

4.12 HAZARDOUS MATERIALS

4.12.1 Introduction

This chapter discusses the potential presence or release of Oil or Hazardous Materials (OHM) in relation to the alternatives under consideration during their construction and operation.

Potential operational impacts of the alternatives may include spills or releases of OHM. However, spills of diesel fuel or hydraulic fluids as a result of a train derailment are not anticipated to occur. Derailments are an extremely rare event, particularly on tracks that are maintained in good condition.

The spill or release of OHM in the process of constructing the alternatives is an unlikely event, and measures would be required to prevent and control any such spills. The construction contractors would implement a Spill Control Program in compliance with the Massachusetts Contingency Plan (310 CMR 40.0000, the MCP) and MBTA policy. These measures would be employed both at the rail reconstruction sites and station construction sites. The following practices would be employed on site to prevent, reduce, and clean up spills.

- All spills would be reported to the MBTA and will be reported to appropriate state and/or federal agency if the reportable quantity is exceeded.
- Spill cleanup material would be kept in any chemical storage area.
- All spills would be cleaned up immediately after discovery.
- A spill report would be prepared after each occurrence.
- An appropriately trained employee involved in day-to-day operations would be identified to be the spill prevention coordinator. Each employee would be instructed to report spills to the spill prevention coordinator.
- An inventory of construction and maintenance materials (and corresponding Material Safety Data Sheets) would be maintained as part of the Storm Water Pollution Prevention Plan (SWPPP) for the project.

While the construction activity itself is unlikely to result in the spill or release of OHM, constructing the South Coast Rail alternatives may require acquisition of properties where oil or hazardous materials may already be present in soils or groundwater, or in existing buildings, potentially under conditions that could constitute a prior release pursuant to the MCP. Construction may also encounter contaminated soils or groundwater, or other OHM, within the railroad rights-of-way. The MCP defines the responsibilities of property owners with regard to oil and hazardous material. Several state and federal regulatory programs also govern the requirements for site remediation, transport of regulated hazardous materials, and potential spills during construction.

Rail beds can be contaminated with OHM from a variety of sources, some of which may be exempt from the reporting requirements of the MCP, as stated in the Secretary's Certificate dated April 3, 2009. However, once the materials are excavated or moved, they may be subject to the MCP or other regulations. The Secretary's Certificate recommended that a detailed pre-characterization of soils be

undertaken as recommended by the MassDEP for the station sites and all areas on the right-of-way where construction or rehabilitation is proposed, and to include a draft soil management plan in the EIR.

The Secretary's Certificate on the DEIR, dated July 29, 2011, did not include any new requirements specific to OHM. However, the relocated Stoughton Station and new Dana Street Station site have been evaluated with respect to the potential for OHM-related impacts.

Several locations along the right-of-way and at station locations may contain or have been confirmed to contain subsurface soil and groundwater contamination; underground storage tanks (USTs), and regulated building materials within the buildings to be demolished. Contaminated sites would require the implementation of response actions, as per the MCP, in conjunction with site construction following property acquisition. Response actions would typically consist of the screening and sampling of soil for laboratory analysis of constituents of concern (COCs) and ultimately risk analysis and potentially risk reduction methods such as off-site export of contaminated soil.

After acquisition of a contaminated property, the new owner would be responsible for its cleanup under the MCP. It is therefore advisable that any hazardous waste properties be identified prior to their purchase since the applicant may qualify as an "eligible person" under the Massachusetts Brownfields Act. An "eligible person" is defined under the Act as an owner or operator who did not own or operate the site at the time of the release and who did not cause or contribute to the contamination at the site. If the applicant were determined to be an "eligible person," it could re-establish MCP deadlines for the submittal of response actions and related reports, referred to as Comprehensive Response Actions. The applicant would be required to complete response actions for the property if the release is to soil only. However, the response actions must be completed for the entire site, which may extend beyond the property boundaries, if the release is for impacts to groundwater and/or surface water. Response actions may need to be continued beyond what is required for station construction, as a permanent solution must be achieved for site closure.

The following provides a summary of each of the proposed Alternatives and describes the potential OHM conditions within the locations that may be affected by the South Coast Rail alternatives. OHM in the vicinity of alternatives, including alignment corridors, station locations, and layover facilities are discussed below.

4.12.1.1 Resource Definition

Recognized Environmental Conditions (RECs), as defined by the American Society for Testing and Materials (ASTM) E1527-05 standard practice (Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process), "means the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws."

In the Commonwealth of Massachusetts, the management of hazardous substance and petroleum products when released into the environment is generally governed by the MCP. Hazardous substances include oil, hazardous material and hazardous waste and are defined as those substances that that may constitute a present or potential threat to human health, safety, welfare, or the environment.

Hazardous materials, as defined in the MCP, include any material in whatever form that, because of its quantity, concentration, chemical, corrosive, flammable, reactive, toxic, infectious or radioactive characteristics, either separately or in combination with any substance or substances, constitutes a present or potential threat to human health, safety, welfare, or to the environment, when improperly stored, treated, transported, disposed of, used, or otherwise managed.

Hazardous wastes are waste materials that, because of their quantity, concentration, or physical, chemical or infectious characteristics, may cause, or significantly contribute to an increase in serious irreversible, or incapacitating reversible illness or pose a substantial present or potential hazard to human health, safety, public welfare or the environment when improperly treated, stored, transported, used or disposed of, or otherwise managed. Oil includes insoluble or partially soluble oils of any kind or origin or in any form, including, without limitation, crude or fuel oils, lube oil, asphalt, insoluble or partially soluble derivatives of mineral, animal or vegetable oils and white oil.

When a hazardous substance impacts (or potentially impacts) an environmental medium, then a release (or threat of release) of OHM is said to occur. As per the MCP, a “release” is defined as “spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping or disposing into the environment.” A threat of release “means a substantial likelihood of a release of OHM which requires action to prevent or mitigate damage of health, safety, public welfare or the environment which may result from the release.”

As a further refinement of the ASTM E1527-05 definition of RECs, MCP terminology and references are used, since the management of OHM once released in the environment is governed by the MCP.

4.12.1.2 Regulatory Context

Properties with confirmed OHM impacts are generally managed in accordance with the MCP, 310 CMR 40.0000 and associated policies or guidance issued by the DEP. However, depending on the type and concentrations of OHM present at a property, other regulations implemented by the Commonwealth of Massachusetts or the USEPA may apply.

4.12.1.3 Methodology

The Build Alternatives would require construction, including soil removal, within the station, layover facility/right-of-way locations and alternatives. Properties would need to be acquired (in part or in full) for station and layover facility construction. Ballasts, railroad ties, and subsurface soil would need to be removed along existing and out of service railroad tracks. Soil would also need to be removed for the construction of new stations and new rail segments. Several buildings would also need to be demolished.

These activities have the potential to result in the following:

- Encountering contaminated soil or groundwater;
- Disposing of contaminated materials;
- Disposing of solid waste containing lead-based paint, asbestos-containing materials, or other regulated materials such as railroad ties.

- The new owner would become responsible for compliance with the MCP for any property that was acquired for stations, layover facilities, or track construction. Remediation of contaminated “brownfield” sites would be a beneficial effect of the alternatives.

Types of Impacts

Potential impacts at each site were determined based on the type of REC identified through Environmental Site Assessments (ESAs). Since publication of the DEIR/DEIS, the Downtown Taunton Station has been replaced by the Dana Street Station, which is proposed to be located on the east side of the railroad between the alignment and Dana Street. In addition, the Stoughton Station, along with a segment of track leading to the station, would be relocated from the location analyzed in the DEIR/DEIS to the area between Morton Street and Brock Street. Potential contamination associated with property required for the Stoughton Station was identified by a Phase I ESA. Potential contamination associated with the Dana Street Station was identified through an environmental screening, comprised of a literature review of DEP records and a review of historical Sanborn Fire Insurance maps. A detailed description of each REC and potential environmental concern or *de minimis* condition is provided in each of the environmental screenings/ASTM Phase I ESAs prepared for the proposed stations and layover facilities for the alternatives under consideration. Also included in the ESAs, and in the tables provided in the following sections, is the list of state hazardous waste sites and corresponding Release Tracking Numbers (RTNs) on which the RECs are based.

In order to permit a user or purchaser of a property to satisfy one of the requirements to qualify for the “innocent landowner, contiguous property owner, or bona fide prospective purchaser” limitations on the landowner liability protection, it is customary practice to conduct a Phase I ESA on the prospective property. The ESA constitutes “all appropriate inquiry” (AAI) into the previous ownership and uses of the property consistent with good commercial or customary practice. An AAI or ESA is conducted to determine if RECs, defined in Section 4.12.1.1, are likely to be present at the prospective property. Except as identified above, a Phase I ESA was performed for all properties which may be subject to potential acquisition for the South Coast Rail alternatives under consideration, including stations and layover facilities.

ASTM E 1527-05 sets forth a standard practice for determining whether a REC is present. The ASTM Standard Practice includes a review of databases, a site reconnaissance, interviews, and a review of sources such as historic aerial photographs, topographic maps, and Sanborn maps by an Environmental Professional to determine if RECs are present at the property.

Potential impacts were evaluated for each REC identified, based on available information, and classified according to their potential for contamination as either high, medium, or low (discussed below).

Depending on the type of REC, additional investigations may be warranted to assess whether a release has actually occurred. Soils to be excavated may be characterized as part of construction, so as to identify potential COCs that may be encountered. In the event that contamination is identified, response actions would be implemented in accordance with the MCP. The results of an investigation and/or screening could reveal the presence of contaminated media and inform risk assessment.

De Minimis Impacts

The ESA Opinion also includes a section for potential environmental concerns or *de minimis* conditions. Such conditions have less of a potential to impact properties than RECs, and are conditions generally not

subject to extensive regulation. An example of a potential environmental concern or *de minimis* condition would be the potential presence of asbestos-containing materials or lead-based paint, based on the age of the building, which would have to be properly managed during building demolition and would require proper disposal.

Asbestos-containing materials were identified as a potential environmental concern or *de minimis* condition for the majority of the buildings that would need to be demolished to implement the alternatives. Such materials include roof flashing, tiles, and other materials that may be present in the building materials based on the age of the buildings. In addition, lead-based paint, mercury and polychlorinated biphenyls (PCBs) may also be present in the building materials and/or fixtures.

The presence of railroad tracks at or adjacent to proposed stations represents a potential environmental concern or *de minimis* condition common to all stations, as railroad operations can be sources of OHM. Removing ballast, ties or soil along railway corridors would require proper disposal; however, a detailed risk assessment or risk reduction measures may not be required if the material is either statutorily exempt from MGL c. 21E or is consistent with background conditions. The soil exemption may apply only if the soil remains *in situ*. If the material is not exempt from MGL c. 21E and not consistent with background conditions, then appropriate response actions must be performed and a Response Action Outcome (RAO) or Remedy Operation Status (ROS) prepared as a regulatory endpoint.

Beneficial Effects

The alternatives would likely have a positive effect on confirmed areas of soil and groundwater contamination in the proposed station and layover locations. On-site contamination encountered would be assessed and if necessary, remediated prior to and during construction activities as per the MCP. Re-use of as much excavated soil as possible, including impacted soil with concentrations below the applicable MCP standards, is the preferred option and is recommended if a pre-risk assessment screening of the material shows that there are no limitations on risk associated with the current and foreseeable use of the property. Remediation of soil which could not be re-used would most likely consist of soil excavation and off-site disposal.

The following describes the locations where environmental screenings/Phase I ESAs were conducted, the methodology used for these assessments, and the methodology used to evaluate the potential impacts associated with RECs (the potential presence of OHM) at each site.

Environmental Screening/Phase I Environmental Site Assessments Study Area

To assess the potential for encountering OHM during the implementation of the South Coast Rail project, Phase I ESAs or environmental screenings were prepared for station locations and layover facilities associated with the alternatives, including the following.

King's Highway	North Easton	Taunton Depot
Whale's Tooth	Easton Village	Dana Street
Freetown	Raynham Park	Wamsutta Layover
Fall River Depot	Taunton	Weaver's Cove East Layover
Battleship Cove	Stoughton	

Phase I ESAs were performed for properties outside the boundaries of the existing rail alignment that will involve property acquisition or ground disturbance. Phase I ESAs were not performed, however, for most properties within the boundaries of the existing rail alignment. The existing corridors were not evaluated because, due to the nature of land use along rail alignments, it can be assumed that there is the potential for adverse impacts to be present in soils or groundwater in these areas, as railroad operations are common sources of OHM releases, such as semi-volatile organic compounds.

Phase I ESA Methodology

Phase I ESAs were performed as per the ASTM E1527-05 Standard Practice and All Appropriate Inquiries (AAI) pursuant to 40 CFR Part 312. The purpose of the Phase I ESAs is to identify RECs in connection with the properties, to the extent feasible pursuant to the process described in the Standard. The Phase I ESAs were completed using the Standard as guidance. The only major modification to the methodology of the ASTM E1527-05 standard is that a “User” was not identified and therefore not asked to perform tasks to help identify the possibility of RECs in connection with the property. The methodology for the Phase I ESAs included the following:

- A computer database search of federal and state files. The federal databases included the current Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS), National Priorities List (NPL), Resource Conservation and Recovery Act (RCRA), Storage and Disposal (TSD), RCRA Generators, and Emergency Response Notification System (ERNS) list. The state databases included the state equivalent CERCLIS list, spills, USTs, Solid Waste Landfills (SWL), and public water supply lists.
- A review of available DEP files to provide more information about reported releases of OHM identified through the database search on or adjacent to the site. Where the DEP files provided additional information regarding past ownership; historic site usage; past usage, storage and disposal of OHM on and adjacent to the subject site and other evidence of potential environmental impacts, such information was documented.
- A review of available municipal and historic files to assist in confirming ownership history and past usage. Resources included tax records, aerial photographs, Health Department records, Building Department records, Fire Department records, Conservation Commission records, and Sanborn fire insurance maps. Where available, the site history review also identified reports of historic spills, disposal areas, or other past releases of OHM on or adjacent to the property.
- A review of previous site documents including ESAs, if applicable and/or available for review.
- A visual site reconnaissance to observe the site for overt evidence of a release or threat of release of oil and/or hazardous materials within interior and exterior portions of the entire property. The uses of adjoining properties are also documented.
- Interviews of past and present owners and occupants, and state and/or local government officials, whenever possible, and documenting information regarding the uses and physical characteristics of the property.

The methodology for conducting environmental hazardous materials screenings for the Whittenton Alternative involved a review of the regulatory databases identified above and a review of historical sources in order to identify past land uses.

REC Impact Criteria

The ASTM Standard requires an opinion regarding the potential for each REC to affect a site. The potential impact for each REC identified was classified as high, medium, or low, based on available information. Criteria used to determine the potential impacts are discussed below.

