

## **4.4 PUBLIC HEALTH AND SAFETY**

## 4.4 PUBLIC HEALTH AND SAFETY

This section describes public health and safety issues associated with hazardous materials<sup>1</sup> at the project site. Hazardous materials are known to be present in areas of surface and subsurface soils and groundwater at the project site as a result of historical releases from former service stations. The presence of hazardous materials at the project site could potentially expose workers or the general public to various health risks during and/or following future site development.

Potential hazardous material issues at the site were evaluated in a Phase I environmental site assessment (Phase I) (BASELINE, 2004). The findings of the Phase I investigation are summarized below. Mitigation measures are suggested, where appropriate, for potential hazardous materials impacts identified during the Phase I site assessment to reduce anticipated future impacts to a less-than-significant level.

### SETTING

The scope of work for the Phase I at the project site included a review of historical land use information, including previous environmental reports, topographic maps, and aerial photographs; a site reconnaissance; interviews with persons familiar with the project site; and a review of federal, state, and local regulatory agency files and databases (BASELINE, 2004).

In 1937, the date of the first available aerial photograph reviewed for the Phase I, the entire project site and vicinity were used for agriculture. The southwestern corner of the project site was part of a tree-bordered pasture, while the rest of the site appeared to be used for agricultural cultivation of row or field crops. In 1939, Karl A. Hess relocated his "Milk Farm" ranch and rental cabins for travelers to the project site (Dixon Chamber of Commerce, 2004). The Milk Farm property was expanded to include a restaurant, service station, pony rides, and other attractions to serve travelers. The Gill Dairy, with 500 cows, was established at the Milk Farm, but the dairy operation was ended after World War II (Dixon Chamber of Commerce, 2004).

By 1957, the date of the next available aerial photograph, several buildings, including the Milk Farm restaurant and three service stations (Ike's Landscaping, Morgan's fruit stand,

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<sup>1</sup> The California Health and Safety Code defines a hazardous material as "...any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment." (Health and Safety Code Section 25501)

and Unnamed sites on Figure 4.4-1) were present at the project site. Between 1957 and 1965, two additional gasoline stations (former Texaco and Exxon stations on Figure 4.4-1) were built in the southwestern portion of the project site. Four wastewater ponds, used by businesses and residences at the project site, had been constructed at their current location in the north-central portion of the project site by this time.

By 1970, one of the service stations in the northeast portion of the project site (Unnamed Service Station on Figure 4.4-1) appeared to have been abandoned. The Milk Farm restaurant and other former gasoline stations on Milk Farm Road were abandoned during the 1980s and 1990s; these structures were demolished in January 2000 (Daily Republic, 2004).

Based on the Phase I, three potential hazardous materials issues were identified at the project site: 1) agricultural chemical residues and metals in soils and sediments in drainage ditches and wastewater treatment ponds; 2) releases of petroleum hydrocarbons and related compounds to soil and groundwater from former service stations; and 3) the presence of asbestos-containing building materials, lead-based paint, and other hazardous materials that may be released during future demolition of the buildings on the project site as part of future site development. Each of those issues is discussed in more detail below. Historical sources of hazardous materials identified during the Phase I are shown on Figure 4.4-1.

