

## 2.12 Hazardous Waste/Materials

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health, and land use.

### 2.12.1 Regulatory Setting

#### 2.12.1.1 Federal

The primary federal laws regulating to hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as “Superfund,” is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. RCRA provides for “cradle to grave” regulation of hazardous waste generated by operating entities. Other federal laws include the following.

- Community Environmental Response Facilitation Act of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act
- Atomic Energy Act
- Toxic Substances Control Act
- Federal Insecticide, Fungicide, and Rodenticide Act

In addition to the acts listed above, EO 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

#### 2.12.1.2 State

California regulates hazardous materials, waste, and substances under the authority of the California Health and Safety Code and is authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup, and emergency planning of hazardous waste. The Porter-Cologne Act also restricts disposal of wastes and requires clean-up of wastes that are below hazardous waste concentrations but could affect groundwater and surface water quality. California regulations that address waste management and prevention and clean-up of

contamination include Title 22 Division 4.5 *Environmental Health Standards for the Management of Hazardous Waste*, Title 23 *Waters*, and Title 27 *Environmental Protection*.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

## 2.12.2 Affected Environment

This section is a summary of the analysis documented in the *Initial Site Assessment (ISA) Update* prepared for the project (Blackburn Consulting 2014). The report is available on the project website at <http://8065interchange.org/>. Table 2.12-1 contains a list of technical reports related to hazardous waste and contamination that were prepared for the project.

**Table 2.12-1. Hazardous Waste/Contamination Reports Prepared for the Proposed Project**

Report	Author	Date	Type & Coverage
Initial Site Assessment (ISA) Update	Blackburn Consulting	September 2014	Comprehensive; project footprint
Radius Map with GeoTech	Environmental Data Resources, Inc.	July 2014	Agency database search, historical aerial maps and topographic maps; project footprint
Aerially Deposited Lead and Traffic Stripe Paint Site Investigation Report	Geocon Consultants	July 2008	ADL and traffic stripes; 2009 project footprint
Initial Site Assessment Eureka Road/I-80 Improvement Project	Blackburn Consulting	November 2008	Comprehensive; 2009 project footprint
Hazardous Waste Revised Evaluation for a Preliminary Environmental Analysis (PEAR) Report	Caltrans	March 2009	Comprehensive; 2009 project footprint

### 2.12.2.1 Background on Hazardous Waste/Materials Potentially Found at Project Location

The existing conditions for hazardous waste/materials presented below are potentially present at the project location, as discussed in the ISA and the other reports prepared for the project (Table 2.12-1).

#### **Site Reconnaissance and Access Limitations**

A site visit was conducted on May 9, 2013. The reconnaissance was conducted to note current land uses and potential indicators of hazardous waste/contamination within the existing and potentially expanded Caltrans right-of-way. Observation of acquisition parcels was limited to those areas visible from publicly accessible areas.

The southeast portion of APN 015-162-007 was not accessible or visually observable due to a locked gate at the end of Stonehouse Court. The Edwin Purdy House was visible from the adjacent parking lot. A power station, small office building, large garage, several vehicles, and large cargo containers were also present on the site.

### ***Aerially Deposited Lead***

Aerially deposited lead (ADL) can be found in the surface and near-surface soils along nearly all roadways because of the historical use of tetraethyl lead in motor vehicle fuels. Areas of primary concern are soils along routes that have had high vehicle emissions from large traffic volumes or congestion during the period when leaded gasoline was in use (generally prior to 1986).

Typically, ADL is found in shoulder areas and has high solubility when subjected to the low pH conditions of waste characterization tests. Shoulder soils along urban and heavily travelled rural highways are commonly above the soluble threshold limit concentration criteria.

Investigations for ADL for the proposed project along I-80 included collecting soil samples adjacent to the roadway. Results indicate that the average levels of lead found along I-80 within project limits are below levels requiring regulatory action. Soils along SR 65 and the I-80 interchange are not likely to contain significant ADL concentrations; however, the highway has been open to traffic since the mid-1980s, just before the removal of lead from automobile fuels. There is the potential that soils along the road contain elevated lead levels.

Based on a review of aerial photos and historical topographic maps, Taylor Road has been in use as a primary route since at least 1941. No soil sampling was conducted along Taylor Road as part of previous investigations. There is the potential that soils along the road contain elevated lead levels.

