
4.11 HAZARDOUS MATERIALS

4.11.1 INTRODUCTION

The SVRTC project would involve construction within an urbanized area, where hazardous materials would be a concern due to past land uses and undocumented releases. Hazardous materials sources or waste sites within the project alignment are discussed, along with a summary of data sources consulted. Information presented in this section summarizes the *Hazardous Wastes Sites Reviewed Report* (Earth Tech 2003).

4.11.1.1 Data Sources

Federal, state, and local regulatory agency databases were reviewed to identify sites near the Baseline and BART alternatives having potential or known hazardous materials releases into soil and groundwater. Identified known releases are primarily associated with past or current operations of leaking underground storage tanks that contained gasoline, diesel, waste oil, or other fuel products. However, identified known releases may also be associated with the use or storage of hazardous materials in aboveground storage tanks, where resulting contaminants commonly include petroleum products such as fuels and oils, chlorinated solvents, and metals. The databases reviewed include:

- USEPA National Priorities List (NPL) – This list contains the names of sites that are in the NPL (Superfund) Program for priority cleanup.
- USEPA Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) List – The CERCLIS List contains data on potentially hazardous waste sites that have been reported to USEPA by states, municipalities, private companies, and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).
- USEPA CERCLIS – No Further Remedial Action Planned (CERCLIS-NFRAP) List – This list contains data on sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require federal Superfund action or NPL consideration.
- USEPA Superfund Consent Decrees (CONSENT) List – This list contains major legal settlements that establish responsibility and standards for cleanup at NPL Superfund sites.
- USEPA Record of Decision (ROD) List – ROD documents mandate a permanent remedy at an NPL site and contain technical and health information.
- USEPA Liens (NPL Liens) List – This is a list of sites prepared by USEPA to file lien against the real property owner in order to recover remedial action expenditures.
- USEPA Toxic Chemical Release Inventory System (TRIS) – TRIS identifies facilities that release toxic chemicals to the air, water, and land in reportable quantities.
- USEPA Toxic Substances Control Act (TSCA) List – This list identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory List.
- Emergency Response Notification System (ERNS) – ERNS records and stores information on reported releases of oil and hazardous substances. The source of this database is USEPA.
- Polychlorinated Biphenyl (PCB) Activity Database System (PADS) – PADS identifies generators, transporters, commercial stores, and/or brokers, and disposers of PCBs who are required to notify USEPA of such activities.
- Resource Conservation and Recovery Act (RCRA) Corrective Action Activity (CORRACTS) List – The CORRACTS database is a list of handlers with RCRA corrective action activity.

- RCRA Treatment, Storage, and Disposal (TSD) List – This list contains selected information on sites that generate, store, treat, or dispose of hazardous waste as defined by RCRA.
- RCRA Small Quantity and Large Quantity Generator (SQG and LQG) Lists – These lists contain selected information on sites that generate hazardous waste as defined under RCRA.
- RCRA Administrative Action Tracking System (RAATS) – The RAATS List contains records based on enforcement actions issued under RCRA pertaining to major violators, and includes administrative and civil actions brought by USEPA.
- USDOT Hazardous Materials Incident Report System (HMIRS) – HMIRS contains hazardous materials spill incidents reported to the USDOT.
- Nuclear Regulatory Commission Materials Licensing Tracking System (MLTS) – This is a list of sites which possess or use radioactive materials.
- California Department of Toxic Substances Control (DTSC) Cal-Sites List – This database contains known and potential hazardous substance sites.
- Hazardous Waste Information System (HAZNET) – This database contains information on facilities that ship hazardous wastes by obtaining data from hazardous waste manifests received each year by the DTSC.
- California EPA/Office of Emergency Information ‘CORTESE’ Hazardous Waste and Substances – This database identifies public drinking water wells with detectable levels of contamination, hazardous substance sites selected for remedial action, sites with known toxic materials identified through the abandoned site assessment program, UST sites with a reportable release, and all solid waste disposal facilities from which there is known contaminant migration.
- State Water Resources Control Board (SWRCB) Proposition 65 List – These records contain facility notifications about releases that could impact drinking water and thereby expose the public to a potential health risk.
- SWRCB Leaking Underground Storage Tank (LUST) List – This database contains an inventory of reported leaking UST incidents.
- Registered Aboveground Storage Tank (AST) and Underground Storage Tank (UST) Lists – These data come from the SWRCB’s Hazardous Substance Storage Container Database.
- Regional Water Quality Control Board (RWQCB) Spills, Leaks, Investigation and Cleanup Cost Recovery (CA SLIC) List – This database includes information about spills, leaks, and cleanup sites.
- List of Permitted Solid Waste Landfills or Transfer Stations (SWLF) – These records contain an inventory of solid waste disposal facilities and landfills.
- Facility Index System (FINDS) – FINDS contains both facility information and “pointers” to other federal sources of information that contain more detail.
- California Hazardous Material Incident Report (CHMIRS) – This database system contains information on reported hazardous material incidents, i.e., accidental releases or spills.