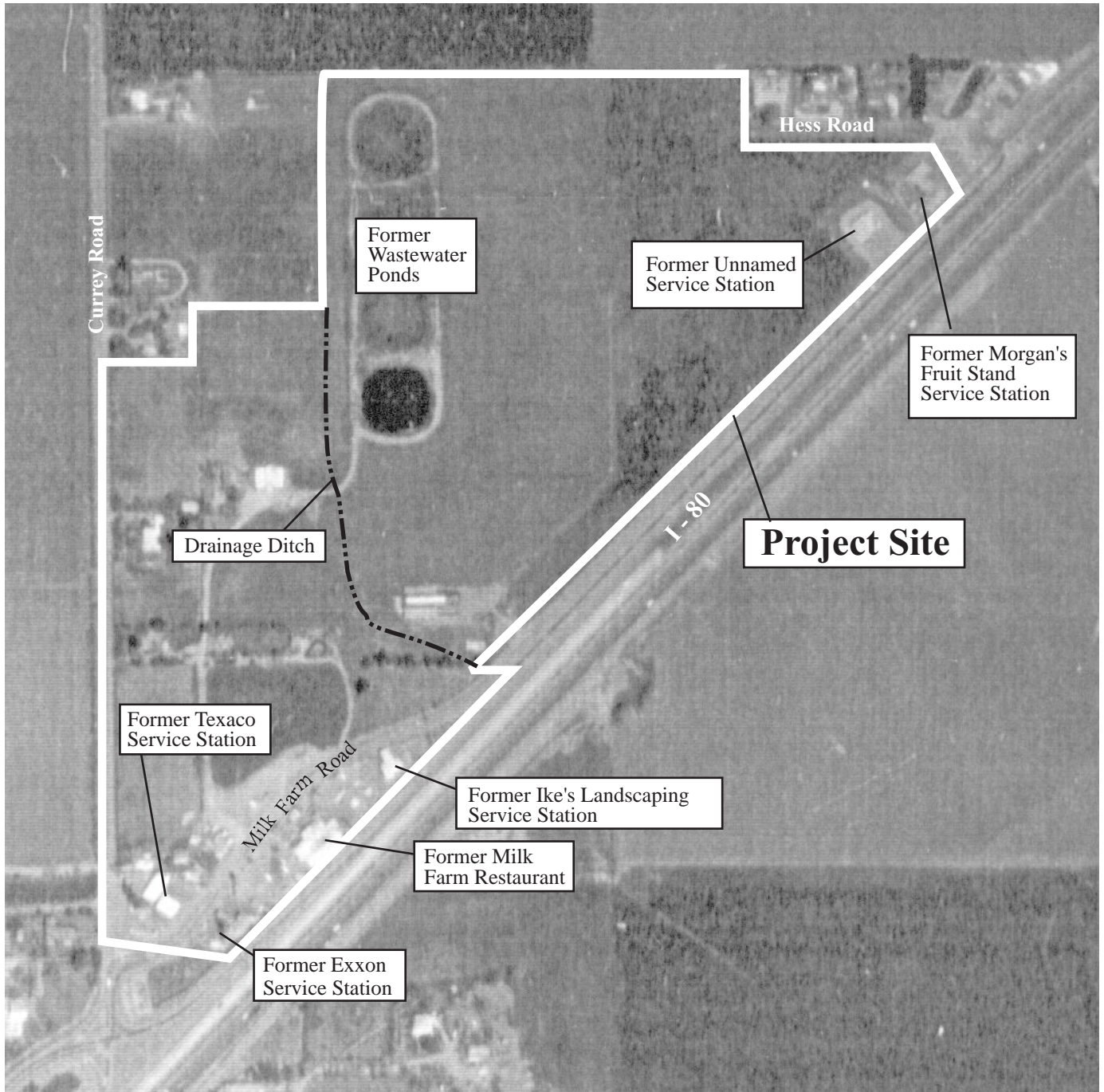
### **Drainage Ditches and Wastewater Ponds**

The project site and vicinity have been used for agriculture since at least 1937. Most agricultural chemicals in use today have short persistence, and quickly degrade into less toxic compounds. Some classes of agricultural chemicals commonly used in the past, however, such as organochlorine pesticides and inorganic compounds, can leave residues in shallow soils that persist for decades. If these classes of agricultural chemicals were used on the project site, agricultural chemical residues could potentially be present in shallow soils at the site.

Since at least 1965, the majority of the project site was used for pastureland. Pastureland is a relatively low intensity agricultural use that is not associated with significant agricultural chemical application. Soils within former pastureland would not be expected to contain concentrations of agricultural chemical residues exceeding health and safety thresholds for commercial land uses. However, soils containing agricultural chemical residues could be entrained in runoff from the site and adjoining parcels, and these soils may accumulate in drainage ditches and wastewater ponds on the project site.

# HISTORICAL SOURCES OF HAZARDOUS MATERIALS (1970 AERIAL PHOTOGRAPH)

Figure 4.4-1



## Milk Farm Dixon, California

Source: 1970 Aerial photograph from Phase I Investigation (BASELINE 2004).



Biosolids present in sediments in the wastewater ponds may also have elevated concentrations of heavy metals. Therefore, soils and sediments in drainage ditches and wastewater ponds at the site could potentially contain higher concentrations of agricultural chemical residues and metals, which may have the potential to affect construction workers and/or require special soil management procedures during site development.

### **Former Service Stations**

Five service stations were historically present at the project site (Figure 4.4-1). Four of those service stations have reported releases from underground petroleum storage tanks (USTs), and are currently or have previously been under regulatory oversight. The fifth gasoline station (Unnamed Service Station on Figure 4.4-1), in the northeastern portion of the project site, was abandoned prior to routine regulatory oversight of UST removals. The USTs at the fifth site have been removed, and based on information collected by SCDEH staff, it appears that no significant releases from the USTs at the fifth site occurred while they were in operation (Kaltreider, 2004).