### ***Yellow and White Traffic Striping***

Yellow and white traffic striping and markings are located along the entire length of the I-80/SR 65/Taylor Road corridors. Caltrans studies have determined that yellow/white thermoplastic striping and painted markings may contain elevated concentrations of lead and chromium, depending on the age of the striping (manufactured before 2005) and painted markings (manufactured before 1997). Disturbing either yellow or white pavement markings by grinding or sandblasting can expose workers to lead and/or chromium.

### ***Asbestos-Containing Materials***

The National Emissions Standards for Hazardous Air Pollutants (NESHAPs) (40 CFR 61[M]) and Federal Occupational Safety and Health Administration (OSHA) classify asbestos-containing materials (ACMs) as any materials or products that contain more than 1 percent asbestos. Nonfriable ACMs are classified by the NESHAPs as either Category I or II material, including materials sometimes found in bridges, rail shims, pipes, pipe coverings, expansion joint facings, and certain cement products.

Regulated ACMs, which are a hazardous waste when friable, are classified as any materials that contain more than 1 percent asbestos by dry weight and are any of the following.

- Friable (can be crumbled, pulverized, or reduced to powder by hand pressure);
- A Category I material that has become friable;
- A Category I material that has been subjected to sanding, grinding, cutting, or abrading; or
- A Category II nonfriable material with a high probability of becoming crumbled, pulverized, or reduced to a powder during demolition or renovation activities.

Activities that disturb materials containing any amount of asbestos are subject to certain requirements of the California Division of Occupational Safety and Health (Cal/OSHA) asbestos standard found in 8 CCR 1529. Typically, removal or disturbance of more than 100 square feet of materials containing more than 1 percent asbestos must be performed by a registered asbestos abatement contractor, but associated waste labeling is not required if the materials contain 1 percent or less asbestos. When the asbestos content of materials exceeds 1 percent, virtually all requirements of the standard become effective.

Materials containing more than 1 percent asbestos are also subject to NESHAPs. Regulated ACMs (friable ACMs and nonfriable ACMs that will become friable during demolition operations) must be removed from structures before they are demolished. Certain nonfriable ACMs and materials containing 1 percent or less asbestos may remain in highway structures, such as guardrail and bridges, during demolition; however, waste handling/disposal issues and Cal/OSHA work requirements may make this cost-prohibitive. With respect to potential worker exposure, notification, and registration requirements, Cal/OSHA defines ACMs as construction materials that contain more than 1 percent asbestos (8 CCR 341.6).

Although not indicated by as-built plans, project utility openings in bridges and other structures may contain ACM.

### **Lead-Containing Paint**

Construction activities, including demolition, that disturb materials or paints containing any amount of lead are subject to certain requirements of the Cal/OSHA lead standard contained in 8 CCR 1532.1. Deteriorated paint is defined by 17 CCR 35022 as a surface coating that is crackling, chalking, flaking, chipping, peeling, not intact, failed, or otherwise separating from a component. Demolition of a deteriorating lead-containing paint (LCP) component would require waste characterization and appropriate disposal. Intact LCP on a component is currently accepted by most landfill facilities; however, contractors are responsible for segregating and characterizing waste streams before disposal.

Potential hazards exist to workers who remove or cut through LCP coatings during demolition. Dust containing hazardous concentrations of lead may be generated during scraping or cutting materials coated with LCP. Torching of these materials may produce lead oxide fumes. Therefore, air monitoring or respiratory protection may be required during the demolition of materials coated with LCP.

Although not noted in as-built plans, utility openings of bridge structures and other steel structures could be coated with LCP.

### **Treated Wood Waste**

Treated wood is wood with preservative chemicals that protect it from insect attack and fungal decay during its use. Typical uses in the highway environment include sign posts, metal beam guardrail wood posts, and lagging on retaining walls. The chemical preservatives used are hazardous and pose a risk to human health and the environment. Arsenic, chromium, copper, creosote, and pentachlorophenol are among the chemicals used. These chemicals are known to be toxic or carcinogenic. Harmful exposure to these chemicals may result from dermal contact

with treated wood waste (TWW) or from inhalation or ingestion of TWW particulate (e.g., sawdust and smoke) as this material is handled.

### ***Pole-Mounted Electrical Transformers***

Pole-mounted electrical transformers associated with overhead electrical services are located along the project alignment. Whether any of these transformers contain polychlorinated biphenyls (PCBs), which are typically associated with pole-mounted transformers, is unknown. Two PG&E/SMUD power towers are located within the proposed acquisition area near Roseville Golfland-Sunsplash.

