PROJECT DESCRIPTION

This item of work includes the following:

- **Removal of two underground storage tanks (USTs), and their appurtenances, as follows:**
  - Tank #1 - One 8,000 gallon UST storing diesel fuel
  - Tank #2 - One 6,000 gallon UST storing diesel fuel
  - Filling and dispensing equipment
- **Removal of three above ground storage tanks (ASTs), as follows:**
  - Tank #3 - One 500 gallon AST, outdoors, reported to be empty, designed to store waste oil
  - Tank #4 - One 250 gallon AST, indoors, storing waste oil
  - Tank #5 - One 275 gallon AST storing No. 2 heating oil
- **Removal of miscellaneous retail volumes of automotive and facility maintenance fluids, paints, and compressed gases.**
- **Soil management activities**

Refer to a figure identified as “Sheet C2.1, Enlarged View of Existing Storage Tanks,” dated December 14, 2016 and prepared by Baxter Nye Engineering and Surveying, for the locations of the USTs and ASTs.

This work will be performed in accordance with Massachusetts Department of Environmental Protection (MassDEP) and Division of Fire Service (DFS) regulations and as directed by the Keller Company (Keller; the project developer) or their appointed designee. These activities shall be conducted in accordance with this document and attachments referenced herein.

The objective of this document is to describe the requirements to remove the on-Site USTs and ASTs, as well as other containers of automotive and facility maintenance fluids, paints, and compressed gases (e.g. motor oil, welding gases, etc.), and properly manage petroleum-impacted soil, if encountered, to mitigate potential risks to human health and the environment at the above referenced property (the Site). The Site is occupied by a trucking depot and is planned for redevelopment as a commercial office space.

Based on a Phase I Environmental Site Assessment performed by Fuss & O’Neill in March 2016, the two diesel fuel USTs are located just outside the northwestern corner of the on-Site building, beneath a concrete pad. The USTs and lines are reportedly constructed of fiberglass-reinforced plastic (FRP) and equipped with leak protection features including interstitial monitoring. The USTs historically stored gasoline.

A release of methyl tert-butyl ether (MTBE; a gasoline additive) was reported at the Site in 2001 and was attributed to the USTs. This release received a Class B-1 Response Action Outcome (RAO) in 2005, indicating that a condition of “No Significant Risk” existed at the Site and response
actions were not warranted. The Site is identified by MassDEP as Release Tracking Number (RTN) 4-16597.

**HEALTH AND SAFETY PLAN**

During tank removal activities, a Site-specific health and safety plan (HASP) must be in place to address safe working conditions relative to the chemical constituents in the soil, groundwater, and air. The site contractor shall develop a HASP describing measures to mitigate exposure to regulated soil, including personal protective equipment to be worn by workers to minimize exposure and contingency planning. The HASP shall be prepared in conformance with Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements (29 CFR 1926.65 and 1910.120, as applicable) and shall, at a minimum, include the following information:

1. Identification of the Contractor’s Site Safety Officer and the appropriate chain of command, including a health and safety manager and emergency coordinator, if warranted.
2. A job hazard assessment for each project task and description of hazard communication practices.
3. Use of personnel protective equipment (PPE), including a protocol for upgrading levels of PPE as necessary.
4. Protocols and monitoring requirements that ensure safe entry and cleaning of the UST in accordance with local, state and federal requirements.
5. Procedures for air monitoring and respiratory protection.
6. Traffic and Site control, as warranted.
7. Other information as required in 29 CFR 1926.65.
8. The Contractor shall maintain a copy of the HASP on-Site and make it available for review as requested by the Owner’s designated Engineer (the Engineer) and local authorities.

The procedures and requirements described in this document will apply to all workers performing tank closure activities or earthwork involving remediation waste (i.e. soil containing petroleum constituents at levels equal to or above the MassDEP reportable concentrations). All workers performing soil management activities at the Site are required to comply with HAZWOPER training and certification requirements in accordance with OSHA 29 CFR 1910.120 and 1926.65. All workers should be prepared to provide documentation of such certifications upon request.

During tank removal activities, the Site shall be secured and stabilized following each day. Fencing and signage shall be used as necessary to restrict unauthorized access to the Site.

Heavy equipment used for UST removal or soil management activities shall remain on-Site during the course of work. To prevent cross-contamination, heavy equipment contaminated during UST or petroleum-impacted soil removal shall be decontaminated prior to leaving the Site or being used in Site work involving soil that is not petroleum-impacted. Equipment
decontamination procedures will be specified in the contractor’s HASP and should generally consist of pressure washing contaminated equipment. If warranted based on site conditions, the owner may require recovery of decontamination waste for off-site disposal.