- RECs that are deemed to have a high potential impact consist of sites such as those with confirmed soil, groundwater, and/or indoor air impacts that either were not reported to DEP or were reported to the DEP and have undergone some type of cleanup or remain an active case. Those properties that have undergone a cleanup and have achieved a Permanent Solution, such as a RAO, are still considered high potential impact due to the fact that changing site use or regulations, construction activities, a DEP audit of the RAO, or identification of new environmental conditions (such as indoor air impacts in nearby structures) could trigger the need to conduct additional assessment and/or remediation activities. Other RECs with high potential impacts are those for which UST installation records exist but for which removal documentation is absent, indicating a likelihood that USTs may be present and those where the historic uses of the property indicate that substantial quantities of OHM were used and could constitute a release of OHM.
- Properties with RECs that are deemed to have a medium potential impact consist of properties such as those with potential sources of OHM with limited or inconclusive information. For instance, a single-walled steel UST which has been removed, but limited or no documentation was available to show that proper sampling was conducted at the time of the UST removal to confirm that the UST did not leak, may be deemed a REC of medium potential impact.
- RECs that have low potential to impact a site include off-site properties where releases have occurred but have been mitigated or USTs where proper documentation is available indicating a release has not occurred, as well as for properties that have more recently installed USTs equipped with leak detection, are double walled, and/or contain overfill protection and spill containment.

4.12.2 Existing Conditions

The following describes RECs and potential environmental concerns relative to OHM associated with the alternatives, beginning with the alignments of rail alternatives followed by those stations located in the Southern Triangle (New Bedford Main Line followed by Fall River Secondary), and proceeding with stations and layover facilities located along the alternatives alignments. The conclusions of the Phase I ESA that was previously performed for the Stoughton Alternative right-of-way is provided at the end of this discussion. It should be noted that the presence of railroad tracks at or adjacent to a site is identified as a potential environmental concern common to all stations and corridors, as railroad operations are often sources of OHM.

4.12.2.1 Rail Alignments

Stoughton Alternative

Stoughton Alternative Right-of-Way

As part of a previously prepared Phase I ESA for the Stoughton Alternative, the MBTA examined the right-of-way between Canton Junction and Weir Junction in 1998. Database searches were also evaluated between Canton Junction to Stoughton Station in January 2000.

Based on the conclusions of the 1998 Phase I ESA, the following release sites may impact the Stoughton Alternative right-of-way. These sites include Cohen Property, General Cable Corporation, North Easton Historical Industrial Avenue, and Cyn Environmental. A brief description of each property is included below.

- The Cohen Property, located in Taunton, was listed as a “not proposed CERCLIS” site. This site was comprised of scattered fill consisting of automobile parts, coal slag, scrap metal, and construction debris. Analytical results indicated the presence of six VOCs, PCBs, and inorganic compounds above detectable concentrations in soil. The City of Taunton has developed a reuse program with the EPA to use a portion of the site for Department of Public Works storage. The groundwater flows to the east toward Ingell Street. Groundwater contaminants are consistent with the soil analytical results.
- General Cable Corporation located in Taunton is listed for two spills and releases of No. 4 and No. 2 fuel oil. This site is also listed as the prior location eight USTs, now removed, and as a RCRA Small Quantity Generator.
- North Easton Industrial Avenue is a potential environmental concern due to the historical use of the properties since the early 1900s.
- Cyn Environmental Services, located in Stoughton, is listed as Adequately Regulated outside of the MCP. Cyn is regulated by RCRA guidelines and is a RCRA Small Quantity Generator with several spills listed for petroleum products.

In January 2000, the MBTA performed an additional environmental database search for the Stoughton Alternative from Canton Junction to Stoughton Station. Four potential environmental concerns were identified from the database reports. Additional information was obtained from the DEP for sites which are listed, including the Canton Landfill on Pine Street and three state listed hazardous waste sites. Information from the DEP on the Canton Landfill indicated that groundwater contamination was migrating away from the railroad and does not pose a concern to the right-of-way. The three state-listed hazardous waste sites include a Texaco gasoline station at 731 Washington Street, the Canton Department of Public Works facility, and the Lamb Company at 85 Jackson Street. All three sites were reviewed and determined not to have an environmental impact on the right-of-way due to the distance or remedial actions undertaken at these sites.

Whittenton Alternative

Whittenton Branch

The Whittenton Branch consists of approximately 3.4 linear miles of inactive railroad right-of-way that is 66 feet in width and is located between Whittenton Junction (West Britannia Street in Taunton) and extending northeast toward Raynham Junction (the intersection of Broadway and Center Street in Raynham) (Figure 4.12-1). According to aerial photographs and reports that were reviewed for the Phase I ESA, the site appears to have not been used as a railroad since at least 1950. The last known rail use along the Whittenton Branch was in 1958. The majority of the site is unpaved and unused, with the exception of trespassers. A small section of the right-of-way, located to the south of Whittenton Street, is used as a paved access roadway for the nearby Aggregate Industries facility.

Based on the tasks conducted for the Whittenton Bypass Phase I ESA, four RECs and five potential environmental concerns were identified and are described below.

REC #1—Transformer Oil Releases on Adjoining Property, RTN 4-18532—On July 10, 2004, a sudden release of approximately 590 gallons of transformer oil occurred at the Parkman Construction site (also referred to as Dyecraftsmen, Inc.), located at 437 Whittenton Street. This release site is located adjoining and to the west of the subject site and was assigned RTN 4-18532 by the DEP. The fire department records indicated that oil may have migrated to catch basins and adjacent asphalt surfaces. The DEP records indicated that a Class A-2 RAO was submitted to the DEP on July 15, 2005, indicating that a Permanent Solution was achieved; however, contamination was not reduced to background. The RAO report indicated that historical operations may have led to additional transformer oil releases that should be addressed and managed as separate releases. The potential migration of this transformer oil release, as well as indications of historical transformer releases, constitutes a REC with a medium potential impact.

REC #2—Historic Use of Adjoining Property as Industrial Manufacturing—According to historical reports, the adjoining property located at 437 Whittenton Street was used for industrial processes for over 100 years. The property was initially used in the late 1800s and early 1900s as a cotton mill, which included the treating and dyeing of materials. As indicated by UST records and historical maps, these industrial processes likely used large quantities of OHM including fuel oil, machining oil, dye, and bleach. Although no historical documented releases (other than REC #1 described above) were identified in connection with this property, given the industrial history and close proximity to the site, the potential presence of OHM is considered to be a REC with a medium potential impact.

REC #3—Indication of Significant Historical Dumping—Significant dumping was observed in the wetland area along Segment 1 of the right-of-way consisting of primarily used tires, but also including an old heating oil tank, an oven, car doors, five gallon buckets, a gas can, and other trash. The dumping was identified as an environmental concern given the type and magnitude of discarded materials, including OHM storage containers and at least 50 tires. This dumping has occurred in a wetland habitat and, therefore, has been identified as a REC with a medium potential impact.

REC #4—Central Oil Company, 728 Broadway, Raynham, RTN 4-16976—A kerosene release was identified at the Central Oil Company, with an address of 728 Broadway, Raynham that was reported to the DEP on April 1, 2002.

RTN 4-16976 was assigned to the release. The current facility status for this site is classified as Tier 1D, where the responsible party fails to provide the required submittal to the DEP by a required deadline. During the site reconnaissance, several large aboveground storage tanks were observed at the Central Oil Company facility, located immediately to the east of the right-of-way. The groundwater directional flow at the facility is not known. These tanks and secondary containment appeared to be in below average condition; however, this was not confirmed, as the Central Oil Company facility was not accessed during this site reconnaissance. Given these observations, the release history, the Tier 1D status and the close proximity to the site, the release and observations associated with the facility have been identified as a REC with a high potential impact.

Potential Environmental Concerns—The Whittenton Branch has five potential environmental concerns, including the following.

- During the site reconnaissance, tires, televisions, piles of fibrous material, and other miscellaneous debris were observed in a wooded area of the site. The source of the material was not determined, although some of the debris was identified as household goods and other material possibly derived from an industry using fibrous materials. The disposal of this material on the site is of potential concern because the nature of the debris is unknown and could potentially contain contaminants that would release to the surrounding environment.
- Three leaking underground storage tank sites located between 2,000 and 3,000 feet to the east of Segments 3 and 4 of the site (see Figure 4.12-1) were identified and are listed below:
 - Pop’s Service Station, 212 Broadway, Taunton;
 - Broadway Gulf (Sunoco) Station, 225 Broadway, Taunton;
 - Mystic Gas & Properties, 242 and 252 Broadway, Raynham.
- Local groundwater flow direction is reportedly toward the south; however, there are also indications that a municipal public water supply well field is drawing groundwater towards the west. Each of these three properties has a history of leaking underground storage tanks and related releases of petroleum. Given the proximity to the site and the anticipated groundwater directional flow, these properties are not likely to impact the site but pose a potential environmental concern.
- Historical gravel pits and current observed stump dump operations currently overlap the right-of-way. Piles of wood and loam were observed across several acres of land. No solid waste permit or other listing for this operation was identified during this assessment.
- Miscellaneous debris and an old abandoned truck were observed outside of a horse barn and a cart path connecting the horse barn property to the site, situated along Segment 4 (see Figure 4.12-1). The debris and contents of the horse barn could be a source of OHM.
- A Taunton Municipal Light Plant substation is located adjacent to the site at the southwest portion of Segment 1 (see Figure 4.12-1). There was no indication of spills or releases at the substation and there was no labeling indicating the presence of PCBs on the electrical equipment. However, the operation of this equipment adjacent to the site has the potential to release transformer oil and other OHM onto the site.

A portion of the Whittenton Branch near Prospect Hill Pond is adjacent to a construction and demolition (C&D) debris disposal facility that has encroached onto the railroad right-of-way. A limited review was conducted to evaluate fill material reportedly present on the right-of-way for the presence of OHM. The review is summarized below; a full report is provided in Appendix 4.12-A, with figures showing the area and site features.

New England Recycling, Inc. of Taunton stores the C&D debris at the Raynham Facility, which abuts the railroad right-of-way and has an address of 138 (Rear) Broadway in Raynham. Disposal of C&D debris on the railroad right-of-way is not an authorized use of the land.

The following materials are permitted for storage at the Raynham Facility: post-consumer asphalt shingles (non-asbestos containing materials), pre-sorted asbestos/brick/concrete rubble, wood waste, sand, and gravel. These materials were observed on-site, in addition to minor amounts of debris including buckets, plastic bags, wire, and rebar. The solid waste/debris noted does not appear to constitute a release of OHM to the environment as defined by the Massachusetts Contingency Plan (310 CMR 40.00).

The right-of-way is currently occupied by what appears to be material containing stumps, compost, sand, gravel, boulders, and minor amounts of solid waste and debris. The disposal facility operator has indicated that this material is frequently relocated and new material brought into the site and would be relocated at the request of MassDOT.

4.12.2.2 Stations

Southern Triangle

Battleship Cove Station Site

The Battleship Cove Station site is located on a portion of land east of Water Street and west of Route 138 in Fall River, Massachusetts with an address of 24 Ponta Delgada Boulevard (Figure 4.12-2). According to the property field cards obtained from the Fall River, Massachusetts tax assessor's database, the site consists of a portion of two parcels. The two parcels total 0.779 acre; however, only approximately 0.33 acre comprise the site. The property is currently occupied primarily by the "Portas da Cidade" or "Gates of the City" monument, which includes a fountain, flags, and a grassy area. The majority of the site consists of an asphalt paved driveway, concrete sidewalk, and concrete memorial, which was constructed in 2005. The area surrounding the asphalt driveway consists of landscaped grass.

Based on the tasks conducted for the Battleship Cove Station Phase I ESA, two RECs and no potential environmental concerns were identified. The RECs are described below.

REC #1—Historical Use of the Adjoining Properties—As early as 1888, Sanborn maps indicate that the property adjoining the site to the north at 84 Anawan Street was used as a manufactured gas plant, referred to as the Fall River Gas Works. The Fall River Gas Works at the time housed iron gas holders and a coal house. A Sanborn map from 1905 shows an addition of a crude oil tank and "gasometer" to the gas manufacturing property, as well as the new ownership by Borden & Remington chemical storage of a property immediately to the northeast of the site at 115 Anawan Street. A gas tank on the Borden & Remington property was also constructed and abutted the northwestern corner of the site. The 1933 map showed that up to 15 gas "caustic" materials storage tanks were also present on the Borden &

Remington property at least through 1976. The “empty oil tank” adjoining the northeast corner of the site is currently present at the New England Gas Company property.

According to the computer database report, ten 10,000-gallon USTs were removed from a property located at 115 Anawan Street, which is north of the site. In addition, two USTs (one 5,000-gallon gasoline and one 2,000-gallon diesel) were removed from the New England Gas Company with an address of 84 Anawan Street. It is not known if contamination was encountered at the time of the UST removal. In addition, the general practices at the properties of gas manufacturing and chemical storage could have contributed to environmental impacts at the site.

Land to the west, which is currently owned by Borden & Remington Corporation, has also been used for industrial purposes as early as the mid-1800s. The 1933 Sanborn map indicates that the American Printing Company was located at the property until the Firestone Rubber & Latex Company began its operations in approximately 1970. Numerous storage tanks can be seen on these properties from the Sanborn maps. In addition, the property is currently used by a manufacturer of latex and rubber.

The historical use of the adjoining properties including numerous storage tanks containing OHM is considered a REC with a medium potential impact due to the potential for releases to have occurred over the past 150 years of industrial use and these impacts could potentially migrate and affect the quality of site media.

REC #2—Analytical Results from Previous Environmental Report—A Limited Phase II Environmental site Assessment (Phase II) was completed for the site in November 2001. During Phase II investigation, soil samples submitted for laboratory analysis indicated concentrations of several polynuclear aromatic hydrocarbons (PAHs) and lead above the Reportable Concentrations (RCS-2) representing concentrations that may be indicative of urban fill. Based on the results from the Phase II investigation, the soil could currently contain contamination above the applicable standards. The environmental impacts discovered on the site are considered a REC with a high potential impact.

Fall River Depot Station Site

The Fall River Depot Station site is located southeast of the intersection of Davol and Pearce Streets and consists of numerous parcels with eight addresses totaling approximately 5.3 acres (Figure 4.12-3), which are described as follows.

- 825 Davol Street—This northwestern portion of the site consists of a retail discount flooring warehouse with an associated asphalt driveway and storage trailer. This area also encompasses another small vacant parcel with no address (Parcel 0020) which is owned by the City of Fall River.
- 775 Davol Street—This western central portion of the site contains the remnants (roof, metal side supports, and concrete pad) and associated paved surfaces of a former factory building and is surrounded on all sides with chain-link fencing.
- 61 Pearce Street—This northeastern portion of the site is occupied by a brick warehouse building used by a painting company and an electric and alarm company.
- 390 Davol Street—The eastern central portion of the property along the railroad tracks is elevated and consists primarily of a vacant, gravel and grassy area.