Two of the four remaining service station sites (Ike's Landscaping and Exxon sites on Figure 4.4-1) have been issued No Further Action letters by SCDEH (1997, 2001), but the two remaining sites (former Texaco Station and Morgan's fruit stand sites on Figure 4.4-1) remain under active SCDEH oversight. Results from the most recent groundwater monitoring investigation reviewed for the Phase I, from November 2002, indicated that total petroleum hydrocarbons as gasoline, benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl-tert-butyl-ether (MTBE) are present in groundwater at the Texaco and Morgan's fruit stand sites. Benzene, the compound of greatest potential human health concern, was present in groundwater at concentrations up to 0.019 milligram per liter (mg/L) at the Texaco site and up to 0.24 mg/L at the Morgan's fruit stand site (Geocon, 2002a, 2002b). These concentrations are below Environmental Screening Levels (ESLs) for the indoor air pathway for commercial properties (RWQCB, 2003). ESLs, developed by the San Francisco Bay Regional Water Quality Control Board (RWQCB), are conservative screening levels developed for use in identifying potential environmental concerns at a site; groundwater containing concentrations below ESLs would not be expected to pose a risk to future building occupants. However, the groundwater concentrations are above water quality objectives established for the site by SCDEH.

In August 2004, Geocon Consultants submitted work plans to SCDEH to perform additional remediation at the Texaco station and Morgan's fruit stand sites (SCDEH, 2004). The plans propose to excavate impacted soil in the vicinity of the former tanks, dispenser islands, and a former waste oil tank. Soils exceeding risk-based thresholds for commercial

land uses would be removed. Approximately 1,000 cubic yards of petroleum-affected soil may require removal at the two sites (Carlton Engineering, 2001).

SCDEH approved the work plans for remedial activities on 20 October 2004 (SCDEH, 2004). In their approval, SCDEH indicated that the implementation of the work plans would address residual soil impacts from the site, but would not necessarily address groundwater impacts. SCDEH stated that additional groundwater monitoring and possible groundwater remediation would be required at the sites to verify that water quality objectives would be met within a reasonable time frame (SCDEH, 2004).

Following completion of proposed soil removal activities, residual contamination would be present in soils at all of the former gasoline stations at the project site. SCDEH staff indicated that additional measures, including implementation of a soil management plan and site management plan, would be required during any construction activities with the potential to encounter this residual contamination (Kaltreider, 2004).

### **Lead, Asbestos, and Other Hazardous Materials in Buildings**

As most of the buildings on the project site were constructed prior to the 1980s, there may be a potential for lead and asbestos to be present in building materials at the site. Prior to 1978, lead compounds were commonly used in interior and exterior paints. Prior to the 1980s, building materials often contained asbestos fibers, which were used to provide strength and fire resistance. Demolition or renovation of buildings on the project site has the potential to release lead particles, asbestos fibers, and/or other hazardous materials to the air where they may be inhaled by construction workers and the general public. In addition, other common items, such as fluorescent lighting and thermostats, can contain hazardous materials, such as mercury and polychlorinated biphenyls (PCBs), that could be released during demolition activities. Proper handling and disposal of these hazardous materials would be the responsibility of the project site property owner, who would be considered the generator of the hazardous wastes that result from removal of these items.

## **REGULATORY FRAMEWORK**

In California, U.S. EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (Cal EPA). In turn, a local agency, the Solano County Department of Environmental Health (SCDEH), has been granted responsibility for implementation and enforcement of many hazardous materials regulations in Solano County under the Certified Unified Program Agency (CUPA) program (California Health and Safety Code Chapter 6.11).

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Oversight for investigation and remediation of sites affected by hazardous materials releases can be performed by state agencies, such as the Department of Toxic Substances Control (DTSC), regional agencies, such as the Regional Water Quality Control Board (RWQCB), or local agencies, such as the SCDEH. Oversight of many contaminated sites in Solano County, such as those associated with leaking underground storage tanks, is performed by SCDEH. At the project site, SCDEH has conducted oversight over remedial activities for hazardous materials releases at former gasoline stations. It is expected that SCDEH will continue to be involved with investigation and remediation of hazardous materials issues in the project area. The Dixon Fire Department provides emergency response to hazardous materials incidents in the city of Dixon.

