnel began in 1920 and lasted until 1927, when the tunnel was opened to vehicular traffic. Early in that time period, the associated Land Ventilation Building was constructed immediately east of the existing DSNY Garage site. After 1921, the Canal Park site was temporarily "loaned" to the NY/NJ Bridge and Tunnel Authority (<http://www.nycroads.com>). The park was intended to be on loan for four years to construct a compressor plant as part of the Holland Tunnel construction. In 1931, the operation of the Holland Tunnel was passed to the Port Authority of New York and New Jersey. Although, by 1950, the compressor plant on the former Canal Park site was removed, park restoration did not commence until 2003 (NYCDPR, <http://www.nycgovparks.org>). A sewage pumping station was constructed under West Street/Route 9A to the southwest of the site. Between 1922 and 1968, uses east and south of the site began to see an increase in industrial activity as well as an increase in the number of commercial establishments resulting from the construction of multiple factories in the area.

12.4 EXISTING CONDITIONS

12.4.1 Topography and Hydrogeologic Conditions

Information on local topography, geology and groundwater hydrology was provided through the information compiled by EDR. Site topography is approximately eight ft above sea level. A 1.25 mile radius search from the center of the two properties indicated that areas to the east and south have a higher elevation than the subject properties, areas to the west decrease in elevation to the Hudson River, and areas to the north have approximately the same elevation as the subject properties.

In the vicinity of the subject sites, the soil surface has a variable soil texture that consists of loamy sand, silt loam, sandy loam and fine sandy loam. Deeper in the soil, there is very gravelly-loamy sand, unweathered bedrock, stratified and sandy loam. The rock stratigraphic unit is within the Paleozoic Era (543 to 248 million years ago) and within the Lower Ordovician and Cambrian carbonate rock series. No subsurface investigations were performed on the subject properties.

The regional groundwater flow direction for the study area is to the west in the direction of the Hudson River.

The existing soil and groundwater conditions on the two project sites were assessed by conducting a database search of state and federal records and by a site reconnaissance. This section provides a list of the potential sources of environmental contamination at each site.

12.4.2 UPS Equipment Staging Lot (Proposed MN 1/2/5 Garage Site)

- There were no results identified from the regulatory records search that indicate the likely presence of materials that result in a recognized environmental condition at this location.

12.4.3 MN 1 Garage (Proposed Salt Shed Site)

- Records indicate DSNY's MN 1 Garage is a RCRA Small Quantity Generator (SQG). Small quantities of hazardous materials associated with garage operations are generated on site.
- A review of the Leaking Storage Tank Incident Reports (LTANKS) database revealed that four spills were reported at the location of the existing MN 1 Garage. All four spills are currently reported as closed by the NYSDEC.
- Groundwater monitoring wells were found to the north, south and inside of the MN 1 Garage during the site reconnaissance. It was reported in the EDR report that soil contamination was discovered during tank removal as part of a tank upgrade. References were made in the EDR report that indicated sampling of the monitoring wells was conducted. The MN 1 Garage site received a "no further action" letter from the NYSDEC on July 11, 2006 as reported by the DSNY.
- According to the underground storage tank (UST) database, there are eight USTs located at the existing MN 1 Garage at 553 Canal Street/297 West Street. They have capacities that range from 550 to 2,000 gallons and are used to store used hoist oil; waste oil; motor oil; unleaded gasoline; diesel; and No. 1, 2 and/or 4 fuel oil. Waste oil from the UST is pumped out and disposed of off-site by a private vendor.
- A review of the NYSDEC SPILL databases indicated that one spill (Spill No. 0012882) of an unspecified amount of motor oil and hydraulic oil into the soil was reported at the existing MN 1 Garage located at 553 Canal Street/297 West Street. This spill was reported closed by the NYSDEC on May 30, 2007.
- There is the potential that the peeling paint observed on the ceiling of the MN 1 Garage may have been lead-based paint due to the age of the building.
- During the site reconnaissance, a substance resembling asbestos was observed wrapped around the ceiling pipes in the existing MN 1 Garage.