### ***Mine Tailings at Miners Ravine***

In the ISA for the Eureka Road/I-80 Improvements Project (Blackburn 2008), mine tailings (spoils from historic mining) were identified within that project's footprint at Miners Ravine. A suggested approach to address contaminated mine spoils was recommended in that report. No evidence of mine tailings in the interchange area was identified for this project.

## **2.12.2.2 Hazardous Waste/Material Conditions by Parcel**

### ***Environmental Data Resources Database Search***

Environmental Data Resources performed a search of federal, state, and local databases for the project footprint and the surrounding area (Appendix C in the 2014 ISA). The search includes a review of county, state, and federal databases for sites located within the project area and a 1-mile radius from the approximate outline of the project area and within the project area. The records review identified three sites with potentially hazardous material conditions at or immediately adjacent to the project area: Two of the sites, Alta Sierra Body Shop and Venture Out Recreational Vehicles are located on one parcel (APN 015-162-005). The third site is Roseville Golfland-Sunsplash (APN 015-450-079). These sites and their potential hazards are described below.

### ***APN 015-162-007 (full acquisition) Stonehouse Court***

Project plans include full acquisition of this parcel. Review of historical aerial photography and fence line reconnaissance shows a residence at the end of Stonehouse Court. The southeast portion of APN 015-162-007 was not accessible or visually observable due to a locked gate at the end of Stonehouse Court. The Edwin Purdy House was visible from the adjacent parking lot. A power station, small office building, large garage, several vehicles, and large cargo containers were also present on the site. Real estate records indicate that the home was built in 1928. Common issues associated with homes of this era include ACM, LBP, leach fields, septic tanks, and heating oil tanks. Acquisition of this parcel is included in all three build alternatives.

### ***APN 015-162-005 (adjacent parcel) Alta Sierra Body Shop/Venture Out Recreational Vehicles***

There are no plans to acquire any portion of this parcel; however, the parcel is immediately adjacent to the project footprint for all three build alternatives. Alta Sierra Body Shop is located at 2020 Taylor Road and is listed in the HIST UST database (the State hazardous substance storage container database). Six registered underground storage tanks (USTs) are listed for this site, including two 1,000-gallon unleaded gasoline tanks and four 1,000-gallon regular gasoline tanks that were installed in 1971. No violations are noted in the searched records.

Also located at 2020 Taylor Road, Venture Out Recreational Vehicles is listed in the HIST UST, HIST CORTESE, and LUST (leaking underground storage tank) databases. A gasoline release was discovered in a LUST in 1990. No information on the quantity of release or corrective action was noted in the file. The release was listed as “soil only,” and the case was closed in 1992.

**APN 015-450-079 (partial acquisition): Roseville Golfland-Sunsplash**

A portion of this parcel would be acquired as part of the proposed project for Alternatives 2 and 3. This parcel is developed as Roseville Golfland-Sunsplash. A 1,000-gallon aboveground storage tank (AST) is located between the parking structure and the racetrack and is stored within a spill containment area. No unauthorized releases have been reported.

### 2.12.3 Environmental Consequences

The ISA and site investigation reports identified the following potentially hazardous materials/waste conditions.

- Contamination associated with traffic or roadway maintenance:
  - Based on review of aerial photos and historic topographic maps, Taylor Road has been in use as a primary route since at least 1941. Therefore, it is possible that ADL at levels exceeding hazardous waste criteria could occur in soils along Taylor Road within the project area;
  - The I-80/SR 65 interchange has been open to traffic since the mid-1980s. Therefore, it is possible that ADL could occur in soils along the I-80 and SR 65 interchange within the project area; and
  - Lead or chromium associated with removal of existing yellow/white traffic striping.
- Potential contamination associated with removal or modification of facilities or structures:
  - ACM may be encountered during demolition;
  - LCP associated with steel structures or utility openings may be encountered during demolition;
  - TWW may be encountered during demolition;
  - PCBs or other hazardous materials may be associated with removal or relocation of power towers; and
  - Potential hazardous materials may be associated with historic homes (e.g., ACM, LCP, leach fields, septic tanks, and heating oil).
- Contamination associated with identified potentially hazardous waste facilities:
  - Past soil contamination due to a gasoline release from a LUST located on an adjacent parcel;
  - Six USTs, including two 1,000-gallon unleaded gasoline tanks and four 1,000-gallon regular gasoline tanks located on adjacent parcel; and
  - A 1,000-gallon AST on a partial acquisition parcel for Alternatives 2 and 3.

