

The Aberdeen- Environmental Conditions and Remediation Overview

The Project

The Aberdeen project will be located at 1650 Commonwealth Avenue in Brighton, Massachusetts. This real estate development will transform what is currently a Massachusetts Brownfield property into a new, mixed-use, five-story residential building containing 40 residential units, 2,000 square feet of ground-floor retail, and 35 parking spaces.

Background

Beginning in approximately 1940, (i.e., for approximately the past 70 years), the 1650 Commonwealth Avenue parcel was occupied by an automotive service station and repair facility. The proposal to redevelop the project site has led to the current remediation work described in this summary.

During a property acquisition investigation in October 2012, contamination was discovered on the property. Further investigation resulted in the discovery of Non-Aqueous Phase Liquid (NAPL), which is sometimes called “separate phase hydrocarbons” or “free phase product.” This discovery resulted in the reporting of the release condition to the Massachusetts Department of Environmental Protection (MassDEP). The reporting of the condition (also called a Release Notification) triggered a mandatory cleanup under state environmental law, specifically the Massachusetts Contingency Plan (MCP) regulations (310 CMR 40.0000). This work has been undertaken by the site’s current owner, Cumberland Farms.

Remediation

The NAPL conditions at the site have been attributed to releases from Underground Storage Tanks (USTs) formerly located at the site. These USTs contained principally gasoline, waste oil, No.2 fuel oil, and/or possibly releases from an oil/water separator (a device used to prevent oil releases to the city sewer system). Since the Release Notification, the responding parties have investigated the site, removed the petroleum sources (USTs and oil/water separator), and conducted an aggressive campaign of NAPL removal using vacuum-enhanced fluid recovery (also called Enhanced Fluid Recovery or EFR). The current goal of the respondents is to remediate the NAPL to reduce or eliminate its presence, and address potential environmental concerns of both future building residences and down-gradient property occupants or owners.

Initial NAPL measurements at the site ranged up to 6 inches in thickness as measured in wells that intercept tiny fractures in the bedrock several feet beneath the ground surface. Through April 2014, the respondents have removed approximately 3,837 gallons of water/NAPL mixture from the site wells. Measured NAPL thicknesses in the remaining two wells with NAPL have been reduced to about ¼ inch or less.



Planned Closure and Future Use Conditions

Many Brownfield sites are redeveloped successfully for new uses, including as residential projects. We anticipate that this will be the outcome at 1650 Commonwealth Avenue. As noted above, the current objectives of site remediation efforts are to (1) eliminate the presence and/or reoccurrence of NAPL at the site, and (2) close the site with a Permanent Solution (to be verified by a Licensed Site Professional based upon two years of post-remediation testing) without Conditions, meaning that no deed restrictions or special requirements will be attached to the property. Should it prove infeasible to completely remove the NAPL, a Permanent Solution with Conditions (or Activity and Use Limitations) will be pursued provided that studies show that the remaining NAPL is stable (not moving). Such Conditions might involve requirements ranging from simply notifying future owners/occupants of the residual NAPL at the site (if such residual NAPL is determined to present no significant risk to occupants) to the installation of a standard protective system widely used in similar conditions, consisting of a vapor barrier and sub-slab depressurization system (if residual NAPL at the site would otherwise present some indoor air risk to occupants).

Regardless of the closure scenario achieved, the site closure will take place in compliance with state law, under MassDEP supervision, and pursuant to a remediation protocol designed to ensure protection of the present and future health of site occupants and abutters, as well as the environment.