From those release sites found within ¼-mile of the Baseline and BART alternative project locations, additional regulatory agency documents were reviewed to identify sites having either known contamination extending beneath the project sites or a high potential for affecting soil or groundwater beneath the project sites. Information on these release sites was obtained primarily from the “Geotracker” (SWRCB) database and the case status reports prepared by SCVWD available on the agency website.

4.11.2 EXISTING CONDITIONS

4.11.2.1 Existing Setting

Since the existing conditions of hazardous materials sites depend on the corridor locations, the affected environment is discussed separately for the Baseline and the BART alternatives.

Baseline Alternative

Based on the review of the databases noted above, over one hundred hazardous materials locations were identified within ¼-mile of the three aerial busway connectors (I-680 WS, WS I-880 and I-880 ME). Note that releases of hazardous materials have not been recorded from all these locations. The following sections describe the existing conditions of the hazardous materials sites that may impact the Baseline Alternative project.

Areas of Known Releases

Release Sites

Within ¼-mile of the three busway connectors proposed in the Baseline Alternative, 19 sites were identified as having contaminant releases that are present or potentially present in subsurface soils and/or groundwater (Environmental Data Resources [EDR] 2003). From these release sites, database search and regulatory document review identified 4 sites, with high potential for affecting soil or groundwater beneath the busways. Although the regulatory documents reviewed did not contain information regarding contaminant migration from these above sites, they were identified as noteworthy based on their locations adjacent to the busway connectors. It is also likely that there are undocumented releases to soil and/or groundwater that may affect the Baseline Alternative. These 4 sites are summarized below:

- **Dirty Dunbar Service Station**, 44790 Grimmer Boulevard, Fremont – A gasoline UST leak at this location was discovered in October 1983. A remediation plan was submitted in 1998, and remediation of soil and groundwater started in April 2000. Remediation included excavation and disposal of contaminated soil, while groundwater is being extracted and treated before discharge. Residual methyl tertiary-butyl ether (MTBE) and benzene has been detected in groundwater.
- **Pacific Motor Trucking Site**, 45055 Fremont Boulevard, Fremont – A diesel UST leak at this site was detected in July 1988. The contaminated soil was excavated and removed in January 1989, and groundwater remediation using extraction and treatment started in April 1993. Groundwater samples collected in 2000 indicated the presence of benzene at 230 micrograms per liter (µg/L or approximately parts per billion), and MTBE which may or may not be present at less than 390 µg/L. Oil and grease was detected in soil at 2,800 milligrams per kilogram (mg/kg). Post remedial action monitoring is underway.
- **Hyster Company**, 47132 Kato Road, Fremont – A gasoline UST leak was discovered at this site in August 1987. MTBE was detected in both soil and groundwater. The remediation of the contaminated soil was started in April 2000. Information about groundwater remediation is not available.
- **New United Motor Manufacturing, Inc.**, 45500 Fremont Boulevard, Fremont - A diesel UST leak at this site was discovered in May 1985. Remediation of soil at the site started in January 1987 and remediation of groundwater started in March 1990. Soil samples have indicated gasoline at 11,000 mg/kg, and groundwater samples have indicated benzene at 10,000 µg/L, MTBE at 2,000 µg/L, and gasoline at 660,000 µg/L (the sample collection dates are uncertain). The site case is still under regulatory review.

Superfund Sites

A Superfund site is any land in the U.S. that has been contaminated by hazardous waste and identified by USEPA as requiring cleanup because it poses a significant risk to human health and/or the environment. The NPL, a subset of the CERCLIS, identifies sites for priority cleanup under the Superfund Program. Based on the NPL database, no Superfund site was identified within two miles of the Baseline Alternative.

Other Potential Sources of Hazardous Materials

UST Sites without Identified Releases

In addition to listed sites with known releases to soil and/or groundwater, at least six UST sites were identified along the I-680 WS and WS I-880 busway connector locations that are not currently associated with known releases (EDR 2003). Although no releases of hazardous materials from these sites are documented, each of these UST sites represents a potential source for release of hazardous materials into soil and groundwater.

No additional UST sites were identified near the I-880 ME busway connector.

Large Quantity and Small Quantity Hazardous Waste Generators

From a search of the RCRA Facilities List, 3 LQG and 27 SQG sites were identified within ¼-mile of the I-680 WS and WS I-880 busway connectors in Fremont. One LQG and 4 SQG sites were identified within ¼-mile of the I-880 ME busway connector in San Jose. It should be noted that inclusion on the RCRA generator lists is not necessarily indicative of environmental impacts to soil or groundwater. If they are both generators and releasers, they are included in the 19 sites identified within ¼-mile of the three busway connectors.