The following environmental consequences may result from construction and operation of the project.

### **2.12.3.1 Build Alternatives**

#### ***Soil Contamination***

##### *All Build Alternatives*

Humans and the environment could be exposed to soil contamination during construction activities under all build alternatives. Six USTs are located at Alta Sierra Body Shop (APN 015-162-005), including two 1,000-gallon unleaded gasoline tanks and four 1,000-gallon regular gasoline tanks. All are registered, and no violations were noted in the searched records. The risk of hazardous materials impacts associated with this business is low.

APN 015-162-005 is also the site of a gasoline release documented in 1990 as a result of a LUST associated with Venture Out Recreational Vehicles. No information on the quantity of release or corrective action was noted in the file. The release was listed as “soil only,” and the case was closed in 1992. Acquisition of this parcel is not a part of the proposed project; it is immediately adjacent to the project limits for all three build alternatives. Although the Venture Out Recreational Vehicles case is considered closed, soil testing for contaminants will be necessary to determine the extent and nature of possible contamination. During construction of the project, the potential for human exposure (i.e., construction workers) to existing contaminated soils would occur mainly during soil-disturbing activities nearby.

Mine tailings (spoils from historic mining) were identified at Miners Ravine. However, no evidence of mine tailings was identified in the interchange area for this project. As a result, impacts on soil or groundwater involving mine tailings is low.

##### *Alternatives 2 and 3*

In addition to the above, humans and the environment could be exposed to soil contamination during construction activities for Alternatives 2 and 3. A 1,000-gallon AST located at Roseville Golfland-Sunsplash parcel (APN 015-450-079) sits between the parking structure and the racetrack and is stored within a spill containment area. No unauthorized releases have been reported. Due to the distance of the AST from the acquisition area and its location within a spill containment area, the risk of hazardous material impacts on the proposed acquisition area is low.

#### ***Unknown Hazardous Materials***

##### *All Build Alternatives*

The potential exists under all build alternatives for exposure of construction workers or nearby sensitive land uses to *previously unknown* hazardous materials during construction activities. The project area generally has a moderate risk of previously unreported hazardous materials that could be discovered during construction of any of the build alternatives. All three build alternatives include full acquisition of APN 015-162-007 (Edwin Purdy House). The southeast portion of this parcel was not accessible or visually observable due to a locked gate at the end of Stonehouse Court. The Edwin Purdy House was visible from the adjacent parking lot. A power station, small office building, large garage, several vehicles, and large cargo containers were also

present on the site. Review of historical aerial photography and fence line reconnaissance shows a residence at the end of Stonehouse Court, and real estate records indicate that the house was built in 1928. Common issues associated with homes of this era include ACM, LCP, leach fields, septic tanks, and heating oil tanks. During construction of the project, the potential for human exposure (i.e., construction workers) to potentially hazardous materials would occur mainly during demolition of existing structures and/or soil-disturbing activities.

### **Other Known Hazardous Materials**

#### All Build Alternatives

The project area generally has the potential for hazardous materials in the form of ADL along Taylor Road; lead or chromium in yellow/white pavement striping; TWW associated with metal beam guardrail posts; ACM in various bridge components; PCBs in pole-mounted transformers, LCP in utility openings or on steel structures, and gasoline-contaminated soil that could be encountered or released during construction of any of the build alternatives unless measures are taken to avoid that release. Construction workers could be exposed to hazardous materials during ground-disturbing activities such as grading, demolition/replacement of structures, and/or roadbed resurfacing at any of the areas known to contain hazardous substances.

### **Release of Hazardous Materials**

#### All Build Alternatives

Humans and the environment could be exposed to hazardous conditions from the accidental release of hazardous materials during construction activities. Construction would involve the use of heavy equipment, involving small quantities of hazardous materials (e.g., petroleum and other chemicals used to operate and maintain construction equipment) that may result in hazardous conditions in the project area. These hazards are applicable to any of the build alternatives.

#### **2.12.3.2 No Build Alternative**

No construction would take place under the No Build Alternative; therefore, there would be no potential to expose workers or nearby land uses to soil contamination or hazardous materials from construction activities. The No Build Alternative would not result in right-of-way acquisition or construction disturbance. Therefore, this alternative would not result in any direct effect regarding hazardous sites.