**APPLICABLE LAWS, REGULATIONS, AND DOCUMENTS**

The activities described herein shall be conducted in accordance with the Massachusetts Contingency Plan (MCP), state fuel system code (310 CMR 80.000), state fire code (527 CMR 9.00), the Cape Cod Commission and Town regulations, as applicable, and this specification.

The contractor shall maintain compliance with the applicable regulations. The contractor is responsible for erosion and pollution controls in accordance with local, State, and Federal regulations. Soil segregated for off-Site disposal will be disposed of at an appropriately licensed receiving facility in accordance with local, State, and Federal regulations and the requirements of the receiving facility.

**UST REMOVAL ACTIVITIES**

The contractor shall remove and dispose of the two diesel fuel USTs at the Site, located along the northwestern side of the truck depot building. The following items are major items of work included:

1. Demolish and remove dispensers, fueling island, bollards, and appurtenances as applicable. No equipment will be retained by the owner. Items slated for demolition (e.g. dispensers, fueling equipment) become property of the contractor, and may be salvaged or discarded at Contractor's sole discretion and expense.

2. Expose, enter, clean, and remove any residual liquids and sludges contained in the USTs, containerize, transport and dispose off-Site in accordance with local, state and federal regulations.

3. Disconnect, clean, cut, remove and dispose supply, return, and vent lines between the UST and fueling island / equipment, in accordance with local, state, and federal regulations.

4. Remove the UST from subgrade, load and dispose at a state-licensed facility. Demolish and remove any concrete tie-down slabs, and dispose off-Site in accordance with state and federal regulations. Obtain and submit documentation of disposal of the UST, residuals, and any other components required to be disposed.

5. The Engineer will collect samples to evaluate soil conditions and determine whether a reportable petroleum release has occurred, in accordance with 310 CMR 80.43. The Engineer shall collect post-excavation soil characterization samples to document the conditions at closure. The contractor shall assist with sample collection as requested.

6. If evidence of a release is identified, the Engineer, owner, and their designated Licensed Site Professional (LSP) shall be responsible for notice to MassDEP and negotiation of immediate response actions, as required. The contractor
shall be prepared to support “immediate response actions” as required, generally in the following manner:

a. Free floating petroleum product shall be skimmed or pumped until all recoverable product is captured. Recovered liquids shall be disposed off-site in accordance with local, state, and federal regulations.

b. Contaminated soil shall be managed in accordance with the soil management requirements detailed later in this specification.

c. The contractor shall coordinate with the designated LSP to obtain Bills of Lading, waste manifests, and other documentation as warranted to support transport and off-Site disposal of recovered liquids and petroleum-impacted soil.

d. At the conclusion of off-site disposal activities, the contractor shall provide copies of fully executed Bills of Lading, waste manifests, and other disposal documentation to the engineer, designated LSP, and owner.

7. The excavation shall be backfilled using borrow material generated on-Site, or soil generated from an off-Site quarry, gravel pit or other property not impacted by releases of oil and/or hazardous materials, and imported to the Site for this purpose.

8. If additional USTs are discovered during removal activities, the owner will be notified and tank removal activities will continue in general conformance with this specification and under the direction of the Owner and Engineer.

**AST REMOVAL ACTIVITIES**

The following activities will be performed to close the two ASTs in the building, and the exterior AST:

1. Remove and containerize any residual liquids and sludges from the ASTs, such that no recoverable product and less than one inch of material remain in the AST. Transport and dispose off-Site in accordance with local, state and federal regulations.

2. Disconnect, cut, remove and dispose of the ASTs in accordance with state and federal regulations. Any tank cutting shall be performed in accordance with municipal ordinances, the HASP, and any Hot Work permits issued for the work, if required. Relay piping from ASTs to storage or burning equipment shall be removed and disposed off-site.

3. Obtain and submit appropriate documentation of disposal of the ASTs, residuals, and any other components required to be disposed.
MISCELLANEOUS CONTAINERS

Retail volumes of automotive and facility maintenance fluids, paints, and compressed gases shall be collected in an interior or secured/covered location; consolidated, transported, and disposed by appropriately-licensed waste management contractor. Documentation of disposal shall be submitted to the Owner.