Listed Hazardous Materials Sites

There were over 25 HAZNET sites found near the I-680 WS and WS I-880 busway connector locations in Fremont, and about 21 sites were identified around the I-880 ME busway connector in San Jose. It should be noted that inclusion on the HAZNET list is not necessarily indicative of environmental impacts to soil or groundwater.

Sno-Boy Rail-Truck Transfer Facility

The primary activity at this site is the loading and unloading of dry and liquid, hazardous and non-hazardous products between railcars and tank trucks. Normal business hours at the facility are between 6:00 a.m. to 6:00 p.m., although specific customer requests can create circumstances wherein loading may occur during non-business hours. The facility also stores several hazardous materials on-site on a regular basis; however, none of these materials is considered to be acutely hazardous, as determined by the Fremont Fire Department.

Common Contaminants From Non-Specific Sources

The following section applies to both the Baseline and BART alternatives.

Aerially Deposited Lead

Up until the 1990s, lead-based additives in gasoline were expelled from engine exhausts onto the adjacent road shoulders and medians. Consequently, lead was aerially deposited as a particulate. With the heavy traffic historically present in an urbanized area such as San Jose, elevated concentrations of

lead are likely to be found in near-surface soil where roadways cross or are adjacent to the project corridor.

Asbestos

Many types of building products and insulation materials contained asbestos up until the 1970s. Since asbestos was occasionally used in construction materials, such as abutment seats for highway bridges or as insulation in buildings, there is potential for asbestos fibers to be found in soil along the project corridor around existing or former road overpasses and where the prior demolition of buildings along or adjacent to the corridor may have resulted in the deposition of asbestos fibers. Asbestos may also be encountered during demolition of buildings during construction of the project.

Volatile Organic Compounds

It is possible to encounter volatile organic compounds (VOCs) unexpectedly in groundwater during construction in heavily urbanized areas, such as central San Jose, as such releases are often undocumented. The migration of contaminant plumes from unidentified sources, which may or may not be directly adjacent to the project corridor, may result in groundwater containing relatively low levels of gasoline and gasoline constituents, MTBE, and chlorinated solvents such as PCE and TCE.

Pesticides

Historical land use in Fremont, Milpitas, and the northern part of San Jose was predominantly agricultural, mainly orchards. Such use suggests that soil along the project corridor may be affected with pesticides. Spraying of pesticides typically results in localized areas with relatively low concentrations in near-surface soil.

Polychlorinated Biphenyls

PCBs are a group of synthetic organic chemicals that were manufactured in the U.S. from 1929 to 1977. The USEPA classifies PCBs as persistent, bioaccumulative, and toxic compounds that are likely human carcinogens, endocrine disruptors, and immune system disruptors. Throughout the 20th century, PCBs were used in hundreds of manufacturing and industrial applications and were most commonly found within electrical equipment. There is potential for PCBs to be found in soil along the project corridor due to railroad operations and/or electrical transformers and substations associated with commercial and industrial activities, particularly in the urbanized areas of San Jose.

BART Alternative

Based on review of the various federal, state, and local databases, hundreds of hazardous materials locations were identified within ¼-mile of the BART alignment. Note that releases of hazardous materials have not been recorded from all these locations. The following sections describe the existing conditions of the hazardous materials sites that may impact the BART Alternative project.

Areas of Known Releases

Release Sites

Within ¼-mile of the proposed BART alignment, 236 sites were identified as having contaminant releases that are present or potentially present in subsurface soils and/or groundwater (EDR 2001 and 2003). Of the 236 sites, 8 sites are within a ¼-mile radius of the existing Sno-Boy rail-truck tank car transfer facility, operated by Truck-Rail Handling, Inc., which is located northwest of the BART Warm Springs Station. The Sno-boy facility is adjacent to the proposed site for the relocation of the existing rail-truck

tank car transfer facility located south of East Warren Avenue. Seven of these 8 sites were previously identified around the WS I-880 busway connector of the Baseline Alternative.

From those release sites found within ¼-mile of the BART alignment, database search and regulatory document review identified 21 sites having either known contamination extending beneath the project corridor or a high potential for contamination affecting soil or groundwater beneath the project corridor. Of these 21 sites, 10 have the potential to affect the property as identified in Table 4.11-1. The remaining 11 have received regulatory closures¹ (or the monitoring program for the sites have been completed). Case closure does not ensure that the project alignment would not be affected by residual contaminants from these sites. These 11 sites are summarized in Table 4.11-2.