- 753 Davol Street and 175 Bayles Street—The central and eastern portions of the property consist of several buildings, including a brick warehouse, and associated paved parking, that are currently being used by Gemco, an electrical and mechanical contractors business.
- 729 Davol Street—the western central portion of the site consists of a cinder block building, referred to as Jimmy’s Tire that is being used as a vehicle repair garage and tire sales facility with associated paved parking.
- 713 Davol Street—the western central portion of the site consists of a multi-family residence in the front near Davol Street and another multi-family residence and associated auto detailing business behind the front residence, referred to as Auto Accent.
- 697 Davol Street—the southernmost portion of the site consists of a restaurant referred to as Davol Street Station Seafood Restaurant & Pub with associated paved parking to the south of the restaurant building. A grassy area is located to the east of the restaurant and parking area along the railroad tracks and slopes upward to the north to a small shack and picket fence.
- Based on the tasks conducted for the Fall River Depot Station Phase I ESA, five RECs and two potential environmental concerns were identified and are described below.

REC #1—Analytical Results from Previous Subsurface Investigations—As part of the Phase II subsurface investigation performed in 2001, a total of 14 hollow-stem auger soil borings were advanced at the site, with eight of the borings being completed as groundwater monitoring wells. Petroleum contamination was encountered in three soil borings at depths ranging from 26 to 34 feet, which is consistent with the groundwater interface. Coal, coal ash, and slag were observed in the fill materials at one soil boring. Asphalt and brick were observed in the fill materials at four of the soil borings. Groundwater samples were also collected from the monitoring wells. Groundwater samples from two wells were observed to have a sheen and distinct petroleum odor.

Analytical results for soil collected from three soil borings showed concentrations in excess of the Reportable Concentration (RCS-1) thresholds, as per the MCP, for volatile petroleum hydrocarbons (VPH). Two samples collected from two soil borings showed concentrations in excess of PAH Reportable Concentrations.

Groundwater samples collected from two on-site monitoring wells showed VPH and extractable petroleum hydrocarbon (EPH) concentrations above the MCP Reportable Concentrations (RCGW-2).

Soil and groundwater concentrations in excess of applicable MCP Reportable Concentrations constituted a potential 120-day release notification obligation to DEP in accordance with the MCP. It appears notification was not performed as the site is not listed on the EDR or DEP databases as having a release. The exceedances of VPH and PAH in soil and VPH and EPH in groundwater above the applicable Reportable Concentrations is considered a REC with a high potential impact.

REC #2—Previous and Current Existence of USTs—A geophysical survey performed on the site in 2001 using ground penetrating radar as part of the Phase II subsurface investigation revealed three potential USTs at the site.

The Fall River Fire Department records show that a 2,000-gallon No. 2 fuel oil UST was previously located at the site at 61 Pearce Street beginning in 1948 until at least 1972. A UST removal permit was not provided; therefore, the UST may still be present at the site. In addition, for the property located at 753 Davol Street, a 1,000-gallon No. 2 fuel oil UST is listed as being present in 1948 and 1976. UST removal permits were provided for two 1,000-gallon No. 2 fuel oil USTs which were removed on March 17, 2009. According to the removal permits, a Licensed Site Professional (LSP) was on the site during the UST removals. Also for the 753 Davol Street property, two 4,000-gallon gasoline USTs were removed on December 2, 1998. It is not indicated on the removal permits if contamination was encountered during the removal; therefore, impacted soil, if encountered during the UST removals, may still be present.

A historic Sanborn map from 1950 showed that a gasoline filling station was located on the northwestern corner of the site that contained two gasoline USTs. According to Building Department records, a gasoline filling station was also constructed at the 753 Davol Street property in 1940. No UST removal permits were provided by the Fall River Fire Department. Therefore, the USTs may still be present at the site which constitutes a REC with a high potential impact.

REC #3—Historic Use of Site Properties—A foundry was located in the northeastern portion of the site beginning in the late 1890s. Two gasoline filling stations were located on the northwestern and center portions of the site in the mid-1900s. The northwestern portion of the site was also previously used as a junk yard and for the storage of vehicles and industrial equipment. In addition, a steel manufacturing company was located in the center portion of the site from the early 1900s until the 1980s. The center portion of the site also appeared to be used for the layover of trains in the early 1900s. A vehicle repair and maintenance garage was located at 729 Davol Street, in the center of the site, from the early 1900s until the present. The Gemco machine shop and metal fabrication shop are currently located at 753 Davol Street. It is not known how long the shops have been operating at this location; however, the website for the company indicates it was founded in 1966, but did not state if Gemco has been operating a machine shop and metal fabrication shop at this location since that time. The historical use of the site constitutes multiple potential sources of OHM and is considered a REC with a medium potential impact due to the potential for releases to have occurred over the past 150 years of industrial use.

REC #4—Use of Site (729 Davol Street) as Vehicle Repair Garage—According to historic Sanborn fire insurance maps, the property located at 729 Davol Street was historically used as a vehicle repair garage since sometime prior to 1933. Jimmy's Tire Shop, which also performs vehicle maintenance and repair, currently operates at this property. Therefore, this property stores, uses, and/or generates petroleum and other OHM. The OHM would typically include waste oil, fuel oil, alcohol, anti-freeze, and degreasing chemicals which can contain chlorinated solvents. The improper use, storage, and/or generation of these products/wastes may have resulted in a release of OHM and is considered a REC with a medium potential impact.

REC #5—Use of Site (753 Davol Street and 175 Bayles Street) as Machine Shop and Metal Fabrication Shop—During a limited site reconnaissance on June 10, 2009, a sign on the office and warehouse building at 753 Davol Street indicated that the property was operated by "Baldor Industrial Electric Motors" and "Gemco Electrical and Mechanical Contractors." An internet search for "Gemco" at the 753 Davol Street address revealed that Gemco is "a leading electrical and mechanical contractor and employs services which include electrical power and controls, mechanical piping, machine work and rigging." The website stated that "Gemco has an 8,250-square-foot shop area that consists of a machine shop and metal fabrication shop." From an open door, soldering/welding and metal cutting/grinding

were observed to be occurring at the time of the site reconnaissance inside the brick warehouse building located at 753 Davol Street. An outside storage area consisting of various pipes and tubes was also observed near the warehouse building. Machine shops typically store and use various OHM in their processes and metal cutting involves the use of lubricating oils and other OHM. These processes may have resulted in a release of OHM and are considered a REC with a medium potential impact.

Potential Environmental Concerns—The Fall River Depot Station site has two potential environmental concerns.

Abandoned debris on the site, including a 55-gallon drum containing a small quantity of water at 825 Davol Street, broken television/computer monitors along the railroad platform, 40 to 50 containers of paint at 775 Davol Street, a large debris pile between Parcels O-15-0032 and O-155-0018, and an overgrown mound of unknown material, are of potential concern because the nature of the debris is unknown and it could contain contaminants that would release to the surrounding environment.

Given the age of the buildings located at the site, it is possible that hazardous materials, including roof flashing, tiles, and other materials, as well as lead-based paint, may be present in remaining building materials, surrounding debris piles, and soils.

Freetown Station Site

The Freetown Station site is located at 165 South Main Street in the Town of Freetown (Figure 4.12-4). The land consists of 14.2 acres, some of which is covered with buildings or paved surfaces that consist of indoor and outdoor storage facilities. Four rectangular storage buildings, along with a paved outdoor storage area, are located on the northeastern portion of the site. The paved outdoor storage area is used for boats, recreational vehicles, trucks, and storage trailers. A cellular phone signal tower and telecommunications facility are located on the site immediately south of the storage facilities. Approximately six large soil piles were observed on the site further south of the cellular phone signal tower. The western portion of the site is vegetated and unoccupied.

Based on the tasks conducted for the Freetown Station Phase I ESA, no RECs were identified for the site; however, three potential environmental concerns were identified and are described below.

Potential Environmental Concerns—The Freetown Station site has three potential environmental concerns:

- An outdoor storage area containing various boats, trucks, and other vehicles was observed during the site reconnaissance. Although the outdoor area was paved, there did not appear to be any engineered secondary containment to prevent a release of motor oil, gasoline, or antifreeze from migrating to environmental receptors. No staining or other indications of spills or release were observed.
- During the site reconnaissance, two pad-mounted electrical transformers were observed on the site. One of the transformers is located in a fenced-in area with the cellular phone signal tower. The second transformer is located outside the fenced-in area to the east of the cellular phone signal tower. A label indicated that this second transformer was owned by Commonwealth Electric Company. There were no stains or other indications of releases observed at the location of the transformers. It is not known if the transformers contain PCB

dielectric fluid. The transformers have the potential to leak transformer oil directly onto the ground.

- Given the age of the buildings located at the site, it is possible that hazardous materials, including roof flashing, tiles, and other materials, as well as lead-based paint, may be present in remaining building materials, surrounding debris piles, and soils.

King's Highway Station Site

The King's Highway Station site, located at 1024 King's Highway in New Bedford, consists of 13.4 acres (Figure 4.12-5). Active railroad tracks are located east of the property. The site is currently a commercial shopping plaza and historically was an industrial site.

Based on the tasks conducted for the King's Highway Station Phase I ESA, two RECs and three potential environmental concerns were identified and are described below.

REC #1—Historical Use of Site as Industrial Manufacturing—According to historical accounts of City of New Bedford personnel, the site and/or adjoining properties were used for industrial processes, including manufacturing ceramic lighting fixtures. These industrial processes likely used OHM, including machining oils, paints, coatings, and glazing. Based on the age of the industrial development and its past use, the potential presence of OHM is considered to be a REC with a medium potential impact.

REC #2—Gasoline Release at Adjoining Property (494 Church Street), Release Tracking Number (RTN) 4-15181—A gasoline release was identified at an adjoining property to the east at 494 Church Street. Information from a DEP file review indicated a release of approximately 1,000 gallons of gasoline had occurred. The DEP was notified of the release in December 1999. The release was issued RTN 4-15181, and a Class A-2 RAO was filed for the site in June 2004, indicating that a Permanent Solution had been achieved for the site; however, the contamination was not reduced to background. Although the anticipated groundwater flow direction is to the southeast, away from the site, the historic release of gasoline in close proximity indicates the possibility of impacts to the site and therefore is considered to be a REC with a low potential impact.

Potential Environmental Concerns—The King's Highway Station site has three potential environmental concerns including:

During the site reconnaissance, the outdoor storage of waste was identified in the rear of Savers retail store on the southern portion of the plaza. The solid waste in this area was observed to be stored in an uncovered and uncontained manner with generally poor housekeeping. Although OHM was not specifically identified, the general storage of waste materials in this manner indicates a potential for historical impacts related to spills and stormwater runoff of OHM.

During the site reconnaissance, two pad-mounted electrical transformers were observed on the eastern or rear portion of the site. One transformer appeared to be in good condition, while the other appeared to be in below average and was not mounted on an elevated pad. An additional pad-mounted electrical transformer was observed further south behind the plaza. There were no stains or other indications of releases observed at the location of the transformers. It is not known if the transformers contain (PCB dielectric fluid. The transformers have the potential to leak transformer oil directly onto the ground.

Based on the age of the buildings located at the site, asbestos-containing materials, including roof flashing, tiles, and other materials, as well as lead-based paint, may be present.

Whale's Tooth Station Site

The Whale's Tooth Station site is located at 532, 536 and 540 Acushnet Avenue, just east of Route 18 in the City of New Bedford (Figure 4.12-6). The land consists of 1.1 acres of paved surface currently used as a ferry terminal shuttle parking area. The surrounding area consists of commercial and light industrial properties. Active railroad tracks run along the eastern property boundary of the site.

Based on the tasks conducted for the Whale's Tooth Station Phase I ESA, three RECs and no potential environmental concerns were identified and are described below.

REC #1—Confirmed Contamination (RTN 4-118) and Historical Use of the Site as Freight Yard—Previous operations at the Conrail yard located at the site included offloading tank railroad cars containing PCBs. The following contaminants were detected in site soils: PCBs, arsenic, lead, and PAHs. The DEP was notified of the release in January 1987 and RTN 4-118 was assigned. The property was managed as a voluntary Brownfields site. The DEP and EPA concluded that it was technically infeasible to remediate the site. Contamination was limited to the fill portion of the site and was not detected in groundwater. Installation of an engineered barrier and implementation of deed restrictions consisting of Activity and Use Limitations (AULs) were sufficient to achieve a Permanent Solution, as defined by the MCP, at the site. Since contaminated soil was left in place beneath the paved surface, potential impacts related to exposures during future excavation or construction at the site exist. The potential impact of this REC is considered medium because exposure is limited due to the engineered barrier and the AUL.

REC #2—Acushnet Estuary (New Bedford Superfund Site)—The Acushnet Estuary, a water body located east of the site, was placed on the EPA's National Priorities List on September 8, 1983, and is referred to as the New Bedford Superfund site. The site contains PCB contamination that affects ambient air, surface water, groundwater, soil, sediment, and the food chain. Responsible parties have been identified; the contamination is the result of improper historic disposal of waste from two manufacturers which occurred over several decades, ending in the 1970s. The site was also reported to the DEP on January 15, 1987 at which time the release was issued RTN 4-122. The site is currently active. Although adequately regulated under state and federal regulations, the PCB contamination associated with this site has the potential to have impacted the subject site historically or potentially impact it in the future and is considered a REC with a medium potential impact.

REC #3—No. 2 Fuel Oil Release at Adjoining Property (618 Acushnet Avenue, RTN 4-14791)—A No. 2 fuel oil release was identified at the Department of Employment and Training, an adjoining property to the north with an address of 618 Acushnet Avenue. Information from a DEP file review indicated that a release of an unknown quantity of oil was reported on June 14, 1999. Approximately 19.3 tons of petroleum contaminated soil was removed from the site. A Class A-2 RAO was submitted to the DEP stating that a Permanent Solution was achieved; however, contamination was not reduced to background. Although the anticipated groundwater flow direction is cross gradient (to the east), the historic leaking fuel oil at the adjoining property is a potential threat of release to the site and is considered a REC with a low potential impact.

Taunton Depot Station Site

The Taunton Depot Station site is located west of the intersection of County Street and Taunton Depot Drive in Taunton (Figure 4.12-7). The site consists of a portion of three parcels totaling approximately 22 acres. The majority of the site is undeveloped. A sewer pumping system and generator associated with the retail stores to the southeast, surrounded by a chain link fence, extends approximately 200 feet west onto the site. An asphalt paved driveway leads up to this area. A truck and metal storage container are also located in that area. The southern portion of the site consists of a grassy field with little vegetation while the northern half of the site is densely wooded with walking paths. Land adjoining the railroad tracks to the west is wooded and consists primarily of wetland areas and small stream, which is a tributary of the Taunton River.

The Taunton Depot Station Phase I ESA did not identify any RECs. However, lead and arsenic based pesticides, herbicides, and/or synthetic fertilizers may previously have been applied to the Taunton Depot Station site when it was used as an orchard. These contaminants do not readily biodegrade and may be present in site soil at elevated concentrations.