SOIL MANAGEMENT AND DISPOSAL

At the discretion of the owner and Engineer, soil from the Site may be segregated and designated for off-Site disposal. If a suitable disposal facility is located and permission is granted prior to the commencement of soil management activities, live-loading of the soils can be performed. Otherwise, the soil shall be stockpiled on and under six-mil or thicker polyethylene sheeting in the vicinity of the excavation until a suitable off-Site disposal location is identified.

Stockpiles shall be covered and secured at the conclusion of each working day, and erosion controls, consisting of hay bales, silt fencing, coir logs or similar, shall be placed around the stockpiles. Stockpiles of soil designated from off-site disposal shall be physically separated from any soil staged for on-site use.

Excavation and removal activities unrelated to the UST systems will be stopped if any soil exhibits characteristics of contamination (odors, staining, sheens). If contaminated soil is encountered, the owner and Engineer shall be notified and shall coordinate with MassDEP if required.

At the discretion of the owner and Engineer, confirmatory soil samples may be collected from excavation areas to document the post-excavation soil quality. If confirmatory soil samples are requested, the contractor shall assist the Engineer with sample collection.

BACKFILL SPECIFICATIONS

Following the collection of confirmatory soil samples and approval by the Owner or Engineer, the UST graves will be re-graded and/or backfilled. At a minimum, UST graves will be backfilled to the extent that the depression has been stabilized and does not present a fall hazard or exhibit unstable slopes, as an intermediate condition during redevelopment. Additional backfill conditions may be required by other design trades for structural stability and site grading.

NOTIFICATIONS

The contractor shall notify the owner and Engineer of pending activities related to soil management at the Site, including the following:

- Minimum 72 hour notice prior to the commencement of UST removal, or any disturbance of regulated soil, and confirmation of Dig Safe notification.
- Minimum 72 hour notice prior to removal of the ASTs.
• Inform the local Fire Marshal of tank removal activities 7 days prior to scheduled activities, or as required in the Town regulations.
• Submittal of analytical results or other specified documentation for any material to be removed from the Site, as well as documentation of acceptance by an appropriately licensed receiving facility.
• Immediate notification of discovery of soil that is visibly impacted or suspected to be impacted by releases of oil and/or hazardous materials (OHM).
• Further submittal and notification requirements as detailed throughout this specification.

**SUBMITTALS**

Prior to the commencement of work, the following submittals will be required:

1. The Contractor’s DigSafe ticket number.
2. A copy of the HASP for confirmation by the Owner or Engineer (not review or approval).
3. A fully executed Form FP-292 Application and Permit for Storage Tank Removal.
4. Location and MassDEP Tank Yard registration number for UST and AST disposal, and the location(s) of the disposal facilities for waste liquids and residuals generated during removal activities.
5. A work plan, including a schedule, a description of the proposed work areas, including proposed exclusion zones, staging areas, stockpile locations, and laydown areas.
6. All required license certifications and ID numbers associated with the removal and transportation of regulated waste and/or hazardous waste.
7. Documentation of backfill soil quality and source.

The following information will be required following completion of the work, to support the Contractor’s request for payment:

• Within 72 hours, provide the Owner and local Fire Department with a receipt documenting disposal of the removed tanks at the approved Site, in accordance with Town of Barnstable regulation Ch. 326-21.
• Fully executed manifests or bills of lading for all solids, liquids and sludges.
• Disposal tickets, tank ledgers, or equivalent, documenting the disposal of the USTs and ASTs.

**REFERENCE STANDARDS**

A. Occupational Safety
   1. 29 CFR 1910.120 and 1926.65: Occupational Safety and Health Administration Hazardous Waste Operations and Emergency Response. Where one citation is included below, the second citation is implied.
   2. 29 CFR 1910.146 Occupational Safety and Health Administration Confined Space Entry.
   3. 520 CMR 14.00: Excavation and Trench Safety

B. Hazardous Materials Transportation, Storage and Disposal
1. 310 CMR 40.000: Massachusetts Contingency Plan
2. 310 CMR 80.00: Underground Storage Tank Systems
3. 527 CMR 9.00: Massachusetts Fire Code, Tanks and Containers
5. 49 CFR 170-180: Hazardous Material Transportation Regulations

C. Tank Closure
3. ENSOL, Inc., 2005. Phase II - Comprehensive Site Assessment Report & Method 1 Risk Characterization in Support of a Class B-I Response Action Outcome, 10 Hadaway Road, Hyannis, MA MA DEP RTN 4-16597
   A copy of this document may be obtained electronically under RTN 4-16597 at http://public.dep.state.ma.us/SearchableSites2/Search.aspx.