Name/Address of Contaminated Site	Approx. Distance to Project	Reported Contamination	Status of Remediation Activities
BP / Mobile Site #1115, 46840 Warm Springs Boulevard, Fremont	1,000 feet	High levels of total petroleum hydrocarbons (TPH) and MTBE in groundwater.	Monitoring 2000.
Beacon Station #593, 47700 Warm Springs Boulevard, Fremont	1,000 feet	High levels of MTBE in groundwater.	Monitoring 1999.
Cap Concrete Bedford Property, currently Scott Creek Business Park, 48870 Kato Road, Fremont	Adjacent upgradient	Moderate chlorinated hydrocarbon and TPH levels in groundwater and soil.	Monitoring 2001.
Prudential Overall Supply, 1429 North Milpitas Boulevard, Milpitas	600 feet	High TPH levels and detectable chlorinated solvents in groundwater.	Uncertain.
North American Transformer, 1200 Piper Drive, Milpitas	500 feet, but plume under Project	Moderate chlorinated solvent levels in groundwater extend under project.	Quarterly groundwater monitoring.
Jones Chemical, 985 Montague Expressway, Milpitas	2,000 feet, but plume under Project	Moderate chlorinated solvent levels in groundwater extend under project.	Groundwater extraction and semiannual monitoring ongoing.
FMC Corporation, 1125 Coleman Avenue, San Jose	Adjacent, down-gradient	Chlorinated solvents and TPH in soil and groundwater.	RCRA corrective action ongoing under DTSC oversight.
Caltrans, 651 Harrison Street, Santa Clara	400 feet upgradient	Moderate TPH levels in soil and groundwater	Residual contamination still exists at the site
Santa Clara University, 455 El Camino Real, Santa Clara	400 upgradient	Moderate TPH levels in soil and groundwater	Residual contamination exists in soil and groundwater
Dirty Dunbar Service Station, 44790 Grimmer Boulevard, Fremont	Adjacent, North	MTBE and benzene in soil and groundwater	Remediation started in April 2000

Source: Earth Tech, 2003.

¹ Where closure letters were available, they were reviewed.

Table 4.11-2: Hazardous Materials Release Sites with Potential to Affect the Project (Cases Received Regulatory Closure)			
Name/Address of Contaminated Site	Approx. Distance to Project	Reported Contamination	Status of Remediation Activities and Current Situation
Mission Corporate Center, 440-1055 Mission Court, Fremont	1,000 feet	Moderate levels of chlorinated solvents in groundwater.	Received regulatory closure in 1999. Project corridor could still be affected by residual contaminants that have migrated beneath the corridor.
Mission Pipeline Corporation Yard, 1265 North Milpitas Boulevard, Milpitas	Adjacent, upgradient	Oil and grease in soil and groundwater.	After source removal, received regulatory closure in 1996. Project corridor could still be affected by residual contaminants from the Corporation Yard.
Dap Incorporated, 520 Marburg Way, San Jose	Adjacent, upgradient of the US 101 Diagonal Option	Moderate TPH and chlorinated solvent levels in groundwater may extend to subway portal.	After source removal, TPH case closed in 1998. Chlorinated solvents case is apparently still open.
Gummow Property, 1325 East Julian Avenue, San Jose	Adjacent, upgradient of the Railroad/28 th Street Option	Moderate TPH levels remain in soil and groundwater.	After source removal, received regulatory closure in 2000. The Railroad/28 th Street Option, where the Gummow property is adjacent to the east site (upgradient) of the project corridor, would be affected by these residual contaminants.
Monarch Leasing, formerly San Jose Steel, 195 North 30 th Street, San Jose	At the Alum Rock Station site	Moderate TPH levels likely to be encountered during Alum Rock Station construction.	After source removal, received regulatory closure in 1997. Since Monarch Leasing is located above the planned location of the Alum Rock Station in the U.S. 101/Diagonal Option, it is likely that moderate petroleum hydrocarbon levels will be encountered during cut and cover station construction at this location. It is also likely that contamination would be encountered during construction of either parking garage option at this site.
Deluxe Cleaners / San Jose Civic Center, 224 East Santa Clara Street, San Jose	Adjacent, but plume under project	TPH source removed for Civic Center project. Moderate TPH in soil and groundwater extends into SVRTC.	Received regulatory closure. Currently under more oversight due to Civic Center project.
Downtown Auto Express / San Jose Civic Center, 154 East Santa Clara Street, San Jose	Adjacent, but plume under project	TPH source removed for Civic Center project. Moderate TPH in soil and groundwater extends into SVRTC.	Received regulatory closure. Currently under more oversight due to Civic Center project.
Kosich Construction Company / San Jose Arena, 555 West Santa Clara Street, San Jose	Adjacent, down-gradient	TPH source removed for Arena project. TPH in soil and groundwater probably extends into SVRTC.	Received regulatory closure in 1997. Residual gasoline is believed to be present in soil and groundwater below West Santa Clara Street (Wahler 1990).