Stoughton Alternative and Whittenton Alternative Station Sites

Easton Village Station

The Easton Village Station site is restricted to a portion of the railroad right-of-way that is owned by the MBTA in Easton, Massachusetts according to the Easton Assessor's Map No. 16U. The site is identified by the Easton tax assessor's database as Map and Parcel No. 20R-45 (Figure 4.12-8). Inactive railroad tracks are located in the center of the right-of-way, while overgrown vegetation occupies the majority of the remaining right-of-way. The site is approximately 50 feet in width and 600 feet in length, totaling approximately 30,000 square feet or 0.7 acres, and is located approximately 400 feet south of Oliver Street, 300 feet north of Main Street, and immediately west of Sullivan Avenue and Mechanic Street.

Based on the tasks conducted for the Easton Village Station Phase I ESA, two RECs and one potential environmental concern were identified and are described below.

REC #1—Fuel Oil Release at Adjoining Property (28 Main Street, RTN 4-19778)—Shovel Shop Square, the commercial buildings located on the site at 28 Main Street, was assigned RTN 4-19778 in May 2006 due to a release of petroleum hydrocarbons associated with former USTs. Elevated concentrations of lead and beryllium were also detected. Site remediation has included soil removal, off-site disposal, and dewatering.

Soil excavation occurred immediately west of the site, just north of Queset Brook. In 2006, a total of 42 soil samples collected from the walls and bottoms of the UST excavation areas showed EPH exceedances in 14 samples above the applicable soil standards. However, soil samples collected closest to the site showed no detections above laboratory reporting limits. Groundwater sampling performed in May and August 2007 found no contaminants in any samples at concentrations above the applicable standards, including the groundwater monitoring well located immediately adjacent to the site. Surface water samples from Queset Brook and Shovel Shop Pond collected in May 2007 showed no compounds were detected above the applicable guidelines or standards.

Although laboratory data for soil samples and groundwater closest to the site indicate no concentrations exceeding laboratory reporting limits for the COCs, the release is considered a REC with a low potential

impact because it abuts the subject site. Possible residual contaminants may still be present, and because groundwater flows from the disposal site toward the proposed Easton Village Station, the contaminants could be present on the site and not identified during assessment activities.

REC #2—Petroleum and Historic Fill Release at Nearby Property (64 Main Street, RTN 4-10839)—The Verizon Central Office Facility located at 64 Main Street, approximately 300 feet west of the site, was assigned RTN 4-10839 in October 1994 due to the presence of EPH compounds in soil. The Class A-2 RAO submitted for the property in December 2001 was reviewed. Remediation was conducted beginning in December 1994 and a total of 42 tons of contaminated soil was removed from the site. EPH compounds and PAHs were detected in soil and groundwater above the applicable standards during subsurface investigations which were conducted in 1995 through 1997 and 2000.

As part of a Phase IV Remedy Implementation Plan that was submitted to DEP in 2001, 27 tons of soil was excavated and 300 pounds of oxygen releasing compounds were injected into the base of the excavation area. Groundwater sampled in September 2001 showed no detections of EPH compounds or PAH target analytes above laboratory method detection limits. The source of the contamination is believed to be from a 1,000-gallon capacity No. 2 fuel oil UST and historic fill material.

The groundwater flow direction is shown to be to the northeast, toward the site. Based on this information, conditions present at this property could impact environmental media at the site and is considered a REC with a low potential impact.

Potential Environmental Concern—Easton Village Station has one potential environmental concern. A utility pole with three pole-mounted transformers was observed on the western boundary of the railroad right-of-way at the southern end of Shovel Shop Square. There were no stains or other indications of releases observed at the location of the transformers. It is not known if the transformers contain PCB dielectric fluid. The transformers have the potential to leak transformer oil directly onto the ground.

North Easton Station Site

The North Easton site is located west of the intersection of Roche Brothers Way and Washington Street/Route 138 in Easton and Stoughton, Massachusetts (Figure 4.12-9). The site consists of a portion of three parcels totaling approximately 5.2 acres. The site is currently void of buildings and primarily overgrown with grass or forest. A small wastewater treatment system and leaching field associated with the commercial development on Roche Brothers Way abuts the southern boundary of the site. The remainder of the southern portion of the site is covered with tall grass and serves as a drainage basin for the commercial property at 31 Roche Brothers Way. J F McNamara & Sons Construction Company currently uses the northern portion of the site to store dumpsters and roll-off containers.

Based on the tasks conducted for the North Easton Phase I ESA, no RECs were identified for the site; however, two potential environmental concerns were identified and are described below.

Potential Environmental Concerns—The North Easton Station site has two potential environmental concerns including:

During a site reconnaissance in 2002, it appeared that the southern portion of the site was used for target practice, based on ammunition shells and miscellaneous scrap metal with bullet holes that were observed scattered throughout that area. Ammunition shells and bullets typically contain high

concentrations of lead; therefore, elevated lead concentrations may be present in surficial soil in the area where target practice occurred. The frequency with which the property was used as target practice could not be determined. This activity would constitute a REC if it were determined that target practice occurred frequently at the property or the property was used as a commercial target shooting facility.

The presence of multiple storage containers on the northern portion of the site is of concern as the containers may be old and painted with lead-based paint. In addition, not every dumpster could be inspected for possible contents and the majority of the containers were rusting and in a state of disrepair.

Raynham Park Station Site

The Raynham Park Station site is located at 1958 Broadway in Raynham. The site parcel consists of a portion of the larger Raynham Dog Track Park and totals approximately 20 acres of land, with more than 80 percent of the property covered with buildings or paved surfaces, including dog kennel buildings, truck storage/maintenance buildings, storage containers, and parking lot space rented for the storage of wooden poles and snow removal equipment (Figure 4.12-10). The inactive rail right-of-way is located west of the property.

Based on the tasks conducted for the Raynham Park Station Phase I ESA, one REC and two potential environmental concerns were identified and are described below.

REC #1—Historic Use of the Site as Truck Maintenance and Industrial Storage—According to observations and reports of operations at the site, trucks, truck parts and equipment, telephone poles, track mats, and other materials have been stored at the site. The property manager for the site stated that the telephone poles are pressure treated and were not treated with creosote. No specific OHM storage was identified at the site during the site reconnaissance. The interiors of the buildings were not accessible during the site reconnaissance and the truck maintenance garage and related OHM storage were not inspected. These site operations could have potentially resulted in a release of OHM to the environment and therefore are considered a REC with a low potential impact.

Potential Environmental Concerns—The Raynham Park Station site has two potential environmental concerns. Two electrical transformers were observed to be located on the site. There were no stains or other indications of releases observed at the locations of the transformers. It is not known if the transformers contain PCB dielectric fluid. The transformers have the potential to leak transformer oil directly onto the ground. Given the age of the buildings located at the site, it is possible that hazardous materials, including roof flashing, tiles, and other materials, as well as lead-based paint, may be present in remaining building materials.

Taunton Station Site

The Taunton Station site is located north of the intersection of Arlington Street and William Hooke Lane in the City of Taunton (Figure 4.12-11). William Hooke Lane (previously referred to as Railroad Avenue) bisects the southern portion of the site in a north-south direction. Arlington Street borders the site to the southwest and the railroad tracks border the site to the east. The site consists of six parcels totaling 10.99 acres.

- Parcel 759—Except for an unoccupied building which is currently located in the southeastern portion of the site (on Parcel 759 with an address of 30 William Hook Lane) and abuts the

railroad tracks, the site does not contain of any building structures. A fire on the Parcel 759 property that occurred in March 2008 burned down the building located on the northern portion of the parcel. The concrete slab foundation and asphalt pavement are still present on the property.

- Parcel 761—This parcel is partially paved. A pile containing miscellaneous trash and debris is located in the southern portion of the parcel. A pile of railroad ties is also located on this parcel.
- Parcels 762, 763, and 764—The northern parcels are unpaved and partially wooded. A small pond and wetland area is located on Parcel 764.
- Parcel 760—Due to a series of fires and consequential demolition which have occurred on (100 Arlington Street) over a period of several years, there are no buildings remaining on the property. Remnants of a building complex, including the concrete slab foundations, are still present. A pond and stream are located in a wooded area on the central portion of the property. The southwestern portion of Parcel 760, which is unpaved, is currently used by contactors as a staging and storage area for the installation of an underground water main in the vicinity of the site. Several trucks, pipes, soil and gravel piles, and equipment are located there.

Based on the tasks conducted for the Taunton Station Phase I ESA, five RECs and four potential environmental concerns were identified and are described below.

REC #1—Historical Use of the Site—

- The Taunton Twist and Drill Company was located at the site west of William Hooke Lane on Parcel 760 beginning in the early 1900s. The New Jersey Rubber Company, a manufacturer of rubber soles and tubing, then occupied the site from the 1920s until the late 1970s. Both of these operations had the potential to release OHM used in manufacturing processes into the environment.
- A coal shed was located east of William Hooke Lane on Parcels 759 and 761 from the late 1800s until the mid-1900s, when Crown Tank Works, a manufacturer of steel tanks, operated on the property until the late 1990s. Coal residues may still be present in the surrounding soil from the loading and unloading of coal into trains.
- Underground fuel storage, manufacturing processes, and OHM storage may have released contaminants into the environment and is deemed a REC with a high potential impact.

REC #2—Conditions Associated with RTN 4-20854 at 100 Arlington Street—A two-hour reporting condition for a spill of five pounds of mercury was reported to the DEP in November 2007 and assigned RTN 4-20854. The release occurred during demolition activities when mercury beads were discovered under a pile of old meters in the bottom of a roll-off container. An Immediate Response Action (IRA) was approved during the initial notification for the excavation of up to 25 cubic yards of soil. No other documents were available for review at the DEP. The presence of OHM and detection of OHM in site media is deemed a REC with a medium potential impact.

REC #3—Conditions Associated with RTN 4-374 and the CERCLIS Listing at 100 Arlington Street—According to a CERCLIS report dated November 1994, improper handling and storage of hazardous substances were the sources of contamination at the property. Toluene was detected at 7,800 parts per million (ppm) and lead was detected at 1,300 ppm in samples collected from drums, bags, and sumps. EPA addressed additional asbestos and oil-contaminated waste debris, as well as transformers located outside the building. A removal action, which included only the wastes that presented an immediate threat to the public, was completed by contractors for EPA in January 1995. The DEP file for RTN 4-374 contained documents relating to the CERCLIS listing. The RTN has been assigned a Tier 1D, which indicates that site is in default because response actions have not been performed by the required deadlines.

The previously hired environmental consultant, who performed the asbestos removal for the 100 Arlington Street property, was interviewed on February 6, 2008. The environmental consultant stated that he reviewed the results of sampling activities previously conducted by EPA and that the soil and sediment collected from the on-site stream showed the presence of PAHs and metals impacts above regulatory criteria. The environmental consultant could not be certain if there were any regulatory exceedances in groundwater. The detection of OHM in site media and the out of compliance status indicating that this release is not being properly addressed are deemed a REC with a high potential impact.

REC #4—Conditions Associated with RTN 4-403 at 30 Railroad Avenue (William Hooke Lane)—According to a Phase I Initial Site Investigation Report prepared in 1995 by Quigley Environmental for Parcel 759, the property at the time consisted of a two-acre tank fabrication facility referred to as Crown Tank Works. Open areas on the property were used for parking and to store metal, liquid products consisting of naphtha and primer that were used for fabricating and finishing tanks. The report stated that an environmental assessment report prepared in 1987 indicated that contaminated soil was encountered during a tank removal operation and gasoline compounds were detected in one water sample. In addition, accidental kerosene spillage was reported by on-site personnel during routine handling practices. A RAM Plan to conduct response actions at the site was also prepared for the site and a RAM Completion Statement was submitted to the DEP in August 1996.

A Class A-3 RAO to permanently close out the site was prepared by Norfolk Environmental and submitted to the DEP in January 2002. A deed restriction, consisting of an AUL, was also implemented for the site.

The presence of multiple OHM sources, detection of OHM in site media, and an AUL is deemed a REC with a high potential impact.

REC #5—Transformer Found at 30 William Hooke Lane (Parcel 759)—During the site reconnaissance visit on November 17, 2008, a fallen pole-mounted transformer on an unpaved surface was observed near the foundations of the demolished building at 30 William Hooke Lane. The transformer was once located on a utility pole that was damaged by fire. The transformer appeared to be an older model, which is typically associated with PCB-containing oils.

The potential presence of an OHM source and detection of OHM in site media is deemed a REC with a medium potential impact.

Potential Environmental Concerns—The Taunton Station site has four potential environmental concerns:

- Given the age of the former buildings which were previously located at the site, it is possible that asbestos-containing materials may be present in the floor tiles currently remaining at the site.
- Given the age of the current building remaining at the site, it is possible that hazardous materials, including roof flashing, tiles, and other materials, as well as lead-based paint, may be present in remaining building materials, surrounding debris piles, and soils.
- Three pole-mounted transformers were observed on a utility pole on the eastern side of William Hooke Lane. There were no stains or other indications of releases observed at the locations of the transformers. It is not known if the transformers contain PCB dielectric fluid. The transformers have the potential to leak transformer oil directly onto the ground.
- A pile containing miscellaneous debris including lumber, old buckets, tires, and plastic tarps was observed in the southern portion of Parcel 761. The asphalt pavement was weathered and cracking. A large pile of railroad ties was also observed in the area along the existing railroad tracks. The parcel was once used to store trucks, and there were also small pieces of automobile parts scattered across the property. The general storage of debris materials in this manner indicates historically poor housekeeping practices and a potential for impacts to environmental media. In addition, railroad ties specifically contain certain OHM.

Dana Street Station

The proposed Dana Street Station site is adjacent to the active Attleboro Secondary rail line and includes on-site and nearby historic and current industrial uses (Figure 4.12-12). A literature review of MassDEP records and Sanborn Fire Insurance maps identified the following environmental concerns for the site; a full report is provided in Appendix 4.12-A, with figures showing the area. The report provides the following observations:

- The proposed station site is partially occupied by an active state-listed disposal site. The disposal site may be out-of-compliance with the applicable regulations and the lack of documentation suggests that remedial actions have not been conducted to mitigate soil contamination that has been identified on site, including petroleum constituents and metals.
- The site and abutting property to the south has a long history of industrial use: the property at 28 Dana Street, for example, is currently used as a scrap yard. The extent to which these industrial activities have impacted the site is unknown.
- A portion of the site west of Dana Street was formerly occupied by a railroad yard since at least 1888. Contaminants associated with former railroad operations include metals and semi-volatile organic compounds. Urban fill, which can contain metals and polycyclic aromatic hydrocarbons, may have also been placed on the site in order to fill in wetland areas. A vegetation control program may have been implemented in the railroad right-of-way and may have introduced lead, arsenic, and other pesticide/herbicide-related contaminants into soils.

The site environmental media have the potential to be impacted by numerous sources related to industrial and, potentially, agricultural uses. Contamination associated with the disposal site has been documented.

Prior to construction, it is recommended that a plan be developed to properly handle and manage soil and groundwater that may be contaminated, which would likely incorporate pre-characterization of media requiring management. Soils should be handled in a manner that protects the health and safety of workers, nearby receptors, and visitors to the site. In addition, impacted soil and groundwater should be managed in accordance with applicable regulations and policies prior to leaving the site, should export be required.