12.5 FUTURE WITHOUT THE PROPOSED ACTION (FUTURE NO BUILD)

Under the Future No Build condition, the UPS Equipment Staging Lot would be developed as a commercial building with UPS staging operations continuing on site. The MN 1 Garage site would be expected to remain as it was characterized in Section 12.4, based on the Phase I analysis. Fuel storage would continue at the MN 1 Garage and no change in operations would occur that would result in a change in the storage or transport of materials. UPS vehicle parking and staging operations would continue on the site at ground level. The commercial building totaling 347,250 sq ft would be built partially above the ground level allocated to UPS.

In the area surrounding the existing MN 1 Garage and UPS Equipment Staging Location where future development may occur by 2012, there is the potential that hazardous or contaminated materials typical to urban areas may be found during any such construction. To avoid any significant adverse impacts to the environment or human health, it is projected that construction activities and any remedial actions would be conducted in accordance with applicable laws and regulations. Actions that are typically implemented when there is the potential presence of hazardous materials include:

- Development and submittal of a detailed investigative work plan to the NYCDEP for review and approval.
- Preparation and submittal of a site-specific Health and Safety Plan (HASP) specifying the measures to be taken to protect project workers and the public during construction for NYCDEP review and approval.
- Closure and removal of aboveground or underground storage tanks, as applicable.
- Closure of all open NYSDEC spills, as applicable.

With these actions, hazardous or contaminated materials, if encountered, would be characterized and remediated, as necessary, to be protective of human health and the environment.

The commercial office building would result in 347,250 sq ft of development on the existing UPS Equipment Staging Lot site. Due to the nature and size of this building, certain hazardous materials would be expected to be utilized on the site for building operations and maintenance. Hazardous materials would most likely be stored in the commercial building for cleaning and maintenance purposes. Some hazardous materials that may be found in a commercial building include cleaning supplies, bleach, paint, heavy metals from the disposal of electronic equipment and fluorescent lights. Building tenants may also utilize certain hazardous items typical of office uses.

If the building were to be heated by oil, USTs containing fuel oil would be located beneath the building. However, if natural gas or steam were used, this would not be necessary. It is projected that any such USTs would be installed and managed according to NYSDEC standards and specifications to prevent spills or leaks from affecting human health and the environment. According to NYSDEC regulations, USTs must meet the following criteria:

- New USTs must be made using fiberglass reinforced plastic, cathodically protected steel or steel clad with fiberglass-reinforced plastic.
- NYSDEC regulations require secondary containment. If the tank is double-walled, monitoring is required in the space between the two tanks.
- If a tank's bottom rests on the ground, the tank must have cathodic protection. An impermeable layer must be present beneath the tank, which must be monitored for spills.

- New underground piping systems must be designed with a 30-year life expectancy. Pipes may be constructed of fiberglass-reinforced plastic or other non-corrodible materials. If the pipes are made of steel, they must be cathodically protected.
- Owners are required to register storage facilities with NYSDEC and registration must be updated every five years.
- Operators of USTs must keep daily inventory records and inventory them every ten days in order to explain any losses from the tank(s).
- Tanks and pipes must be tested every five years to assess the structural integrity of the double-walled equipment.

12.6 FUTURE WITH THE PROPOSED ACTION (FUTURE BUILD)

Like the Future No Build condition, the Proposed Action would require disturbance to the soils of the UPS Staging Lot site and limited excavation during construction for the installation of pilings and utilities. Based on the findings of the Phase I ESA, it is highly unlikely that workers or the public would be exposed to hazardous materials during construction of the MN 1/2/5 Garage and Salt Shed. However, if hazardous materials were encountered, they would be dealt with in accordance with the Occupational Health and Safety Administration (OSHA), RCRA, New York State and local regulations and guidelines. Any petroleum contaminated soil or any soil affected by hazardous materials that may be encountered during excavation and grading activities would be removed and properly disposed of in accordance with NYSDEC regulations and guidelines. There is no evident need for a site-specific HASP that addresses worker health and safety with regard to hazardous materials, however, a construction HASP that addresses dust control and other construction issues would be prepared and implemented. Should hazardous materials be encountered during construction, a site-specific HASP would be developed that addresses the measures required to protect worker health and safety.