continued

**Table 4.11-2: Hazardous Materials Release Sites with Potential to Affect the Project
(Cases Received Regulatory Closure)**

Name/Address of Contaminated Site	Approx. Distance to Project	Reported Contamination	Status of Remediation Activities and Current Situation
Blue's Roofing Company, 1181 Campbell Avenue, San Jose	500 feet	Moderate levels of TPH and MTBE in groundwater.	Groundwater monitoring program completed in 2002. Project corridor could still be affected by the residual contaminants from the site.
Old Simas Service Station, 3290 The Alameda, Santa Clara	400 feet upgradient	Moderate TPH-G and BTEX ^[1] in soil and groundwater. Source removed ^[1]	Groundwater monitoring program completed in 2000. Project corridor could still be affected by the residual contaminants from the site.
Kelly's Concrete and Building Materials, 44300 Old Warm Springs Boulevard, Fremont	600 feet side gradient	Low levels of MTBE in groundwater	Source removal completed. Project corridor could still be affected by the residual contaminants from the site.
<p>Note: ^[1] BTEX - Benzene, Toluene, Ethylbenzene, and Xylenes Source: <i>Earth Tech, Inc., 2003.</i></p>			

Among these 21 sites, two release sites, Kelly's Concrete and Building Materials and Dirty Dunbar Service Station (which was also identified as a noteworthy site for the Baseline Alternative) are near the proposed relocated rail-truck tank car transfer facility at the Sno-boy site in Fremont.

The list of sites as presented above may not include all release sites that may affect the BART Alternative, as it is likely that there are undocumented releases to soil and/or groundwater.

Superfund Sites

For the BART Alternative, one Superfund site was identified within two miles of the project corridor. Lorentz Barrel and Drum Co., Inc. at 1515 South 10th Street in San Jose is approximately 1.5 miles south of the project corridor. The site consists of the 6.72-acre former Lorentz Barrel & Drum facility, a limited amount of adjacent City of San Jose sidewalk property, and a shallow groundwater plume extending north of the site. Since 1981, several investigations revealed soil and groundwater contaminated with metals, VOCs, PCBs, and pesticides. Following the removal of drums, stored hazardous wastes, and highly contaminated soil, RODs were prepared in 1988 and 1993 to address groundwater remediation and removal of soil and debris (USEPA 1988 and USEPA 1993). In 1990, USEPA signed a consent decree requiring the design, construction, and operation of a shallow groundwater extraction and treatment system to address the VOC contamination of the groundwater beneath the site, as well as the plume that extended approximately 2,000 feet north. Based on this, the Lorentz Barrel & Drum site is not expected to affect the BART Alternative.

Other Potential Sources of Hazardous Materials

Fuel Pipelines

Identified subsurface utilities along the UPRR ROW include a Kinder Morgan Energy (formerly Santa Fe Petroleum) pipeline and a Chevron Pipeline Company high-pressure pipeline. These pipelines carry highly flammable liquids and may be potential sources of previous or future fuel leaks.

Contaminants from Railroad Use

Over 10 miles of the BART alignment currently consists of a railroad ROW. Hazardous materials commonly associated with railroad operations include petroleum products such as fuels and oils, metals, pesticides and herbicides, wood preservatives on railroad ties, and solvents.

From the late 1950s or early 1960s until 1982 or 1983, it was common railroad practice in California to use imported copper smelting slag for track maintenance. Use of such material may cause contamination of soil, surface waters, and groundwater from metals (primarily arsenic and lead). Arsenic, copper, lead, and zinc were found in surface soil at the UPRR Yard in Sacramento, California, from which the source was primarily attributed to 'slag tack ballast' (California Department of Health Services and Agency for Toxic Substances and Disease Registry 1999). At a separate UPRR site in East Palo Alto, California, arsenic concentrations were found in soil along an approximate 1-mile former UPRR rail spur, although the source of the arsenic was not identified (SF RWQCB 2001). Since a substantial portion of the BART alignment would be located in the UPRR corridor, which has been an active railroad corridor since the late 1800s, there is potential for similar contamination along the project corridor.

Additional sources of potential impacts to near surface soil and/or ballast from hazardous wastes that are likely to be found along the UPRR ROW due to former railroad practices include:

- The rail-truck tank car transfer facility near East Warren Avenue and the Warm Springs, Milpitas, and the UPRR Newhall Yards;
- The historical use of lead acid batteries as power sources for signals; and
- Leaking lubricants from trains, junction boxes, journal boxes, and wayside lubricators.