Relocated Stoughton Station

The Stoughton Station is proposed to be located north of Brock Street, south of Morton Street and west of the rail alignment. A Phase I ESA was conducted for the parcels that would be acquired in whole or in part for the station and the realignment of the tracks in the vicinity of the station. The assessment was conducted to identify, to the extent feasible, RECs in connection with the property. The Phase I ESA is attached in Appendix 4.12-B.

Nine properties with RECs were identified during the Phase I ESA. Four of these parcels are property on which the station would be located, while the other five parcels are off-site but nearby. Two of the on-site parcels comprise the main portion of the proposed site and would be acquired in whole. Only small portions of the other two on-site parcels would be needed for the station. Final design of the station may eliminate these two taking requirements, resulting in these RECs being re-categorized as occurring on off-site parcels (Figure 4.12-13).

The Phase I ESA determined that four of the parcels comprising the site (two at 25 Brock Street, and one each at Morton Square and Morton Street) have a moderate potential to contain soil and groundwater contaminants due to prior or current industrial activities. The two properties which may be partially acquired have a high potential of containing petroleum-contaminated soils or groundwater. Reported releases and industrial uses on adjacent properties also constitute a low to moderate potential to affect the site. The nine RECs are discussed below.

REC #1–2 Canton Street, Former Use of Property and On-Site Disposal Site (RTNs 4-21470, 4-875, and 4-18753)—A disposal site located at 2 Canton Street was assigned RTN 4-875 for a release of petroleum discovered during the removal of two underground storage tanks (USTs) in 1989. A second disposal site was assigned RTN 4-21470 for petroleum contamination discovered during the removal of an additional UST. A third disposal site was assigned RTN 4-18753 in October 2004 for the detection of separate phase product in two piezometers. The presence of contamination is associated with the industrial uses of the property, which have included operation by the Mystic Rubber clothing company, Stoughton Rubber Company, and Joseph F. Corcoran Shoe Company. A Class A-3 Response Action Outcome (RAO) was achieved for all three disposal sites in October 2009, which indicates that contaminant concentrations were not reduced to background, and a Condition of No Significant Risk is dependent upon the implementation of an activity and use limitation (AUL) on the property. The former petroleum storage, industrial uses, and existing contamination on the Site are deemed a REC with a high potential impact.

REC #2—Off 17 Morton Square, Murphy Coal Company, On-Site Automotive Repair, Petroleum Storage, and Disposal Site (RTN 4-13478)—An on-site disposal site on the property off Morton Square owned by Murphy Oil Company was assigned RTN 4-13478 in November 1997 when a representative

from MassDEP identified an oil-stained area and improperly stored waste oil at the property. The disposal site achieved a Class A-1 RAO in May 1998, which indicates that a Condition of No Significant Risk was achieved and contaminant levels were reduced to background.

According to Sanborn maps, the property has been occupied by Murphy Coal Company since at least 1923, and formerly contained a coal shed and scales. The company is currently permitted for three 15,000-gallon and two 10,000-gallon above ground storage tanks (ASTs) associated with the sale and distribution of fuel oil. The ASTs have been present since at least 1957 according to historic aerial photographs and the current condition of the tanks is unknown. The assessor's card also indicates that the property is used as an automotive repair garage. Former repair operations at the property may have required the use of OHM including petroleum products, solvents, and other OHM. These OHM have the potential to contaminate environmental media when not handled or disposed of properly. In addition, during the Site reconnaissance, several piles of fill (gravel, sand, stumps), and pieces of heavy machinery were also observed on the property. The origin of the fill material is unknown, and machinery can leak petroleum or fluids to the environment when not properly maintained. These industrial uses of the property and record of environmental contamination are deemed a REC with a medium potential impact.

REC #3–25 Brock Street, Former Use of the Property and On-Site Disposal Site (RTN 4-13476)—The two site parcels with an address of 25 Brock Street have an extensive history of industrial uses, including operation by the Meade Rubber Company in the early 1900s, L. Albert & Son rubber machinery in the mid-1900s, and a latex and shoe materials manufacturer around 1966. According to recent environmental reports, the property has also been used as a machine shop. According to the Fire Department, five petroleum ASTs have been removed from the Site. No information was available regarding the condition of the tanks or analytical testing of the surrounding environmental media. Furthermore, a complaint was filed by the Fire Department in 1979 noting an oil storage violation at the property. According to the assessor's cards, two of the Site buildings are currently heated with oil.

In addition, a disposal site located at 25R Brock Street was assigned RTN 4-13476 in November 1997 for a release of approximately 15 gallons of No. 2 fuel oil. The release occurred when a 275-gallon AST tipped over and began leaking from a pipe. The disposal achieved a Class A-1 Response Action Outcome (RAO) in August 1999, which indicates that contaminant concentrations were reduced to background and a Condition of No Significant Risk was achieved. The industrial uses of the property, former petroleum storage, and presence of an on-Site disposal site are deemed a REC with a medium potential impact.

REC #4–48 Wyman Street, Former Use of the Property as a Machine Shop—The property at 48 Wyman Street comprises a portion of the Site, and was formerly used for the sale of automotive parts, and as a machine shop. Former repair operations at the property may have required the use of OHM including petroleum products, solvents, and other chemicals. These OHM have the potential to contaminate environmental media when not handled or disposed of properly. In addition, the property is noted by the assessor's to be heated with oil and the condition of any storage tanks at the property is unknown. No access was granted in order to observe the interior of the building located on the Site and it has been conservatively assumed that a REC with a low potential impact is present associated with former site use including a machine shop and petroleum storage.

REC #5–931 Washington Street, Current Auto Repair and Former Filling Station (Off-Site)—The property located at 931 Washington Street was formerly the location of a gasoline station as depicted in

the 1966 Sanborn map. An associated 3,000-gallon gasoline UST, which was installed in March 1947, has been removed from the property according to the MassDEP UST Query database. No information was available regarding the condition of the tank or analytical testing of the surrounding environmental media. The property has also been permitted as a Conditionally Exempt Small Quantity Generator (CESQG) since 1986 and is currently used for automotive repair. Manifests have been used to transport ignitable hazardous waste, such as petroleum distillates, from the property since this time. These chemicals have the potential to contaminate environmental media when not handled or disposed of properly. The property is located approximately 50 feet east of the site. The former use of the property as a gasoline station and current use for automotive repair in close proximity to the site are deemed a REC with a medium potential impact.

REC #6–24-46 Morton Street, Chemical Company (RTN 4-11611, Off-Site)—Alpha Chemical Company located at 24-46 Morton Street abuts the Site to the west. The company has been listed as a RCRA CESQG since 2004, and wastes transported from the property under manifest include lead, 1,1,1-trichloroethane, hydrofluoric acid, and dimethyl-benzene. The company manufactures acid sanitizer, disinfectants, mildew preventatives, and liquid chlorinating products. Large aboveground tanks were noted against the western exterior of the company's building during the Site reconnaissance. In addition, a 1,000-gallon fuel oil tank was removed from the property in 1993 and there was no information provided by the Fire Department regarding analytical testing or environmental observations. Chemicals and petroleum stored at the property have the potential to have been released to the environment due to improper handling, disposal, or maintenance of containment structures. The storage of chemicals and petroleum at the property are therefore deemed a REC with a medium potential impact.

REC #7–945 Washington Street, Active Drycleaning Business (Off-Site)—Pearl Drycleaners of 945 Washington Street is listed with the MassDEP as a regulated drycleaning facility. This status indicates that the business utilizes perchloroethylene (PCE), a chemical solvent. When not properly disposed, PCE can contaminate soil and is highly mobile in groundwater. The property is located less than 100 feet southeast of the Site. The chemical handling practices of the drycleaning business are unknown and there is currently no publically available testing data for soil or groundwater between the Site and property. Therefore, the use of chemical solvents at the property is a deemed a REC with a low potential impact.

REC #8–45 Wyman Street, Former Petroleum Storage at Stoughton Train Station (Off-Site)—The historic Stoughton train station constructed in 1888 and located at 45 Wyman Street was formerly heated using three 330-gallon above ground storage tanks located in the building's basement. According to the Stoughton Fire Department, the tanks were removed in 1997; however, no information was provided regarding the condition of the tanks or the surrounding basement floor. There is a potential for petroleum to have been released to the surrounding environment during fuel deliveries, or if the tanks and piping were improperly maintained. The station is located less than 50 feet northeast of the Site. Therefore, the former petroleum storage in close proximity to the Site is deemed a REC with a low potential impact.

REC #9–825 Washington Street, Nearby Disposal Sites and Former Filling Station, (RTNs 4-12937, 4-11868, 4-13560, and 4-13682)—Four releases have been identified at the former gasoline station located at 825 Washington Street. The primary contaminants are petroleum constituents, which are currently undergoing remediation. A definite groundwater flow direction has not been established at this property, which is located approximately 150 feet east of the site. In addition, only one monitoring

well exists between the disposal site and site, which has been frequently dry and therefore may have not been installed at a sufficient depth to detect contamination. Due to this lack of information and the presence of a plume of petroleum constituents in groundwater, the disposal sites at this property are deemed a REC with a medium potential impact.

Additionally, three potential environmental concerns or *de minimis* conditions have been identified for the site:

Based on the age of the on-site buildings that may be demolished for the relocated Stoughton Station, asbestos containing materials, including roof flashing, tiles, and other materials, as well as lead based paint, may be present.

Due to the site's location within a densely developed area, close proximity to a railroad right-of-way and a long history of industrial and commercial use, urban fill may have been used to fill portions of the site. Urban fill can contain metals and polycyclic aromatic hydrocarbons (PAHs) originating from coal/wood ash, tar, and/or slag.

Due to the close proximity of the railroad tracks and likely implementation of a vegetation control program in the vicinity of the railroad tracks, there is a possibility that lead, arsenic, and other contaminants from pesticides are present in site soil.

4.12.2.3 Layover Facility Sites

New Bedford Main Line Layover Site

Wamsutta Layover Site

The Wamsutta layover site is located on a triangular shaped property in a commercial and light industrial area of New Bedford (Figure 4.12-14). The site is located south of Wamsutta Street, east of the railroad tracks, and west of Herman Melville Boulevard and is approximately 12 acres in size. Due to immobile soil contamination, the site was capped with a geotextile membrane in approximately 2004. Two grassy mounds are located on the eastern portion of the site. Railroad tracks abut the site to the west and travel off site to the north. Railroad tracks also extend from the northeastern site boundaries to the harbor, which is located approximately 100 feet to the east. The trains haul dredged sludge from the harbor to the east and travel to the site for off-site disposal.

Based upon the tasks conducted for this Phase I ESA, five RECs and three potential environmental concerns associated with the site were identified and are described below.

REC #1—Historic Use of Site as Freight Yard and Placement of Permanent Engineered Barrier Above Impacted Soil at Site, RTN 4-118—The former Conrail Yard comprising the site was managed as a voluntary Brownfield site. RTN 4-118 was initially assigned to this site and the nearby Whale's Tooth property located south of the site by the DEP in January 1987. The center of the site contained elevated concentrations of PCBs, arsenic, lead, and PAHs with the perimeter having lower concentrations of these contaminants in soil. An agreement was reached with the DEP and EPA based on the financial infeasibility of remediation at the site. The contamination was proposed to be left in place with proper engineering controls, such as a soil geotextile composition cap and land use restrictions consisting of an AUL in the areas exhibiting the highest concentrations of contamination above the Upper Concentration Limits. Since contaminated soil was left in place, there are potential impacts related to exposure during

future soil disturbance at the site during construction related to the South Coast Rail project. Therefore, this condition is considered a REC. The potential impact of this REC is considered medium because exposure is limited due to the engineered barrier and the existence of an AUL.

REC #2—Documented Release at Acushnet Estuary (New Bedford Superfund Site), RTN 4-122—The Acushnet Estuary, a water body located to the east of the site, was placed on the National Priorities List and became a Superfund site in 1983. This site contains PCB contamination that affects ambient air, surface water, groundwater, soils, sediment, and the food chain. The contamination is the result of improper historic disposal of wastes which occurred over several decades up until the 1970s. The site is currently active and was assigned RTN 4-122 by the DEP in 1987. Although adequately regulated under State and Federal regulations, the PCB contamination associated with this site is widespread and has the potential to have impacted the subject site historically or potentially impact it in the future through continued contaminant migration and is considered a REC with a medium potential impact.

REC #3—Documented Fuel Oil Release at Adjoining Property (618 Acushnet Avenue), RTN 4-14791—A No. 2 fuel oil UST release from a western adjoining property, the Department of Employment and Training, located at 618 Acushnet Avenue, was identified in June 1999. A total of 20 tons of petroleum contaminated soil was removed from the property. A Class A-2 RAO, indicating that a Permanent Solution was achieved but that contamination was not reduced to background, was submitted to the DEP. The anticipated direction of groundwater flow is to the east toward the property comprising the site. However, given the quantity and regulatory status, this REC is deemed to have a low potential to affect site media.

REC #4—Documented Diesel Fuel Release and AUL at Nearby Property (1 Wamsutta Street), RTN 4-11715—A diesel fuel UST release from a property located northeast of the site to soil was reported to the DEP in October 1995. Approximately 100 cubic yards of petroleum impacted soil was removed. Exceedances of 2-methylnaphthalene in soil were detected above the applicable regulatory standards and a deed restriction consisting of an AUL was placed on the property along with a Class A-3 RAO in October 1996. Although groundwater was not impacted, the groundwater flow direction was determined to flow to the south-southwest toward the site. Based on the proximity of the site, the direction of groundwater flow, and the implementation of an AUL indicating residual petroleum impacts are present, this REC is deemed to have a low potential to affect site media.

REC #5—Documented PCB Release at Nearby Property (New Bedford Main Interceptor), RTN 4-127—PCBs were detected during the filling of an abandoned interceptor pipe with grout in soil in an area located northeast of the site. Limited documents were available for review on this release at the DEP file review. Available documents stated that an AUL will be necessary to achieve a condition of No Significant Risk for the property indicating residual soil impacts are present. Based on the proximity of this property to the site and the lack of information available for review, this property may have the potential to impact the site and is deemed a REC with low potential to impact the site.

Potential Environmental Concerns—The Wamsutta layover site has three potential environmental concerns:

- An electrical substation containing transformers abuts the site to the west off Acushnet Avenue. It is not known if the transformers contain PCB transformer oil. The transformers have the potential to release transformer oil directly onto the ground surface.

- A motor repair facility abuts the site to the east off Herman Melville Boulevard. Numerous 55-gallon drums were observed outside behind the facility facing the site and most likely contained OHM. The drums were not placed on pallets or any other type of secondary containment structure. Releases or spills from the drums, should they occur, have the potential to impact the site.
- Numerous piles of unused new creosote coated railroad ties were located in two areas in the northern portion of the site. Creosote contains heavy organic compounds that have the potential to leach into soil and groundwater.