### Dixon General Plan Policies

The Dixon General Plan includes one policy relevant to general hazards and public safety issues (Dixon, 1993). The policy applicable to this project is identified in the Natural Environment Element:

Dixon General Plan Policy	Project Consistency
NATURAL ENVIRONMENT	
<b>23:</b> The City shall use zoning and other land use regulations to control, and in some instances prohibit, development in hazardous areas. The extent of development limitation will be commensurate both with the degree of hazard involved and with the public costs which would be incurred if emergency or remedial public actions became necessary.	Any future site development would be consistent with this policy since any remediation of contamination and risk management activities on the site would be managed in accordance with the requirements of the local regulatory agency for the protection of public health and the environment.

## IMPACTS AND MITIGATION MEASURES

### Significance Criteria

Based on the Environmental Checklist in Appendix G of the CEQA Guidelines, a proposed project could be considered to have significant impacts to public health and safety if it would:

- Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

- Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment.
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area.
- For a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area.
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.
- Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

### **Impacts Determined to Be Less than Significant**

- **Hazardous emissions or materials within one-quarter mile of an existing or proposed school.**

The project is not within one-quarter mile of a school.

- **Safety hazards related to a nearby public or private airport.**

The project is not within an airport land use plan or within two miles of an airport.

- **Interfere with an adopted emergency response or evacuation plan.**

Based on the analysis for the project Initial Study, planned development would not be expected to interfere with any emergency response plans.

- **Expose people or structures to wildland fires.**

The project is located in an area of intensive, irrigated agricultural land not subject to wildfires.



### **Impacts Determined to Be Potentially Significant**

- Hazards related to the reported presence of on-site hazardous materials from listed hazardous materials sites (former service stations) and other historical land uses (wastewater ponds and drainage ditches) and on-going remediation activities;
- Hazards to construction workers related to the routine transport, use, or disposal of hazardous materials during construction and site operation; and
- Hazards related to the accidental release of hazardous materials into the environment from hazardous materials contained in on-site building materials during site development or following completion of construction.

### **Anticipated Future Impact 4.4-1**

**Development of the project may interfere with investigation and remediation of listed hazardous materials sites. This is a potentially significant impact.**

Proposed development of the project site could result in construction activities at five former leaking underground storage tank sites, two of which remain under active regulatory oversight. If the future development occurred prior to the completion of remediation and post-remedial monitoring, it could potentially interfere with remedial activities by destroying groundwater monitoring wells or covering contamination source areas with buildings and other impermeable surfaces or agricultural activities. If future development hinders site investigation and cleanup, remediation efforts may be adversely affected and future effects to public health and safety may occur. While the applicant has committed to complete remediation of existing contamination and phase future development to accommodate site remediation activities, it is possible that long-term groundwater monitoring may be required, which will in and of itself not hinder future development, but would need to be accommodated by future site development.

#### ***Anticipated Future Mitigation Measure 4.4-1***

*Prior to regulatory closure of the leaking underground sites, written approval from SCDEH shall be required for all future construction and grading in those areas to ensure that future development activities do not interfere with investigation or remedial activities. The SCDEH may require modification or replacement of existing groundwater monitoring wells or other actions, as necessary, to ensure that investigation and remediation of historic contamination is not affected by project development.*

Implementation of the mitigation measure above would reduce this anticipated future impact to a less-than-significant level.

## **Anticipated Future Impact 4.4-2**

**Future development could expose construction workers to hazardous materials during construction activities at the project site. This is a potentially significant impact.**

Proposed remediation activities at the leaking underground tank sites would remove contaminated soil from the project site; however, some contamination may remain above background levels. In addition, soils and sediments in wastewater ponds and drainage ditches at the project site may contain agricultural chemical residues and/or metals at concentrations that could pose a health risk to construction workers and future site users.

It is therefore possible that construction workers would come into contact with contaminated soils and groundwater during future development of the project site. Concentrations of agricultural chemicals and metals in drainage ditches and wastewater ponds at the project site have not been investigated as of the date of preparation of this EIR. Analytical data, when available, should be compared to U.S. EPA, Region IX, Preliminary Remediation Goals (PRGs) (U.S. EPA, 2004) for residential and commercial/industrial uses. PRGs are risk-based concentrations that are intended to assist in initial screening-level evaluations of environmental data. Generally, if contaminants are present in soil below the PRGs for the respective land use scenario, there is no expected adverse health effects to future land users from residual soil contamination found in the subsurface.