UST Sites without Identified Releases

In addition to listed sites with known releases to soil and/or groundwater, there are at least 23 identified UST sites along the BART project corridor that are not currently associated with known releases (EDR 2001 and EDR 2003). Although no releases of hazardous wastes from these sites are documented, each of these UST sites represents a potential source for release of hazardous materials into soil and groundwater.

Large Quantity and Small Quantity Hazardous Waste Generators

From a search of the RCRA Facilities List, there are at least 44 LQGs and 257 SQGs of hazardous waste identified within ¼-mile of the project corridor. Among these, 3 LQG and 23 SQG locations were identified near the proposed relocated rail-truck tank car transfer facility at Sno-boy in Fremont. It should be noted that inclusion on the RCRA generator lists is not necessarily indicative of environmental impacts to soil or groundwater. If they are both generators and releasers, they are included in the 236 sites identified within ¼-mile of the BART alignment.

Listed Hazardous Materials Sites

The database search identified over 870 HAZNET sites near the BART Alternative project corridor. Forty-two of these sites were identified near the proposed relocated rail-truck tank car transfer facility at Sno-boy in Fremont. As stated previously, inclusion on the HAZNET list is not necessarily indicative of environmental impacts to soil or groundwater.

Common Contaminants from Non-Specific Sources

The risk of common contaminants from non-specific sources for the BART Alternative project would be similar to those discussed in Section 4.11.2.1 above for the Baseline Alternative.

4.11.2.2 Regulatory Setting

This section describes the regulatory framework pertaining to management of hazardous materials. The use, storage, and disposal of hazardous materials, including the management of contaminated soils and groundwater, are regulated by local, state, and federal laws. A description of agency involvement in management of hazardous materials is also provided.

Federal Laws and Regulations

Resource Conservation and Recovery Act of 1976

RCRA establishes a comprehensive program for identifying and managing hazardous waste, including reporting and record-keeping requirements for generators, a manifest system for transporters of hazardous waste shipments, and standards for treatment and disposal facilities. The 1984 and 1986 amendments include additional reporting requirements, restriction of landfill disposal, and a program regulating underground storage tanks. RCRA regulates active facilities and does not address abandoned or historical sites.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980

CERCLA provides a federal "Superfund" to clean up uncontrolled or abandoned sites contaminated by releases of hazardous substances, as well as accidents, spills, and other releases of pollutants and contaminants into the environment. CERCLA, as amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA), authorizes USEPA to order the parties responsible for a release to take action to remediate the contaminated site or to conduct remediation itself and recover the costs from responsible parties.

Title III of SARA authorizes the Emergency Planning and Community Right-to-Know Act (EPCRA). EPCRA requires facility operators to undertake emergency planning and report on hazardous chemical inventories and toxic releases, and makes this information available to local communities.

State Laws and Regulations

California Department of Toxic Substances Control

DTSC regulates hazardous materials under the authority of RCRA and the California Health and Safety Code. California has enacted legislation pertaining to the management of hazardous waste that is equivalent to, and in some cases more stringent than, corresponding federal laws and regulations. DTSC is responsible for the enforcement and implementation of hazardous waste laws and regulations. The state hazardous waste regulations are codified in the California Code of Regulations (CCR), Title 22.

Regional Water Quality Control Board, San Francisco Bay Region

The SVRTC is within the jurisdiction of the RWQCB. The RWQCB is authorized by the Porter-Cologne Water Quality Control Act to implement water quality protection laws, including some federal water protection laws specified in CCR Title 26, Division 23, Subchapter 16. (See Section 4.18.3.4, *Water Resources, Water Quality, and Floodplains/Regulatory Setting* for a discussion of the Porter-Cologne Water Quality Control Act.) When the quality of groundwater or surface waters of the state are

threatened, the RWQCB has the authority to require investigations and remedial actions, when necessary. The RWQCB provides oversight in cases that require permits, investigation, and/or remediation. Extraction of contaminated groundwater or dewatering during construction and subsequent discharge into the storm drain system or waters of the state requires a permit from RWQCB, whereas discharge into the sanitary sewer requires a permit from the local publicly owned treatment works.

4.11.3 IMPACT ASSESSMENT AND MITIGATION MEASURES

4.11.3.1 Impacts

Impacts from the numerous hazardous materials sites identified in the database search and regulatory document review would primarily occur during the construction phase of the project alternatives. Impacts related to construction are discussed in Section 4.19.10.1, *Construction/Hazardous Materials Impacts*.

During the operational phase, existing contamination would affect either the Baseline or BART Alternative primarily during maintenance procedures. Any operations impacts would be due to existing soil and groundwater contamination and/or contaminated surface water runoff.