Weaver's Cove East Layover Site

The Weaver's Cove East Layover site consists of three parcels and is situated between the railroad tracks, which are located to the west, and North Main Street, which is located to the east, in a mixed use area of Fall River (Figure 4.12-15). The former Shell Oil Company petroleum product distribution facility is located southwest of the railroad tracks. The Weaver's Cove portion of the Taunton River is located immediately west and northwest of the railroad tracks. The parcels comprising the site are currently undeveloped and surrounded by a chain-link fence. Groundwater monitoring wells were observed throughout the site.

The southernmost parcel (Parcel T-1-38) consists of a concrete slab from a former repair garage that was used by the New England Telephone & Telegraph company. The land around the slab consists of grass, shrubs and trees. The center parcel (Parcel T-1-33) consists of a heavily vegetated wetland area that reportedly was formed from a depression caused by the weight of a former gasoline AST. The northernmost parcel (Parcel T-15-1) is vegetated and primarily covered with shrubs and trees.

Based on the tasks conducted for the Weaver's Cove East Layover site Phase I ESA, five RECs and one potential environmental concern were identified and are described below.

REC #1—Previous Use of Site as Oil Storage Facility and Documented Petroleum Release at Site, RTN 4-749—According to historic Sanborn maps, from the early to mid-1900s, a large gasoline AST was located on the center portion of the site. Numerous ASTs of various sizes were also located west of the site across the railroad tracks. The portion of the site that contained the AST was listed as owned by Shell Oil Company (Shell). The AST located at the site was removed in the mid-1900s. According to documents reviewed, Shell operated a crude oil refinery, product storage and distribution facility at the western abutting property from 1920 to 1929 and a petroleum product distribution facility from 1929 to 1995.

Documents obtained from the Fall River Fire Department include a letter from the DEP to Shell Oil Company at One New Street dated February 9, 1993. The letter refers to the Notices of Responsibility dated 1989 and 1992 relative to releases of petroleum products on their property and requests "Short Term Measure Activities" to address the oil release. A map prepared by Handex dated November 4, 1992 depicts a large area of petroleum impacts, which includes the site and the abutting property located west of the site, as well as the former and current tank locations. Contours on the map show the thickness of the LNAPL in groundwater of thickness up to 2.5 feet. In the center of the site, the LNAPL thickness is shown to be 2 feet.

The previous use of the site as an oil storage facility and the documented extensive petroleum release constitutes a REC with a high potential impact.

REC #2—Previous Use of Adjoining Property as Petroleum Product Distribution Facility and Documented Release (Shell Oil Company, 1 New Street), RTN 4-749—As stated in REC #1 above, Shell operated a crude oil refinery, product storage and distribution facility at the western abutting property from 1920 to 1929 and a petroleum product distribution facility from 1929 to 1995. According to documents reviewed, extensive petroleum releases occurred on that property during that time. According to a recent ROS Status Report dated November 2008, this property is currently being remediated with a LNAPL recovery and groundwater treatment system. Even though active remediation activities are currently ongoing and groundwater flows to the northwest toward the Taunton River and away from the site, the presence of extensive LNAPL in the subsurface is deemed a REC with a high potential impact.

REC #3—Previous Use of Building on Parcel T-1-38 as a Commercial Garage—Recent aerial photographs of the southern portion site located on Parcel T-1-38 show the presence of a concrete slab, indicating that a building was once present. A Sanborn map dated 1976 shows the existence of a “private garage” that was operated by New England Telephone and Telegraph Company.

It is assumed that vehicle repairs were performed in this building and that petroleum and other OHM were stored, used, and generated. The petroleum and OHM would typically consist of motor oil, waste oil, fuel oil, alcohol, anti-freeze, and degreasing chemicals that may contain chlorinated solvents. The storage, use, and/or generation of these products may have or could result in a release of OHM constituting a REC with a medium potential impact.

REC #4—Existence of USTs on Parcel T-1-38—According to records received from the Fall River Fire Prevention Department, three USTs were previously located on Parcel T-1-38, which is described above in REC #3, with an address of 2680 North Main Street. The USTs included a 4,000-gallon gasoline tank, a 275 waste oil tank, and a 6,000-gallon No. 6 fuel oil tank. The records document the removal of the gasoline and waste oil tanks which were removed in 1988 and 1987, respectively. There are no records documenting the removal of the No. 6 fuel oil tank.

It was not indicated on the removal records if contamination was encountered during the removal of the gasoline and waste oil tanks and detailed closure reports were not identified. Therefore, OHM may be present in the locations of the former USTs. In addition, it is possible that the No. 6 fuel oil UST, the integrity of which is unknown, may still be present. OHM associated with the USTs formerly/currently on this property would constitute a REC with a medium potential impact.

REC #5—Possible Presence of Elevated Concentrations of Metals in Soil at Adjoining Property (1 New Street)—According to a report reviewed for a western adjoining property, arsenic and beryllium were detected in soil above applicable standards at a depth beginning from the ground surface to a depth of approximately eight feet below grade. The detection of these metals are believed to be attributable to historic filling activities in the 1920s during which fill material was dredged from the Taunton River. According to historic Sanborn maps, the area located to the west of the site was previously under water and was filled in the early 1900s. The Sanborn map also shows a portion of the site to be previously under water; which appears to have been filled in the early 1900s. Therefore, arsenic and beryllium-impacted soil may be present in site soils. Coal ash was found to be present in the fill on the adjacent property; therefore, the presence of metals may be consistent with the MCP’s definition of background, and no response actions under the MCP may be necessary. However, aside from the regulatory provisions, the potential presence of OHM at levels which could pose a risk to human or ecological

populations is considered a REC with a low potential impact and would need to be managed appropriately during any proposed construction activities.

Potential Environmental Concern—Weaver’s Cove East Layover site has one potential environmental concern. During the site reconnaissance, pole-mounted electrical transformers were observed on the site. It is not known if these transformers contain PCB transformer oil. The transformers have the potential to leak transformer oil directly onto the ground surface.

4.12.2.4 Summary

Phase I ESAs or environmental screenings were conducted for the station sites, layover facility sites and rail corridors associated with the alternatives under consideration. The Phase I ESAs indicate that multiple proposed station and layover locations either border or are the location of known and/or suspected OHM contamination and may also contain building materials that can include asbestos, lead, and other OHM. These conditions represent the potential to encounter OHM impacts when demolishing buildings or constructing new stations and rails, including soil excavation and groundwater management. A table summarizing the RECs and potential environmental concerns for each station site is provided in Table 4.12-1.

Based on the findings of the Phase I ESAs, further evaluation for subsurface contamination may be needed for proposed station, layover, and rail locations with RECs classified as having a high or medium potential to impact each site and which may be subject to disturbance during implementation of the South Coast Rail project prior to acquisition and/or construction. The results of the subsurface investigations previously conducted for Whale’s Tooth Station and Wamsutta Layover show that OHM is currently present above regulatory standards below an engineered barrier; these properties, therefore, do not have to be reassessed. Based on updated information regarding Battleship Cove Station and King’s Highway Station, no property acquisition or station construction would occur; therefore, no further investigations are recommended for these stations. Further investigation prior to construction is recommended at these sites:

- Stoughton Station
- Fall River Depot
- Raynham Park
- Taunton Depot Station
- Weaver’s Cove East
- Dana Street Station
- Whittenton Branch
- Taunton Station
- Freetown Station
- Easton Village

Table 4.12-1 Summary of RECs by Location

Location	REC		Address	RTN	Impact
	No.	Ranking			
King's Highway	1	Medium	Site (1024 King's Hwy)	Not applicable	Historical use
King's Highway	2	Low	Adjoining property (494 Church Street)	4-15181	Gasoline release
Whale's Tooth	1	Medium	Site (532, 536 & 540 Acushnet Avenue)	4-118	Confirmed contamination (PAHs, PCBs, arsenic lead) and capping
Whale's Tooth	2	Medium	Nearby property (Acushnet Estuary)	4-122	PCB release
Whale's Tooth	3	Low	Adjoining property (618 Acushnet Avenue)	4-14791	No. 2 fuel oil release
Fall River Depot*	1	High	Site (390, 775 & 825 Davol St. & 61 Pearce St.)	Not applicable	Confirmed contamination (VPH, EPH, PAHs)
Fall River Depot*	2	High	Site (see above)	Not applicable	Presence of USTs
Fall River Depot*	3	High	Site	Not applicable	Historic use
Fall River Depot*	4	Medium	Site (729 Davol Street)	Not applicable	Historic and current use as vehicle repair garage
Fall River Depot*	5	Medium	Site (753 Davol Street and 175 Bayles Street)	Not applicable	Use as machine shop and metal fabrication shop
Battleship Cove	1	Medium	Adjoining properties	Not applicable	Historic use
Battleship Cove	2	High	Site (24 Ponta Delgata Boulevard)	Not applicable	Confirmed contamination (PAHs and lead)
Easton Village	1	Low	Adjoining property (28 Main St)	4-19778	Fuel oil release
Easton Village	2	Low	Adjoining property (64 Main St)	4-10839	Petroleum and historic fill release
Raynham Park*	1	Low	Site (1958 Broadway)	Not applicable	Historic use
Taunton*	1	High	Site (100 Arlington Street & 30 William Hooke Lane)	Not applicable	Historic use
Taunton*	2	Medium	Site (100 Arlington St.)	4-20854	Mercury release
Taunton*	3	High	Site (100 Arlington St.)	4-374	Metals and petroleum release
Taunton*	4	High	Site (30 William Hooke Lane)	4-403	Gasoline and kerosene release
Taunton*	5	Medium	Site (30 William Hooke Lane)	Not applicable	Possible electrical transformer release

Location	REC No.	Ranking	Address	RTN	Impact
Stoughton Station*	1	High	2 Canton Street	4-875, 4-18753, 4-21470	Former Industrial Property and On-Site Disposal Site
Stoughton Station*	2	Medium	Off 17 Morton Square	4-13478	Murphy Coal Company On-Site Automotive Repair, Petroleum Storage, and Disposal Site
Stoughton Station*	3	Medium	25 Brock Street	4-13476	Industrial and Commercial Use and On-Site Disposal Site
Stoughton Station*	4	Low	48 Wyman Street	Not Applicable	Machine Shop
Stoughton Station	5	Medium	931 Washington Street	Not Applicable	Current Auto Repair and Former Filling Station
Stoughton Station*	6	Medium	24-46 Morton Street	RTN 4-111611	Chemical Company
Stoughton Station	7	Low	945 Washington Street	Not Applicable	Active Drycleaning Business
Stoughton Station	8	Low	45 Wyman Street	Not Applicable	Stoughton Train Station
Stoughton Station*	9	Medium	825 Washington Street	4-12937, 4-11868, 4-13560, 4-13682	Nearby Disposal Sites and Former Filling Station
Dana Street Station*	1	High	140 Dana Street	4-11341	Active State-Listed Disposal Site
Dana Street Station*	2	Medium	28 Dana Street and Site	Not Applicable	Scrap Yard
Dana Street Station*	3	Low	60 Hodges Street	Not Applicable	Pesticides, Herbicides
Dana Street Station*	4	Medium	West of Dana Street	Not Applicable	Former Rail Yard
Wamsutta Layover	1	Medium	Site	4-118	PCBs, arsenic, lead, and PAHs
Wamsutta Layover	2	Medium	Nearby Property (Acushnet Estuary)	4-122	PCB release
Wamsutta Layover	3	Low	Adjoining Property (618 Acushnet Avenue)	4-14791	No. 2 fuel oil from UST
Wamsutta Layover	4	Low	Nearby Property (1 Wamsutta Street)	4-11715	Diesel fuel from UST
Wamsutta Layover	5	Low	Nearby Property (New Bedford Main Interceptor)	4-127	PCBs
Weaver's Cove East Layover*	1	High	Site	4-749	Previous use as oil storage facility and documented release
Weaver's Cove	2	High	Adjoining property	4-749	Previous use as

Location	REC No.	Ranking	Address	RTN	Impact
East Layover*			(Shell Oil Co., 1 New Street)		petroleum products distribution facility and documented release
Weaver's Cove East Layover*	3	Medium	Site (Parcel T-1-38)	Not applicable	Previous use as commercial garage
Weaver's Cove East Layover*	4	Medium	Site (Parcel T-1-38)	Not applicable	Existence of USTs
Weaver's Cove East Layover	5	Low	Adjoining Property (1 New Street)	Applicable	Detection of arsenic and beryllium in soil
Whittenton Branch*	1	Medium	Adjoining property (437 Whittenton Ave.)	4-18532	Transformer oil releases
Whittenton Branch*	2	Medium	Adjoining property (437 Whittenton Ave.)	Not applicable	Historic use
Whittenton Branch*	3	Medium	Adjoining property (Segment 1)	Not applicable	Historic dumping in wetland
Whittenton Branch*	4	High	Adjoining property (728 Broadway, Raynham)	4-16976	Kerosene release and use of property

* Further investigation is recommended at these sites

The purpose of the subsurface investigations would be to screen each site for the presence of OHM that could impact construction and/or operation of the stations. In areas determined to be impacted by a release of OHM, soil and groundwater information will be useful in developing a management plan for impacted media and defining worker protection requirements and required response actions (if any) under the MCP.

4.12.3 Analysis of Impacts

4.12.3.1 Southern Triangle (Common to All Rail Alternatives)

Portions of the rail lines within the southern part of the South Coast Rail study area are common to all rail alternatives. These rail lines form a rough triangular shape running south from Myricks Junction to Fall River (the Fall River Secondary) and from Weir Junction through Myricks Junction to New Bedford (the New Bedford Main Line), and are therefore referred to as the Southern Triangle.

The Southern Triangle includes six stations, which include a total of 12 identified RECs. Three of the RECs were evaluated as having a "high" impact, seven RECs were evaluated with "medium" impacts and two RECs were evaluated as having "low" impacts. Table 4.12-2 lists each of the RECs for the stations along the Southern Triangle. Stations located on the Southern Triangle include Battleship Cove, Taunton Depot, Fall River Depot, Freetown, King's Highway and Whale's Tooth. A total of eight structures would be demolished for station construction.

In summary, there is a substantial likelihood that contamination would be encountered and would need to be addressed at Battleship Cove and Fall River Depot stations. There is a moderate likelihood that contamination would be encountered and need to be addressed at King's Highway Station. An engineered barrier was constructed at the Whale's Tooth site and contaminated soil was left in place beneath the barrier. There are potential impacts related to exposure during the future excavation or

construction at this proposed station. It is less likely that contamination would be encountered at the Taunton Depot and Freetown stations.