The PRGs have been developed to ensure that concentrations of carcinogens do not result in an excess carcinogenic risk of one in one million ( $1 \times 10^{-6}$ ) and a non-carcinogenic risk above a hazard index of 1.0. Exceedance of PRGs does not necessarily mean that the soils and sediments may pose a health risk, but may indicate that additional investigation and/or remediation of a site may be warranted.

### ***Anticipated Future Mitigation Measure 4.4-2a***

*A Phase II soil investigation shall be performed prior to issuance of development permits at project site drainage ditch(es) and wastewater ponds, in accordance with recommendations of the Phase I investigation. If remediation is required to reduce risks to public health and the environment, and the remediation results in residual contamination on the site, a Risk Management Plan (RMP) shall be prepared for the project site (Mitigation Measure 4.4-2b). If residual contaminants remain on-site above PRGs for residential land uses, measures must be incorporated into the RMP to ensure that any potential added health risks to future site users as a result of hazardous materials being present are reduced to a level acceptable to the applicable regulatory oversight agency. The potential risks to human health may be reduced either by remediation (e.g., excavation/extraction and off-site disposal) and/or implementation of institutional controls and engineering controls. Institutional controls and engineering*

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*controls may include the use of hardscape (buildings and pavements), importation of clean soil in landscaped areas to eliminate exposure pathways, and/or deed restrictions.*

##### ***Anticipated Future Mitigation Measure 4.4-2b***

*An RMP shall be prepared prior to issuance of development permits at the project site to address the safe management and disposal of hazardous materials that may be encountered during project construction. The RMP shall include a site-specific Health and Safety Plan (HSP) for construction activities, which shall be prepared for the project by a qualified industrial hygienist. At a minimum, the HSP shall summarize information collected in environmental investigations for the project site, including soil and groundwater quality data; establish soil and groundwater mitigation and control specifications for grading and construction activities, including health and safety provisions for monitoring exposure to construction workers and the general public; provide procedures to be undertaken in the event that previously unreported contamination is discovered; incorporate construction safety measures for excavation activities; establish procedures for the safe storage and use of hazardous materials at the project site, if necessary; provide emergency response procedures; and designate personnel responsible for implementation of the HSP.*

*Coordination with SCDEH shall be performed, as required, to ensure that provisions of the RMP do not interfere with remediation of former underground storage tank locations at the site. If necessary, the RMP shall include procedures for managing soils and groundwater removed from the site to ensure that any excavated soils and/or dewatered groundwater with contaminants are stored, managed, and disposed of safely, in accordance with applicable regulations. The RMP shall be submitted to SCDEH for review and approval.*

Implementation of the mitigation measures above would reduce this anticipated future impact to a less-than-significant level.

##### **Anticipated Future Impact 4.4-3**

**The improper use, storage, or transport of hazardous materials during future construction activities could result in releases affecting construction workers, the general public, and/or the environment. This is a potentially significant impact.**

Future development of the project site would involve the use and transport of hazardous materials. These materials could include contaminated soil and/or groundwater and fuels, oils, and other chemicals typically used during the construction activities. Removal, relocation, or transportation of hazardous materials could result in accidental releases or spills and associated health risks to workers, the public, and the environment.

***Anticipated Future Mitigation Measure 4.4-3***

*The RMP, described in Mitigation Measure 4.4-2b, shall establish procedures for the safe storage and use of hazardous materials at the project site, as applicable; provide emergency response procedures in the case of a hazardous materials release; and designate personnel responsible for implementation of the plans.*

Implementation of the mitigation measure above would reduce this anticipated future impact to a less-than-significant level.

**Anticipated Future Impact 4.4-4**

**Demolition of any structures containing lead-based paint, asbestos-containing building materials during future site development, or other hazardous materials could release airborne particles of hazardous materials, which may affect construction workers and the public. This is a potentially significant impact.**

Exposure to lead particles and asbestos fibers generated during future demolition activities may potentially result in serious health risks. Federal, state, and local requirements govern the abatement of lead-based paint and removal of asbestos or suspected asbestos-containing materials, including special construction worker health and safety standards for sites where lead and/or asbestos may be present. Other regulations require the proper handling and disposal of hazardous wastes. These requirements are promulgated by federal and state agencies and the YSAQMD.