Changes in hazardous materials use or usage patterns due to operation of the Baseline or BART Alternative may affect project facilities, users, or surroundings. These impacts include the use of hazardous materials, interaction with existing hazardous wastes, and effects on existing hazardous materials usage patterns.

The potential impacts of hazardous materials on project operations and of project operations on hazardous materials use or usage patterns are discussed below.

No-Action Alternative

Projects planned under the No-Action Alternative would undergo separate environmental review to define hazardous materials impacts and determine appropriate mitigation measures. (See Section 3.2.1.2 for a list of future projects under the No-Action Alternative.)

Baseline Alternative

Operations Impacts due to Soil Contamination

The aerial structures proposed in the Baseline Alternative would be concrete/paved structures that would not require maintenance related to earthwork activities, except for small slope transition sections from aerial bridge pavement structures to at grade pavements. Little or no exposure to transit riders, maintenance workers, or local populations to contaminated soil is anticipated during operations and maintenance of this alternative.

Operations Impacts due to Groundwater Contamination

All operations involved in the Baseline Alternative would be aboveground, and interaction with groundwater is not anticipated. Therefore, impacts due to groundwater contamination are not anticipated.

Operations Impacts due to Surface Water Contamination

During operations of the Baseline Alternative, surface water may be contaminated due to leaks or spills from buses, in wastewater from bus cleaning, or by runoff from the roadway pavements. The potential

extent of surface water contamination from this source is very small. No mitigation is warranted beyond ordinary health and safety practices.

Compared to the surface water contamination from highway runoff for the automobiles the Baseline Alternative would replace, the Baseline Alternative's net impact to surface water quality is expected to be beneficial.

Impacts on Hazardous Materials Use or Usage Patterns

Very small amounts of hazardous materials may be used in minor maintenance activities, such as pavement repairs, pavement markings, signboard paintings etc, for the Baseline Alternative. The Baseline Alternative would not affect the amount or frequency of hazardous materials transport or expose transit users or residents in the vicinity of Baseline Alternative facilities to an increased risk of accidents involving use or transport of hazardous materials.

BART Alternative

This section identifies hazardous materials impacts on soil, groundwater, and surface water due to the operation of the BART Alternative. The potential hazardous materials use or usage patterns are also described. The possible hazardous materials impacts and usage for the MOS scenarios would be the same as those identified for the full-build BART Alternative. For a description of the potential hazardous materials impacts due to construction of the BART Alternative and MOS scenarios, refer to Section 4.19.10.1, *Construction/Hazardous Materials Impacts*.

Operations Impacts due to Soil Contamination

During operations of the BART Alternative, existing soil contamination would affect the project mainly during maintenance procedures, including dewatering of the tracks inside tunnel and retained cut segments. Such impacts would be due to existing soil and groundwater contamination and/or contaminated surface water runoff. Impacts would be similar to those caused by soil contamination during construction, as described in Section 4.19.10.1, *Construction/Hazardous Materials Impacts*, except that the potential severity of impacts would be much less because the infrequent nature of subsurface maintenance would result in contact with much smaller volumes of contaminated soil. A worker health and safety plan will be prepared and adopted to prevent exposure of maintenance workers, control emissions of hazardous dusts, and safeguard off-site transport of hazardous materials.

Operations Impacts due to Groundwater Contamination

Little groundwater is expected to be encountered during the operation of the BART Alternative. Human contact is likely only during extremely infrequent maintenance events in wet tunnels or saturated soil outside concrete U-walls or tunnels. Contaminated groundwater may enter the retained cuts or tunnels through cracks. A National Pollutant Discharge Elimination System (NPDES) permit will be obtained and waste discharge requirements established to prevent discharge of untreated contaminated water.

Groundwater flow directions and pathways may be affected by BART retained cut and tunnel segment structures, possibly resulting in the spread of groundwater contamination and the rise of the water table. To minimize this impact, highly permeable preferential flow pathways (i.e., highly permeable gravel channels) will be constructed directly beneath the U-wall sections, as described in Section 4.19.10.2, *Construction/Design Requirements and Best Management Practices for Hazardous Materials Impacts*.

Operations Impacts due to Surface Water Contamination

No impacts to surface water quality are expected due to operation of the BART Alternative. Surface water contamination may result from contact between rainwater and hazardous materials from BART trains and facilities, such as lubricants, or from releases of untreated contaminated groundwater during dewatering of the tunnels and retained cuts. The potential for such surface water contamination is very small and no mitigation beyond ordinary health and safety practices is warranted.

Compared to surface water contamination from highway runoff for the automobiles and buses the BART Alternative would replace, the BART Alternative's net impact to surface water quality is expected to be beneficial.

