SECTION 6
Hazardous Materials

6.1 Review of Data Collected

Hazardous materials concerns within the five study zones (Zones 1 through 5) associated with the SR-710 Tunnel Technical Study were evaluated using information from the three Initial Site Assessments (ISAs) and a limited Environmental Site Assessment (ESA), as listed below. The ISAs were conducted for areas in the vicinity of the 13 geotechnical borings performed by Caltrans in Zones 1, 2, and 3, whereas the limited ESA was conducted for all five study zones. The purpose of these assessments was to identify sites within the five study zones that have potential soil or groundwater contamination that could affect geotechnical work (for example, drilling or tunneling) associated with the SR-710 Tunnel Technical Study. These assessments included reviews of electronic environmental databases, historical reference sources, and regulatory agency databases. Additionally, the ISA’s included site reconnaissance of properties in the vicinity of the boring locations.

6.1.1 Records Review Procedures

Results of the ISAs and ESA are summarized in the following project documents. The ISAs provide information specific to the boreholes in the five zones; whereas, the ESA provides overall screening of potential hazardous materials locations for all areas encompassed by Zones 1, 2, 3, 4, and 5. Because the scope of the ESA encompassed all areas within each zone, it is the primary reference used and is of more relevance to the tunneling work.

- CH2M HILL. 2009d. Environmental Site Assessment for Zones 1, 2, 3, 4, and 5 SR-710 Tunnel Technical Study. August. (included as Appendix F of this report)

The procedures used during reviews of these sources of information and site reconnaissance are further described below.

6.1.1.1 Electronic Environmental Database Reports

The ISA and the limited ESA used electronic environmental database reports that were generated by Environmental Data Resources, Inc. (EDR) to perform record searches of local, state, and federal databases in accordance with the ASTM E 1527-05 standard of practice guidance. The hazardous materials sites identified in these EDR reports were screened to
include only hazardous materials sites that were considered open or active sites by the lead regulatory agencies and sites that had affected the soil or groundwater within Zones 1 through 5.

6.1.1.2 Agency Web Site Databases

The list of hazardous materials sites from the EDR reports considered open sites with impacts to soil or groundwater within Zones 1 through 5 were then further researched on the California Regional Water Quality Control Board (RWQCB) Web site called “Geotracker” or the California Department of Toxic Substances Control (DTSC) Web site called “Envirostor.” In most cases, these Web sites provided summary information or electronic reports that detailed investigations that had occurred at the site, such as ongoing groundwater investigations, leaking underground storage tank (LUST) removal reports, or remedial action plans.

These electronic reports generally documented the site conditions, including the contaminants of concern and their respective concentrations (for example, benzene at 1,200 micrograms per liter [μg/L]). This detailed information was then included in the ISAs or the limited ESA and referenced.

6.1.1.3 Historical Reference Documents

Historical aerial photographs, topographical maps, and Sanborn maps were reviewed to assess historical land uses and identify evidence of environmental concerns in the vicinity of the proposed boring locations. Reviews of historical investigation reports and documents obtained from Envirostor and Geotracker were completed for the remaining areas within Zones 1, 2, 3, 4, and 5.

Oil and gas maps were obtained from the California Department of Conservation, Division of Oil, Gas, and Geothermal Resources to determine whether oil and/or gas wells are present within Zones 1 through 5.

6.1.2 Site Reconnaissance Procedures

As part of the ISAs, a site reconnaissance was performed at the locations of the proposed borings and the properties adjoining the borings to observe the environmental conditions of the sites and determine the current land uses. Observations from the site reconnaissance that could be of an environmental concern were recorded and included in the ISAs as applicable. No site reconnaissance was performed as part of the limited ESA.

6.2 Summary of Hazardous Materials Information

The ISAs and the limited ESA identified several sites within the five study zones that have soil and groundwater contamination issues (shown in Figure 6-1). These contaminated sites have the potential to impact the project during both the geotechnical study and construction phases.

The biggest contamination issues are the existence of the three National Priorities List (NPL) sites within Zones 1, 4, and 5. These three NPL sites (also known as Superfund sites) are the San Fernando Valley Superfund Site (Zone 1) and the San Gabriel Valley Superfund Sites identified as Area 1 (El Monte) and Area 3 (Alhambra) (Zones 4 and 5). The sites have known
groundwater contamination issues that are in various stages ranging from assessment to remediation.

Most of the groundwater contamination is due to chlorinated volatile organic compounds (VOCs) that are the result of past industrial activities in the area. Contaminated groundwater plumes have been delineated for the San Fernando Valley Superfund Site Area 4 (Pollock Field) in Zone 1 and the San Gabriel Valley Area 1 (El Monte) Superfund Site in Zone 5. However, a groundwater plume has not been delineated yet for the San Gabriel Valley Area 3 (Alhambra) Superfund Site in Zone 4. Because there is the potential of encountering the contaminated groundwater during the tunneling phase (if any of these zones is the preferred alternative), these NPL sites are considered to have a potential to impact the project. A brief summary of Superfund sites is provided below:

**Contamination in Zone 1** – Located in the northwestern end of Zone 1 within the Pollock region of the groundwater basin. USEPA implemented a containment system several years ago and began treatment in 1998.

**Contamination in Zone 4** – The contaminated site is located approximately at the southwest end of Zone 4. USEPA is currently evaluating the extent of the contamination and will subsequently complete a Record of Decision (ROD). Following completion of the ROD, the containment system and remedial design will be developed.

**Contamination in Zone 5** – The contaminated area is located at the midpoint of Zone 5 and extends in an easterly direction. USEPA is currently designing a containment system to control the movement of contaminants and anticipates construction in the next few years.

If it is suspected that groundwater associated with these NPL sites will be encountered, it is recommended that coordination with the primary federal, state, and local stakeholders occur prior to tunnel advancement. Any drill cuttings, excavated soils, and/or water generated during drilling activities should be sampled, profiled, and disposed in accordance with the relevant regulatory requirements.

In addition to the above NPL sites, there are localized groundwater contamination sites within Zones 1, 2, 3, 4, and 5 (Figure 6-1) that have the potential to impact the project during the tunneling phase depending upon the final tunnel alignment. If groundwater with suspected contamination is encountered, it is recommended that drill cuttings, excavated soils, and/or water generated during drilling activities should be sampled, profiled, and disposed in accordance with the relevant regulatory requirements.

Finally, there are sites with localized soil contamination issues within Zones 1, 2, 3, 4, and 5 that have the potential to impact the project during the tunneling phase depending upon the final tunnel alignment. Generally, the soil contamination at these sites is shallow and is comprised of metals, total petroleum hydrocarbons (TPHs), or VOCs. If the tunnel alignment encounters contaminated soil at these localized sites, it is recommended that drill cuttings or excavated soils generated during drilling activities should be sampled, profiled, and disposed in accordance with the relevant regulatory requirements.