### **2.12.4 Avoidance, Minimization, and/or Mitigation Measures**

#### **Conduct Site Assessment**

The project proponent will conduct additional site assessments of the road right-of-way adjacent to APN 015-162-005 prior to construction, and of 015-162-007 prior to acquisition and construction, to determine the extent and nature of possible contamination and implement appropriate avoidance or remediation measures according to state and federal regulations. Additional assessment of 015-162-007, private property proposed for acquisition, was not possible during the preparation of the environmental document because landowner permission

was not available. To reduce the potential of encountering unexpected contamination, further assessment will include obtaining additional information about the contamination history of the parcels, conducting a site inspection and owner interview, and review of local agency files.

### **Develop and Implement Plans to Address Worker Health and Safety**

As necessary, and as required by Caltrans and federal and state regulations, plans such as a health and safety plan, BMPs, and/or an injury and illness prevention plan will be prepared and implemented to address worker safety when working with potentially hazardous materials, including potential ACMs, LCPs, TWW, lead or chromium in traffic stripes, ADL, and other construction-related materials within the right-of-way during any soil-disturbing activity.

If project components are removed that may contain TWW (e.g., sign posts, metal beam guardrail wood posts, and lagging on retaining walls), the contractor must prepare and submit a safety and health work practices plan for handling TWW approved by an American Board of Industrial Hygiene Certified Industrial Hygienist. TWW must be disposed of in an approved TWW facility. Construction workers who handle this material must be provided training that includes the following.

- All applicable requirements of Title 8 CCR;
- Procedures for identifying and segregating TWW;
- Safe handling practices;
- Requirements of Title 22 CCR, Division 4.5, Chapter 34; and
- Proper disposal methods.

### **Coordinate with Utility Companies for Relocation of Towers**

Discussions with the utility companies has been initiated and both SMUD and PG&E have provided as-built drawings and clearance requirements. Before removal or relocation of the two PG&E/SMUD power towers located within the proposed acquisition area near Roseville Golfland-Sunplash, utility owners will check the pole-mounted transformers for the presence of PCBs or other hazardous materials. If PCBs or other hazardous materials are present, the utility owner will handle remediation and disposal according to federal and state regulations. Identification and remediation of old transformers is the responsibility of the utility owner. Therefore, coordination between the construction contractor and power companies will occur before project activities involving the power towers commence.

### **Conduct Sampling, Testing, Removal, Storage, Transportation, and Disposal of Yellow/White Traffic Striping along Existing Roadways**

As required by Caltrans' standard special provisions, the construction contractor will sample and test yellow/white traffic striping scheduled for removal to determine whether lead or chromium is present. All aspects of the project associated with removal, storage, transportation, and disposal will be in strict accordance with appropriate regulations of the California Health and Safety Code. The stripes will be disposed of at a Class 1 disposal facility. The responsibility of

implementing this measure will be outlined in the contract between Caltrans and the construction contractor. Implementing this measure will minimize potential effects from these hazardous materials.

### **Perform Soil Testing and Dispose of Soils Contaminated with ADL Appropriately**

Soil testing for ADL contamination will be conducted in the project area along I-80, SR 65, and Taylor Road prior to construction work.

Soils in the project limits identified as having hazardous levels of ADL will be disposed of or reused according to federal and state regulations. Soils within the right-of-way that contain hazardous waste concentrations of ADL may be reused under the authority of variances issued by the California Department of Toxic Substances Control. These variances include stockpiling, transporting, and reusing soils with concentrations of lead below maximum allowable levels in the project right-of-way. Stockpiling, transporting and reusing of soil will also be conducted following Caltrans' standard special provisions.

### **Develop a Lead and Asbestos Abatement Plan**

If structures are to be removed or renovated as part of the project, a hazardous materials survey will be conducted prior to demolition or significant renovation. If lead or asbestos is found in these structures, an abatement plan will be developed prior to removal or renovation. The abatement plan will provide for a California-certified asbestos consultant and California Department of Health Services–certified lead project designer to prepare hazardous materials specifications for abatement of the ACM and LCP. This specification should be the basis for selecting qualified contractors to perform the proposed asbestos and lead abatement work. Caltrans will retain a California-licensed asbestos abatement contractor to perform the abatement of any asbestos-containing construction materials and LCP deemed potentially hazardous. Abatement of hazardous building materials will be completed prior to any work on these structures.

## **2.12.5 References Cited**

Blackburn Consulting. 2014. *Initial Site Assessment (ISA) Update – Interstate 80/State Route 65 Interchange (80/65 IC) Improvement Project*. Prepared for CH2M HILL. September.