Impacts on Hazardous Materials Use or Usage Patterns

The BART Alternative would involve use of minor amounts of hazardous maintenance chemicals, such as lubricants and hydraulic fluids, that may be released onto the BART tracks or result from drips or rainfall, which washes off exposed chemicals. The magnitude of these releases is expected to be similar to the releases seen on the existing operating sections of BART and would not result in impacts requiring mitigation beyond implementing ordinary safe practices.

The BART Alternative would result in the relocation of the present rail-truck tank car transfer facility south of East Warren Avenue to the Sno-boy site in Fremont. Relocation of this facility would not affect the amount or frequency of hazardous materials transport or expose BART riders or workers to an increased risk of accidents involving use or transport of hazardous materials. In fact, relocation of this facility to the Sno-boy site would eliminate the potential for interaction between hazardous materials transport transfer activities and BART workers or riders at the existing site, which is currently located in an urbanized area, as the Sno-boy site is in a less urbanized area and is situated farther away from the BART tracks. However, the relocated rail-truck tank car transfer facility may introduce the potential for other hazardous materials activities risk at the expanded Sno-boy site; although, relocation may reduce impacts, as the new, expanded facility must meet all current laws and regulations, whereas the existing facility was not constructed in accordance with present-day standards.

4.11.3.2 Design Requirements and Best Management Practices

Baseline and BART Alternatives

The following design features and standards apply to both the Baseline and BART alternatives, as well as the MOS Scenarios.

- The use, transport, and disposal of hazardous materials will be in compliance with federal, state, and local regulatory requirements.
- Buildings subject to demolition/construction operations will be inspected and tested as necessary for asbestos containing materials and lead-based paints.
- All BART or bus operations will be conducted in accordance with a properly prepared, approved, and adopted worker health and safety plan.
- Maintenance personnel who may be exposed to contaminated soils or water will be trained in accordance with the OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, follow a site-specific health and safety plan, and use proper personal protective equipment. Untrained workers and members of the public will be excluded from the area.

- Any contaminated soil encountered during bus or BART operations will be segregated from clean material, covered while on-site to prevent dust generation or contaminated surface water runoff, and properly disposed off-site in compliance with all pertinent rules and regulations.
- Surface water contamination from hazardous materials from bus or BART vehicles and facilities can be minimized by following best management practices for hazardous materials, as is standard public transit operations practice.

The following design features and standards apply to the BART Alternative and MOS Scenarios only.

- Accumulated water inside BART tunnel and retained cut segments will be pumped out on a regular basis. Since some of the accumulated water will be contaminated groundwater, prior to starting regular discharges from each pump station, the chemical content of the water will be tested and any necessary NPDES or industrial wastewater discharge permits obtained. If necessary, each pump station collecting contaminated water will be equipped with a properly designed, operated, maintained, and monitored treatment system appropriate for the contaminants detected at that location. Human contact with contaminated groundwater will be minimized by thoroughly dewatering the area throughout tunnel or U-wall repairs.
- Truck-Rail Handling, Inc., operations at the Sno-boy site in Fremont are currently permitted by the BAAQMD, the Union Sanitary District, the City of Fremont, as well as the USEPA, Research and Special Programs Administration (RSPA), and USDOT. Truck-Rail Handling, Inc. will obtain new permits or amend existing permits as necessary to include expansion of their operations due to the relocation of the rail-truck transfer facility located south of East Warren Avenue to the Sno-boy site.

4.11.3.3 Mitigation Measures

No-Action Alternative

Projects planned under the No-Action Alternative would undergo their own environmental review process to define hazardous materials impacts and determine appropriate mitigation measures.

Baseline Alternative

No mitigation is warranted beyond ordinary health and safety practices.

BART Alternative

Additional site-specific information will be collected regarding hazardous materials use and hazardous waste generation for those properties that would be acquired for ROW or support facilities for the BART Alternative and MOS scenarios. Regulatory agency files will be reviewed to confirm whether groundwater has been affected by any reported releases and/or whether the sites are within an area where excavation would encounter groundwater. Visual inspections will be conducted of properties or portions of properties that were inaccessible during preparation of this environmental document.

Phase Two site investigations will be performed, as appropriate, prior to construction in areas where groundwater contamination is documented, where groundwater or soil contamination is nearby, or where current information regarding the extent of contamination is inconclusive. The purpose of a Phase Two investigation is to determine whether environmental contamination is present that could affect construction or maintenance of facilities. Investigations will include sampling and testing for contaminants in soil and groundwater. Site owners/operators will be interviewed to develop a history of hazardous materials use at the sites. The information will also be used in developing safe and environmentally sound practices and procedures for the SVRTC project's Construction Impact Management Plan.

Section 4.19.10, *Construction/Hazardous Materials*, discusses the design requirements, best management practices, and mitigation measures for hazardous materials discovered through a Phase Two site investigation or encountered during construction.

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