***Anticipated Future Mitigation Measure 4.4-4***

*As a condition of approval for any future demolition permit for a structure constructed prior to 1985 at the project site, a lead-based paint and asbestos-containing material survey shall be performed at the structure by a qualified environmental professional. Based on the findings of the survey, all loose and peeling lead-based paint and identified asbestos hazards shall be abated by a certified contractor in accordance with federal and state requirements. Federal and state construction worker health and safety regulations shall be required during renovation or demolition activities, and any required worker health and safety procedures shall be incorporated into the HSP for the project (Mitigation Measure 4.4-2b). If loose or peeling lead-based paint were identified, it shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. Other hazardous wastes generated during future demolition activities, such as fluorescent light tubes and mercury switches, shall be managed and disposed of in accordance with existing hazardous waste regulations.*

Implementation of the mitigation measure above would reduce this anticipated future impact to a less-than-significant level.

#### **Anticipated Future Impact 4.4-5**

**Improper use, storage, or transport of hazardous materials by future businesses at the project site could result in releases affecting workers, the general public, and/or the environment. This is a potentially significant impact.**

A portion of the project site could include future industrial and research and development uses. It is possible that future activities at the project site would involve the use, handling, and storage of hazardous materials. Fertilizers, pesticides, and herbicides used for future landscaping may be used and possibly stored at the project site. Other potentially hazardous materials associated with new industrial or commercial uses may be introduced to the project area after development; such materials could be stored and transported in the project area. Hazardous material use, storage, or transport following redevelopment could potentially affect future site users and/or the environment.

Future businesses at the project site using, storing, or disposing of hazardous materials would require that the business comply with requirements for managing hazardous materials. These plans include the primary hazardous materials programs administered by SCDEH (CUPA Plans, Programs, and Permits) as well as other requirements of state and federal laws and regulations. Depending on the type and quantity of hazardous materials, these requirements could include the preparation of, implementation of, and training in the following plans, programs, and permits:

#### ***CUPA Plans, Programs, and Permits***

- **Hazardous Waste Generator Requirements.** Facilities that generate more than 100 kilograms per month of hazardous waste, or more than 1 kilogram per month of acutely hazardous waste, must be registered in accordance with the Resource Conservation and Recovery Act (RCRA) (Title 42, U.S. Code, Sections 6901 *et seq.*).
- **Aboveground and Underground Storage Tank Permits.** Facilities with aboveground or underground storage tanks must be permitted. Other plans, such as a Spill Prevention Control and Countermeasures Program, may be required depending on the size, location, and contents of the tank(s).
- **Hazardous Materials Business Plan (Business Plan).** Facilities that use, store, or handle hazardous materials in quantities greater than 500 pounds, 55 gallons, or 200

cubic feet are required to prepare a Business Plan. The Business Plan should contain facility maps, up-to-date inventories of all hazardous materials for each shop/area, emergency response procedures, equipment, and employee training.

- Hazardous Material Release Response Plan (Contingency Plan). All facilities that generate hazardous waste must prepare a Contingency Plan. The Contingency Plan identifies the duties of the facility emergency coordinator, identification and location of emergency equipment, and also includes reporting procedures for the facility emergency coordinator to follow after a hazardous materials incident.
- California Accidental Release Program (CalARP). Businesses that use significant quantities of acutely hazardous materials must prepare a detailed engineering analysis of the potential accident factors present at a business and the mitigation measures that can be implemented to reduce this accident potential.

#### *Non-CUPA Plans, Programs, and Permits*

- Injury and Illness Prevention Plan. The California General Industry Safety Order requires that all employers in California shall prepare and implement an Injury and Illness Prevention Plan, which should contain a code of safe practices for each job category, methods for informing workers of hazards, and procedures for correcting identified hazards.
- Emergency Action Plan. The California General Industry Safety Order requires that all employers in California prepare and implement an Emergency Action Plan. The Emergency Action Plan designates employee responsibilities, evacuation procedures and routes, alarm systems, and training procedures.
- Fire Prevention Plan. The California General Industry Safety Order requires that all employers in California prepare and implement a Fire Prevention Plan. The Fire Prevention Plan specifies areas of potential hazard, persons responsible for maintenance of fire prevention equipment or systems, fire prevention housekeeping procedures, and fire hazard training procedures.
- Hazard Communication Plan. Facilities involved in the use, storage, and handling of hazardous materials are required to prepare a Hazard Communication program. The purpose of the Hazard Communication program is to provide methods on safe handling practices for hazardous materials, ensure proper labeling of hazardous materials containers, and ensure employee access to Material Safety Data Sheets (MSDS).

***Anticipated Future Mitigation Measure 4.4-5***

*Adherence to the applicable federal, state, and local laws and regulations that have been cited would reduce this impact to a less-than-significant level.*

Implementation of the mitigation measure above would reduce this anticipated future impact to a less-than-significant level.