Operations of the garage would involve certain hazardous materials typical of maintenance facilities. These include batteries, solvents, fuels and lubricants. During shift changes, up to a maximum of 2542 DSNY trucks containing refuse or recyclables ~~garbage~~ could be parked temporarily inside of the MN 1/2/5 Garage. The temporary parking of DSNY vehicles containing refuse inside the garage would not result in any adverse effect on humans or the environment. The floors of the MN 1/2/5 Garage would be concrete and any floor drains will drain to a sand trap and an oil/water separator and then to the sewer system. Any spills of automotive fluids on the floor would be addressed with appropriate measures such as Speedy Dry absorbent material and would not impact groundwater or soil.

B5 Biodiesel fuel, unleaded gasoline, E85 Ethanol and waste oil would be stored underground beneath the first floor of the MN 1/2/5 Garage in nine USTs storing fuel and oil. Two USTs would be located beneath the proposed Salt Storage facility for the storage of calcium chloride, which is not hazardous. During construction, any existing USTs that need to be removed would be properly closed and removed in accordance with applicable federal, state and local regulations. NYSDEC rules require that tanks that are to be removed or left in place should be drained entirely of liquid, sludge and vapors. NYSDEC would need to be notified 30 days prior to permanently closing a UST (www.dec.ny.gov/regulations/).

All new USTs would meet NYSDEC regulations described above in Section 12.5. The total capacity of all the tanks in the garage would be 34,000 gallons and would consist of one 10,000 gallon diesel tank; three 4,000 gallon diesel tanks; one 4,000 gallon unleaded gasoline tank; one 2,000 gallon ethanol tank; one 2,000 gallon motor oil tank; one 2,000 hydraulic fluid tank; and one 2,000 gallon used oil tank. The USTs located in the proposed salt shed would have a total capacity of 8,000 gallons, which includes two 4,000 gallon USTs containing liquid calcium chloride, which helps to melt snow and ice.

The waste oil would be collected in the used oil UST and a private vendor would remove and recycle the waste oil.

Future development in the areas immediately surrounding the Proposed Action would remain as previously described in the scenarios of the Future Without the Proposed Action. Hazardous materials potentially exposed during construction occurring in the surrounding area would be dealt with in accordance with applicable state and local regulations. Such measures would ensure the safety of human health and the environment resulting from construction activities.

Due to the proximity of the sites to West Street/Route 9A and the expectation of historic fill on the sites, there is a potential for elevated levels of contaminants in site soils, such as lead from decades of use of leaded gasoline and lead paint in the vicinity, as well as the potential for groundwater contamination from past petroleum spills in the surrounding industrial area. Accordingly, to determine the potential need for any site specific HASP during construction and for any remedial measures as well as to manage any related liability risks to the City, DSNY will have samples of soil and groundwater analyzed for contaminants, including volatile and semi-volatile organic compounds such as those associated with petroleum, as well as pesticides, polychlorinated biphenyls and heavy metals. Should levels be detected in excess of NYSDEC guidance values that indicate the need for remedial action, an appropriate remedial plan will be prepared in coordination with NYCDEP. DSNY will enter into a memorandum of understanding with NYCDEP to coordinate site investigation activities and the steps for a remedial plan, if any is deemed necessary by NYCDEP technical staff. Any such remediation would be conducted in accordance with all applicable regulations. Any dewatering activity required for construction activities would be done in accordance with and pursuant to NYCDEP Sewer Discharge Permit requirements. The proposed piling and slab construction is not expected to require significant quantities of soil excavation. A floor slab and pavement would cover virtually the entire proposed garage and salt shed sites, effectively capping and thus limiting exposure to any contaminants that may already be present.

In view of the foregoing, the Proposed Action would not result in a significant adverse impact with respect to hazardous or contaminated materials.