Table 4.12-2 RECs—Southern Triangle

Station	Number of Structures to be Demolished	REC Description	RTN	Relative Impact
Battleship Cove	0	Analytical Results from Previous Subsurface Investigation	Not applicable	High
		Historical Use of the Adjoining Properties	Not applicable	Medium
Taunton Depot	0	None	Not applicable	Not applicable
Fall River Depot	8	Analytical Results from Previous Subsurface Investigations	Not applicable	High
		Previous and Current Existence of USTs	Not applicable	High
		Historic Use of Site Properties	Not applicable	Medium
		Use of Site (729 Davol Street) as Vehicle Repair Garage	Not applicable	Medium
		Use of Site (753 Davol Street) as Machine Shop and Metal Fabrication Shop	Not applicable	Medium
Freetown	0	None	Not applicable	Not applicable
King's Highway	0	Historic Use of Site as Industrial Manufacturing	Not applicable	Medium
		Gasoline Release at Adjoining Property (494 Church St.)	4-15181	Low
Whale's Tooth	0 (has small attendant's booth and storage shed)	Confirmed Contamination and Historical Use of Property as Freight Yard	4-118	Medium
		Acushnet Estuary (New Bedford Superfund Site)	4-122	Medium
		No. 2 Fuel Oil Release at Adjoining Property (618 Acushnet Avenue)	4-14791	Low

4.12.3.2 Stoughton Alternatives

The Stoughton Alternatives would provide electric or diesel commuter rail service to South Station using the Northeast Corridor, Stoughton Line, New Bedford Main Line, and Fall River Secondary. Both electric (Stoughton Electric) and diesel (Stoughton Diesel) commuter rail options were evaluated for this alternative. The New Bedford route would be 54.9 miles long and the Fall River route would be 52.4 miles long.

This alternative requires improvements to track infrastructure along the Stoughton Line. This alternative also requires reconstructing track on the Southern Triangle, which is common to all rail alternatives, including the New Bedford Main Line and the Fall River Secondary. Infrastructure improvements also include constructing, reconstructing, or widening 43 bridges and constructing or reconstructing 47 railroad at-grade crossings.

This alternative would include eleven new commuter rail stations (Battleship Cove, Taunton Depot, Easton Village, Fall River Depot, Freetown, North Easton, King's Highway, Raynham Park, Stoughton Station, Taunton, Whale's Tooth) and major reconstruction at the existing Canton Center commuter rail stations. This alternative would include two overnight layover facilities, one on the New Bedford Main

Line—the Wamsutta layover facility—and one on the Fall River Secondary—the Weavers Cove East layover facility.

For the electrified option, the traction power system would include two main substations (one in Easton and one in New Bedford), two switching stations (one in Canton and one in Berkley), and six paralleling stations (one in Easton, one in Taunton, two in Freetown, one in New Bedford, and one in Fall River).

Six of the eleven stations are summarized in the Southern Triangle section. For the segment specific to just the Stoughton Alternative, there are five stations, which include Easton Village, North Easton, Raynham Park, Stoughton and Taunton. Table 4.12-3 lists each REC for Easton Village, North Easton, Raynham Park, Stoughton and Taunton. Taking the Southern Triangle into consideration, there are a total of 29 RECs identified. Seven of the RECs were evaluated as having a “high” impact, 15 RECs were evaluated with “medium” impacts and seven RECs were evaluated as having “low” impacts. A total of approximately 25 structures would be demolished for station construction.

In summary, there is a substantial likelihood that contamination would be encountered and would need to be addressed at Taunton Station. It is less likely that contamination would be encountered at Easton Village and Raynham Park stations. It is unlikely that contamination would be encountered at North Easton Station.

4.12.3.3 Whittenton Alternatives

The Whittenton Alternatives would provide electric or diesel commuter rail service to South Station through Stoughton, connecting to the existing Stoughton Line using the Whittenton Branch through the City of Taunton. Both electric (Whittenton Electric) and diesel (Whittenton Diesel) commuter rail options were evaluated for this alternative.

This alternative requires improvements to track infrastructure along the Stoughton Line; Whittenton Line and Attleboro Secondary. This alternative also requires reconstructing track on the Southern Triangle, which is common to all rail alternatives, including the New Bedford Main Line and the Fall River Secondary. Infrastructure improvements also include constructing, reconstructing, or widening 40 bridges and constructing or reconstructing 54 railroad at-grade crossings.

This alternative would include 11 new commuter rail stations (Battleship Cove, Taunton Depot, Easton Village, Fall River Depot, Freetown, King’s Highway, North Easton, Raynham Park, Dana Street, Stoughton and Whale’s Tooth) and major reconstruction at the existing commuter Canton rail station. This alternative would include two overnight layover facilities, one on the New Bedford Main Line – the Wamsutta layover facility – and one on the Fall River Secondary – the Weavers Cove East layover facility.

For the electrified option, the traction power system would include two main substations (one in Easton and one in New Bedford), two switching stations (one in Canton and one in Berkley), and six paralleling stations (one in Easton, one in Taunton, two in Freetown, one in New Bedford, and one in Fall River).

Six of the eleven stations (Whale’s Tooth, King’s Highway, Battleship Cove, Fall River Depot, Freetown and Taunton Depot) are summarized in the Southern Triangle section. For the segment north of Taunton Depot there are five stations, including Dana Street (Whittenton Alternative), Taunton (Stoughton Alternative), Raynham Park, Easton village, North Easton and Stoughton. In addition the Whittenton Alternative would include the Whittenton Branch. Table 4.12-4 lists each of the RECs for Easton Village, North Easton, Raynham Park, Dana Street, Stoughton and Whittenton Branch. A total of approximately

25 structures would be demolished for station construction. Taking the Southern Triangle into consideration, there are a total of 24 RECs identified. Seven of the RECs were evaluated as having a “high” impact, 11 RECs were evaluated with “medium” impacts and six RECs were evaluated as having “low” impacts.

Table 4.12-3 RECs—Stoughton Alternatives

Station	Number of Structures to be Demolished	REC Description	RTN	Relative Impact
Easton Village	0	Fuel Oil Release at Adjoining Property (28 Main Street)	4-19778	Low
		Petroleum and Historic Fill Release at Nearby Property (64 Main Street)	4-10839	Low
North Easton	0	None	Not applicable	Not applicable
Raynham Park	Estimated 16	Historic Use of Site as Truck Maintenance and Industrial Storage	Not applicable	Low
Taunton	1 (also has flooring/slabs from previous buildings destroyed by fires)	Historic Use of Site	Not applicable	High
		Conditions Associated with Release and CERCLIS Listing at Site (100 Arlington Street)	4-374	High
		Conditions Associated with Release at Site (30 William Hooke Lane)	4-403	High
		Conditions Associated with Release at Site (100 Arlington St.)	4-20854	Medium
Stoughton	9	Transformer Found at Site (30 William Hooke Lane)	Not applicable	Medium
		Historic Use of Site		Medium
		Murphy Coal Company	4-13478	
		On-Site Automotive Repair, Petroleum Storage, and Disposal Site (Off Morton Square)	4-13476	
		Industrial and Commercial Use and On-Site Disposal Site (25 Brock Street)	4-875,	
		Former Industrial Property and On-Site Disposal Site (2 Canton Street)	4-18753, and 4-21470	
		Machine Shop (48 Wyman Street)		
		Historic Use: Adjacent Sites	4-11611	Medium
		Chemical Company (24-46 Morton Street)		
		Nearby Disposal Sites and Former Filling Station (825 Washington Street)	4-12937, 4-11868, 4-	
Current Auto Repair and Former Filling Station (931 Washington Street)	13560, and 4-13682			
Active Drycleaning Business (945 Washington Street)				
Stoughton Train Station (45 Wyman Street)				

Table 4.12-4 RECs—Whittenton Alternatives

Station	Number of Structures to be Demolished	REC Description	RTN	Relative Impact
Easton Village	0	Fuel Oil Release at Adjoining Property (28 Main Street)	4-19778	Low
		Petroleum and Historic Fill Release at Nearby Property (64 Main Street)	4-10839	Low
North Easton	0	None	Not applicable	Not Applicable
Raynham Park	Estimated 16	Historic Use of Site as Truck Maintenance and Industrial Storage	Not applicable	Low
Dana Street Station	0	Active State-Listed Disposal Site	4-11341	High
		Historic Use of Site and Adjoining Properties (Scrap Yard)	Not applicable Not applicable	Medium
		Former release of pesticides and herbicides on adjacent property	Not Applicable	Low
		Former Rail Yard west of Dana Street	Not applicable	Medium
Whittenton Branch	0	Release History and Observations of Adjoining Property (728 Broadway)	4-16976	High
		Historic Use of Adjacent Property as Industrial Manufacturing	Not applicable	Medium
		Indication of Significant Historical Dumping	Not applicable	Medium
		Transformer Oil Release on Adjacent Property	4-18532	Medium
Stoughton	9	Historic Use of Site		Medium
		Murphy Coal Company	4-13478	
		On-Site Automotive Repair, Petroleum Storage, and Disposal Site (Off Morton Square)	4-13476	
		Industrial and Commercial Use and On-Site Disposal Site (25 Brock Street)	4-875, 4-18753, and 4-21470	
		Former Industrial Property and On-Site Disposal Site (2 Canton Street)		
		Machine Shop (48 Wyman Street)		
		Historic Use: Adjacent Sites	Not Applicable	Medium
		Chemical Company (24-46 Morton Street)		
		Nearby Disposal Sites and Former Filling Station (825 Washington Street)	4-12937, 4-11868, 4-13560, and 4-13682	
		Current Auto Repair and Former Filling Station (931 Washington Street)		
Active Drycleaning Business (945 Washington Street)				
Stoughton Train Station (45 Wyman Street)				

4.12.3.4 Layover Facilities

Two layover sites have been identified along the Southern Triangle, including the Weaver’s Cove East Layover in Fall River, and the Wamsutta Layover site in New Bedford. For the layover sites, a total of 10 RECs have been identified. Two of the RECs were evaluated as having “high” impacts, four RECs were evaluated with “medium” impacts and four RECs were evaluated as having “low” impacts. Table 4.12-5 lists each of the RECs by layover site. No structures are anticipated to be demolished for the layover sites for station construction.

In summary, there is a substantial likelihood that contamination would be encountered and would need to be addressed Weaver’s Cove East layover site. An engineered barrier was constructed at the Wamsutta layover site and contaminated soil was left in place beneath the barrier. There are potential impacts related to exposure during the future excavation or construction at this site.

Table 4.12-5 RECs—Layover Sites

Layover Facility	REC Description	RTN(s)	Relative Impact
Wamsutta	Historic Use of Site as Freight Yard and Placement of Permanent Engineered Barrier Above Impacted Soil at Site	4-118	Medium
	Documented Release at Acushnet Estuary (New Bedford Superfund Site)	4-122	Medium
	Documented Release at Adjoining Property (618 Acushnet Avenue)	4-14791	Low
	Documented Release and Implementation of Activity and Use Limitation at Nearby Property (1 Wamsutta Street)	4-11715	Low
	Documented Release at Nearby Property (New Bedford Main Interceptor)	4-127	Low
	Weaver’s Cove East	Previous Use of Site as Oil Storage Facility and Documented Petroleum Release on Site	4-749
Previous Use of Adjoining Property as Petroleum Product Distribution Facility and Documented Release (Shell Oil Company, 1 New Street)		4-749	High
Previous Use of Building on Parcel T-1-38 as Commercial Garage		Not applicable	Medium
Existence of Underground Storage Tanks (USTs) on Parcel T-1-38		Not applicable	Medium
Possible Presence of Elevated Concentrations of Metals in Site Soil		Not applicable	Low

4.12.3.5 Summary of Impacts by Alternatives

Each of the alternatives under consideration would require acquisition of properties with RECs that would require further investigation. In each case, remediation or soil/groundwater management during construction could be required. Table 4.12-6 summarizes the number of RECs and the impact that were identified for each alternative.

The Stoughton and Whittenton Alternatives each have at least five high impact RECs that were identified, and these alternatives also have the potential to encounter soil or groundwater contamination. Taunton Station on the Stoughton Alternatives and Dana Street on the Whittenton Alternatives have three and one high impact RECs, respectively that were identified.

Table 4.12-6 Summary of RECs by Alternative*

Alternative	Total Number of Stations	Total Number of RECs	Number of Low Impact RECs	Number of Medium Impact RECs	Number of High Impact RECs
Stoughton Alternatives	11/0	29	5	18	6
Whittenton Alternatives	11/0	32	6	21	5

* Not including Layover facilities

The Stoughton Alternatives and the Whittenton Alternatives would have environmental benefits. Although sites containing RECs could increase construction costs, there would be an environmental benefit associated with remediating contaminated sites, particularly the station sites with known soil and groundwater contamination such as the Taunton Station site. The alternatives that would have the greatest environmental benefits are the alternatives with the most RECs since these properties are the most likely to have contaminated environmental media that would be cleaned up for the proposed South Coast Rail project.

Both layover sites would involve acquisition of properties with RECs that would require further investigation. In each case, remediation or soil/groundwater management during construction could be required. Table 4.12-7 summarizes the number of RECs and the impact that were identified for each layover.

Table 4.12-7 Summary of RECs by Layover Site

Layover	Total Number of RECs	Number of Low Impact RECs	Number of Medium Impact RECs	Number of High Impact RECs
Wamsutta	5	3	2	0
Weaver's Cove East	5	1	2	2

4.12.4 Management of Contaminated Media and Regulatory Compliance

For contaminated property owned by MassDOT, response actions would be required pursuant to the milestones outlined in the MCP. Notification to the DEP would be required if a reporting condition is identified as per the MCP or if OHM is detected in soil and/or groundwater above the applicable standards, referred to as the Reportable Concentrations. An LSP would then most likely need to be retained to verify that notification is required, to further assess and manage the site, direct response actions, and specify procedures for work performed in the contaminated areas, such as soil excavation, in accordance with the MCP and, if need be, to render appropriate Opinions. The LSP would also determine if risk reduction measures are required.

To extend MCP deadlines for response action and report submittals so that the response actions can be coordinated with the construction of the stations, layovers, and expansion of the rail lines, the application for a Special Designation Permit (as per 310 CMR 40.0060 of the MCP) may be warranted.

At many sites containing impacted soil, it is often not possible to reach a regulatory endpoint by using soil excavation and off-site disposal as the only type of remediation. It is advisable to explore other

options such as the re-use of soil in order to minimize the quantity of soil to be excavated and disposed off-site. For low levels of impacted soil where a risk assessment shows an unacceptable risk for current and future unrestricted use, a deed restriction consisting of an AUL may be implemented after construction is completed to meet a regulatory endpoint. As per 310 CMR 40.1012(3) (c) of the MCP, AULs are not required within railroad rights-of-way.

Soil impacted with OHM above the Reportable Concentrations that is encountered during the implementation of the South Coast Rail project would be managed appropriately in accordance with the MBTA Design Construction Standard Specifications, Section 02282, entitled “Handling, Transportation and Disposal of Excavated Material.” Preliminary assessment activities may assist in identifying the type and quantity of OHM impacted media which would require management under these protocols and help select the optimal disposal methods and/or destination prior to generation. A summary of the MBTA Specification is provided in the following sections.

4.12.4.1 Management of Impacted Soil

Since contaminated media located on proposed stations and rail rights-of-way may be present from historic releases or urban fill which were not reported to the DEP, a pre-characterization of soils prior to excavation, as recommended by DEP, would be performed. The pre-characterization would consist of a limited subsurface investigation whereby soil samples would be collected, screened, and submitted for laboratory analysis in order to define the nature and extent of contamination in areas where soil disturbance would occur. Based on the pre-characterization described above, a Soil Management Plan would be prepared for the project that is consistent with MBTA specifications.

A Soil Management Plan would be implemented as a waste management tool during soil excavation and removal activities that would occur during construction to ensure soil is properly characterized, re-used and/or exported. The primary purpose of the Soil Management Plan is to expedite construction and avoid unexpected costs by minimizing costly off-site disposal and maximizing the re-use of soil within the boundaries of the project.

In order to minimize the need to stockpile and manage the excavated soil, which often can be problematic due to dust, runoff, regulatory time limits on stockpiles, the need for large areas, and impacts to other area, the Soil Management Plan would require the identification of the soil that would be disposed of off-site prior to being excavated, as well as the names of the receiving facilities that would be accepting the soil. It would categorize the soil based on its regulatory status from the specific areas to be excavated. Based on the subsurface investigation analytical results, the soil would fall into four groups, consisting of:

- non-regulated clean;
- soil subject to the anti-degradation policy;
- MCP regulated; and
- RCRA Hazardous Waste.

Re-use and disposal options for each category would then be designated under the Soil Management Plan during construction activities, and soil receiving facilities or destinations would be pre-selected on

either a daily or weekly basis. The soil requiring excavation would be loaded directly into trucks at the site of excavation requiring soil to be removed only once.

Based on the anti-degradation policy and a pre-risk screening which would be performed to determine the risk associated with the current and foreseeable use of the property, the re-use of soil may be possible within the project that is above the MCP standards as long as regulatory endpoints could be met.

Properties with confirmed OHM impacts are generally managed in accordance with the MCP, 310 CMR 40.0000 and associated policies or guidance issued by the DEP. However, depending on the type and concentrations of OHM present at a property, other federal regulations implemented by the U.S. EPA may apply (e.g., Comprehensive Environmental Response, Compensation, and Liability Act of 1980).

Should OHM impacted soil be generated during project-related excavation that requires export or on-site re-use, this material would also need to be properly characterized and managed in accordance with applicable regulations. Proper management would ensure appropriate re-use on the project site to prevent exposure to contaminants or export to appropriate destinations. Characterization may entail the collection of soil samples and analysis for specific parameters specified in the DEP policies for re-use and disposal of contaminated soil. Pre-characterization should eliminate the need to stockpile excess soil onsite pending characterization and if export is needed, generation of the required paperwork. A minimum of ten business days are required for laboratory analysis and approval at a disposal facility or landfill. The stockpiling of soil before characterization on such a large project may lead to delays or outright stoppages of work resulting from management and segregation difficulties and could result in a large volume of soil for which there may not be space to accommodate.

Although re-use should be the preferred option, when characterization of soil after excavation is absolutely necessary, the soil should be segregated into approximately 500-cubic yard sections and placed on and covered with polyethylene sheeting of 10 mil or greater thickness. Covers would be placed on each stockpile at the end of each day's operations, and would be secured in place to prevent runoff and erosion. A composite soil sample would be collected from each of the 500 cubic yard segments. The soil samples would be submitted for the following, at a minimum, chemical analyses: RCRA 8 metals using Method 6010/7471, VOCs via EPA Method 8260, PCBs via EPA Method 8081, total petroleum hydrocarbons (TPH) via modified EPA Method 8100, SVOCs via EPA Method 8270, reactive cyanide and sulfide using EPA Method SW-846, ignitability using EPA Method 1010, corrosivity using EPA Method 9045, and conductivity using EPA Method 120.1. The specific analyses to be performed will depend upon the requirements of the receiving facility that was selected to accept the soil. Any samples found to contain contaminant concentrations equal to or greater than 20 times their hazardous waste toxicity threshold (*i.e.*, the 20-times rule) would be analyzed for toxicity characteristic leaching procedure (TCLP).

It is assumed that the analysis of pesticides and herbicides would not be required; however, this assumption may be modified based on the requirements of the disposal facility and history of the generator site. Should alternate soil disposal options be pursued (*i.e.*, asphalt batching), analytical requirements may vary depending on the analytical requirements for that facility. Based on the results of the characterization, a Bill of Lading would be prepared to facilitate the export of the soil that would need to be disposed of off-site to the selected disposal facility to ensure that the facility is appropriate to handle the impacted soil. The Bill of Lading would need to be prepared and/or certified by an LSP.

4.12.4.2 Management of Impacted Groundwater

If OHM impacted groundwater is encountered during the implementation of any of the alternatives under consideration, it may also need to be managed in accordance with applicable regulations. If the volume would be limited and subsequent offsite disposal is deemed to be the most cost effective disposal option, the groundwater can be temporarily stored in a 21,000-gallon fractionation tank. It would then be characterized, at a minimum, via laboratory analysis for the following parameters: VOCs via EPA Method 8260, TPH via EPA Method 8100 and SVOCs by EPA Method 8720. For managing larger volumes of groundwater, it may be more cost effective to obtain an EPA Construction General Permit or Remediation General Permit for discharge to surface waters/storm drains or a permit from the local sewer authority, if allowed, for discharge to sanitary sewers.

Contaminated groundwater may also need to be dewatered. However, since dewatering is not cost effective, it is not recommended and therefore should be thoroughly assessed before any decision is made as to remediation. When impacted groundwater has originated from an off-site property, the filing of a Downgradient Property Status may be prudent to suspend response actions and compliance fees. However, response actions may still be necessary in order to achieve a regulatory endpoint beyond those required for project construction.

Large quantities of impacted groundwater encountered by construction activities would also be managed with proper permitting. For smaller quantities, groundwater would be pumped into a containerized 20,000-gallon fractionation tank and removed via a manifest for off-site disposal at an approved facility.

4.12.4.3 Management of Hazardous Demolition Debris and Used Railroad Ties

Asbestos-containing materials, including roof flashing, tiles, and other materials may be present in the building materials for the buildings that would be undergoing demolition, based on their age. In addition, lead-based paint, mercury, and PCBs may also be present in the building materials and/or fixtures. It is recommended that prior to demolition a licensed asbestos and hazardous materials contractor sample the building material, including roof flashing, tiles, and other materials, as well as the potential lead-based paint, mercury, and PCBs. If these hazardous materials are found to be present in the structures, then they must be removed by a licensed contractor in accordance with state regulations.

Re-use of building materials, such as asphalt, brick, and concrete, should be considered, as their re-use could reduce disposal costs and may not require a permit. The re-use would depend on whether they are coated with a contaminant or considered “contaminated” based on the concentrations of contaminants present on the material.

Used wooden railroad ties are typically coated with chemical preservatives including creosote which contains SVOCs and would require special handling procedures. The discarded railroad ties must be managed and disposed of in accordance with applicable regulations.

4.12.4.4 Health and Safety Requirements

In addition, health and safety procedures must be followed under the guidelines of the Occupational Safety and Health Administration. All construction workers involved in performing the response actions must be appropriately health and safety trained in accordance with the Occupational Safety and Health

Act (OSHA) of 1970 (Title 29 United States Code, Chapter 15), which mandates specific procedures that must be followed to be protective from exposure to contaminated media.

4.12.4.5 Closure Reports

At the completion of response actions at properties acquired by the applicant for which an RTN was obtained from the DEP, but a closure report consisting of a RAO has not yet been submitted, a condition of No Significant Risk must exist as defined by the MCP. The preferred outcome is a Class A-1 RAO in which contamination is reduced to background levels. In some situations, the confirmatory sampling results may not support a Class A-1 RAO, and in these situations, alternatives would be evaluated to a Class A-1 RAO. DEP would need to be consulted regarding the planning and implementation of demolition and management of contaminated soil to ensure consistency with the applicable regulations.

Additional response actions beyond those necessary for project construction may be necessary at some of these properties in order to achieve regulatory closure. Such foreseeable response actions could occur pursuant to the MCP as permitted under provisions such as those of a RAM plan, Special Designation Permit, or others, and applicable MCP policies pertaining to construction and waste management.

4.12.5 Temporary Construction-Period Impacts

Mitigation measures during construction may include special handling, dust control, and management and disposal of contaminated soil and groundwater in order to prevent construction delays and to provide adequate protection to workers and any nearby sensitive receptors. All response actions must ensure that any nearby or adjacent receptors are adequately protected.

4.12.5.1 Recommendations

Based on the conclusions of the Phase I ESAs that were performed for the rail alignments, proposed stations, and layovers, the following section describes the recommendations and mitigation measures to be performed prior to and during construction of these stations, track segments, and/or layovers. Recommendations are also discussed below for the Stoughton right-of-way based on an environmental database review that was performed in 2001, since track work and retaining wall construction would be performed along the right-of-way. The recommendations for Phase II ESAs would be to determine existing environmental conditions for property acquisitions and would not consist of soil pre-characterization as part of the Soil Management Plan described above.

Rail Alignments

The track segments where land acquisition or substantial new construction is required include the Whittenton Branch for the Whittenton Alternatives, as well as the Stoughton Line right-of-way for the Stoughton Alternatives. The recommendations for these track segments are described in the following section.

Stoughton Line Right-of-Way (Stoughton and Whittenton Alternatives)

Potential contamination along the Stoughton Line that may require further investigation include the following.

- Cyn Environmental Services located in Stoughton is a state hazardous waste spill site, UST location, and RCRA corrective action site. The site is currently adequately regulated outside of the MCP. Potential soil and groundwater contamination in the right-of-way would be assessed by the applicant prior to construction.
- North Easton Historical Industrial Area is a state hazardous spill site where several USTs have been removed. Unknown material was used for undergrade bridge fill at Main and Bridge Streets. Soil contamination in the right-of-way would be assessed by the applicant prior to construction.
- Petroleum contamination was documented at DeAngelis Iron Works in Easton. The applicant would assess potential soil contamination in the right-of-way prior to construction.
- General Cable Corporation in Taunton is a state hazardous waste spill site and contains a UST. Soil and groundwater contamination is documented. The status and remediation of the UST release and assess oil and groundwater contamination in the right-of-way would be researched by the applicant prior to construction.

The Cohen property in Taunton is a designated Superfund site. Potential soil contamination in the right-of-way would be assessed prior to construction.

Whittenton Branch (Whittenton Alternatives)

A Phase II ESA is recommended for Whittenton Branch in the areas of identified medium impact RECs in which limited soil and groundwater sampling would be performed. Response actions would be implemented as necessary to address any soil or groundwater impacts that may be identified.

Stations

Recommendations for the eleven stations, presented in alphabetical order, are described below.

Battleship Cove Station Site

A Phase II ESA was performed in 2002 for Battleship Cove and identified impacted soil above the regulatory criteria. However, since no property acquisition an updated Phase II ESA is not required.

Dana Street Station Site

Prior to construction, it is recommended that a plan be developed to properly handle and manage soil and groundwater that may be contaminated, which would likely incorporate pre-characterization of media requiring management. Soils should be handled in a manner that protects the health and safety of workers, nearby receptors, and visitors to the site. In addition, impacted soil and groundwater should be managed in accordance with applicable regulations and policies prior to leaving the site, should export be required.

Easton Village Station Site

Because only two low impact RECs were identified on adjoining properties, a Phase II ESA is not recommended. Soils excavated as part of construction should be screened for potential contaminants

that may be encountered. In the event that contamination is identified, response actions would be implemented in accordance with the MCP.

Fall River Depot Station Site

A Phase II ESA was performed in 2002 for the northern portion of the Fall River Depot and identified impacted soil above the regulatory criteria and the potential presence of USTs. An updated Phase II ESA is recommended for the Fall River Depot to obtain updated data from the northern portion of the property as well as to obtain soil and groundwater from the southern portion that was not previously assessed. Response actions may be implemented as necessary to address the impacts that were identified. An update of the 2001 comprehensive survey of the existing buildings will be performed by the applicant for the presence of asbestos-containing materials, lead-based paint, and other regulated building materials.

Freetown Station Site

No RECs were identified at this location; however, soils excavated would be screened as part of construction for potential contaminants that may be encountered. In the event that contamination is identified, response actions would be implemented in accordance with the MCP.

King's Highway Station Site

Although several RECs were identified at this location, since no property acquisition or station construction is planned, a Phase II ESA is not recommended.

North Easton Station Site

No RECs were identified at this location; however, soils excavated as part of construction would be screened for potential contaminants that may be encountered. In the event that contamination is identified, response actions would be implemented in accordance with the MCP.

Raynham Park Station Site

A Phase II ESA is recommended for Raynham Park in which limited soil and groundwater sampling would be performed. Response actions would be implemented as necessary to address any soil or groundwater impacts that may be identified. A comprehensive survey would be performed of the existing structures for the presence of asbestos-containing materials, lead-based paint, and other regulated building materials.

Stoughton Station Site

Hazardous materials mitigation measures should be incorporated during preliminary and final design of the relocated Stoughton Station. In accordance with DEP requirements, any materials that would be excavated from the project area should be pre-characterized to determine course of action for removal. The specific mitigation measures recommended for oil and hazardous materials are: (1) Prepare a Hazardous Materials and Solid Waste Management Plan, and a Health and Safety Plan, to describe the regulatory context and procedures to be used during construction; (2) Pre-characterize any materials that would be managed during the project to determine the course of action for excavation and disposal. Such pre characterization may include subsurface investigations to determine the nature and extent of any soil or groundwater contamination present; (3) Pre-characterize construction materials in

buildings that would be demolished to identify special or hazardous waste and determine the course of action for removal and disposal; and (4) Pre-characterize any railroad infrastructure that would be removed, such as ties, to determine the course of action for removal and disposal.

Taunton Depot Station Site

No RECs were identified at this location; however, soils excavated as part of construction would be screened for potential contaminants that may be encountered. In the event that contamination is identified, response actions would be implemented in accordance with the MCP.

Whale's Tooth Station Site

An engineered barrier was constructed at Whale's Tooth and contaminated soil was left in place beneath the barrier. There are potential impacts related to exposure during the future excavation or construction at this site. Since known contamination is present at the site but buried beneath an engineered barrier, no soil disturbance or subsurface investigation, including a Phase II ESA, is recommended.

Layover Facility Sites

Wamsutta Layover Facility Site

An engineered barrier was constructed at the Wamsutta Layover site and contaminated soil was left in place beneath the barrier. There are potential impacts related to exposure during the future excavation or construction at this site if soil disturbance below the barrier were to occur. Since known contamination is present at the site but buried beneath an engineered barrier, no soil disturbance or subsurface investigation is recommended, including a Phase II ESA.

Weaver's Cove East Layover Facility Site

A Phase II ESA is recommended for the Weaver's Cove East Layover site, since potentially substantial impacts are likely. The comprehensive surficial and subsurface investigation would address soil and groundwater impacts. Response actions would be implemented as necessary to address environmental media that may be identified.