

## 4.5 HAZARDS and HAZARDOUS MATERIALS

This section discusses potential impacts relating to soil and groundwater contamination. The analysis is based upon the findings of Phase I and II Environmental Site Assessments (ESAs) for the proposed Specific Plan by Earth Systems Southern California (November 2005) and Earthsystems Southwest (November 2006). The findings of the reports were also peer reviewed by Rincon Consultants, Inc. The Phase I ESA investigates the potential for recognized environmental conditions that warrant further investigation. The Phase I ESA included a limited site reconnaissance, regulatory agency database review, site use history research, and preparation of the report. The Phase II ESA included exploration of the recognized environmental conditions that were identified in the Phase I ESA. The Phase II ESA included 99 soil samples for laboratory analysis, eight borings, and a geophysical survey with subsequent analysis and preparation of a report. The Phase II ESA identified soil contamination relative to former agricultural uses and recommended measures to reduce the potential for adverse effects to a level that is less than significant. These documents are incorporated by reference and are available for review at the City of Ventura Community Development Department.

### 4.7.1 Setting

The plan area consists of approximately 66.7 acres located at the southwest corner of Telegraph Road and Wells Road. The plan area is currently utilized for agricultural operations, including cultivation of row crops and flowers.

**a. History and Phase I and II Results.** The plan area is located on lands that historically have been and continue to be used for agricultural production. The majority of the plan area consists of orchards and agricultural fields from at least 1938. The Phase I ESA conducted for the plan area indicates that agricultural chemicals are currently used and stored on the property. As discussed above, a Phase II ESA was completed to identify soil conditions. That study identified potential hazards associated with contaminated soil due to former use of organochlorine pesticides (OCP), asbestos-cement debris likely from subsurface irrigation systems, and an underground storage tank.

Contaminated Soil. The upper ½ foot of soil in the northwest quadrant of the project area is contaminated with TDE, which is an OCP that is a combination of the values of DDT (1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane), DDD (1,1-dichloro-2,2-bis(p-chlorophenyl) ethane), and DDE (1,1-dichloro-2,2-bis(chlorophenyl) ethylene). The highest detected concentration was 2.34 milligrams (mg) per kilogram (kg) of soil in surface sample-111 (delineated as ss-111 on Figure 4.5-1). Additionally, two other areas of contaminated soil were found. One is located along the northern boundary of the northwest field area in association with a storage area and the other is located along the eastern portion of the plan area, east of Brown Barranca and south of the residence at the "Address Location" (as delineated on Figures 4.5-1 and 4.5-2). The highest concentration detected in the northwest storage area was 1.69 mg/kg of soil, and the affected soil volume was estimated at 270 cubic yards. Concentrations of TDE in contaminated soil located on the east side of Brown Barranca were found to exceed the Title 22 Total Threshold Limit Concentration of 1.0 mg/kg of soil and also contained Dieldrin and Toxaphene at levels in excess of preliminary remediation goals (PRGs). DDT, DDD, and DDE (TDE) are all forms of a synthetic organochlorine insecticide that was banned in the United

States in 1972 due to its adverse effects upon wildlife as it biomagnifies through the foodchain (<http://www.emla.hu/prtr/chems/toxfaq.html#-T->). Dieldrin is a chlorinated hydrocarbon used as an insecticide before its ban by the United States. It has been shown to not break down easily and biomagnify as it is passed through the foodchain. Toxaphene is another organic compound formulated for use as an insecticide before it was found to have adverse effects. Toxaphene was banned by the United States in 1990 and is documented as having adverse effects on the liver, kidneys, adrenal glands and immune system in animals that ingested contaminated food or water (<http://www.emla.hu/prtr/chems/tfacts94.html>). Table 4.5-1 illustrates the pollutant levels exceeding established thresholds at identified sample areas. Figures 4.5-1 and 4.5-2 illustrate the locations of the samples on an aerial photograph.

**Table 4.5-1  
 Measured Pollutant Levels Exceeding Thresholds**

Sample ID	Area	DDT, DDE, and DDD	Dieldrin	Toxaphene
SS-105-106	Field	--	--	0.44
SS-109-110	NW Field	1.16	--	--
SS-109	NW Field	1.19	--	--
SS-110	NW Field	1.46	--	--
SS-111-112	NW Field	1.85	--	--
SS-111	NW Field	2.34	--	--
SS-112	NW Field	1.69	--	--
SS-303	NW Field	1.31	--	--
SS-304	NW Field	1.27	--	--
SS-305	NW Field	1.55	--	--
SS-306	NW Field	1.14	--	--
SS-213-214	NW Storage	1.763	--	--
SS-213	NW Storage	1.69	--	--
SS-214	NW Storage	1.46	--	--
SS-309	NW Storage	1.09	--	--
SS-219-220	Address Location	1.03	--	0.59
SS-220	Address Location	1.1	0.050	1.1
Regulations	TTLIC	1.0 mg/kg as sum total of DDT, DDE, DDD (TDE)	8.0 mg/kg	5 mg/kg
	Residential PRG	2.4 mg/kg for DDD, 1.7 mg/kg for DDE and DDT	0.03 mg/kg	0.44 mg/kg

*Notes: Only those samples and concentrations above the established thresholds were included in the table. For the complete table, See Figure 1 and 2 of the Phase II ESA which can be found at the City of Ventura Planning Counter.*

*All concentrations are in mg/kg*

*PRG = US EPA Preliminary Remediation Goal for Residential Uses*

*TTLIC = Total Threshold Limit Concentration*

*Source: Earth Systems Southern California, Phase II Investigation, November 22, 2006.*

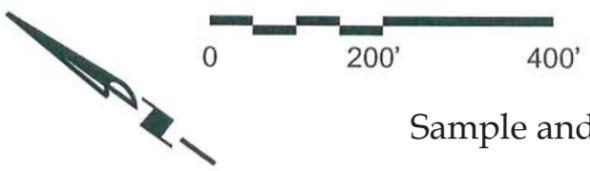




Basemap Source: Earth Systems Southwest, November 2006.  
 Image Source: Google Earth, 2007

**LEGEND**

- Site Boundary
- . - Limits Geophysical Survey
- ⊕ B-1 Boring Location
- OB-1 Geophysical Object
- SS-1 Surface Sample Location
- Exceeds TTLG Guideline for TDE (DDT+DDD+DDE)
- Exceeds Residential PRG Guideline for Toxaphene



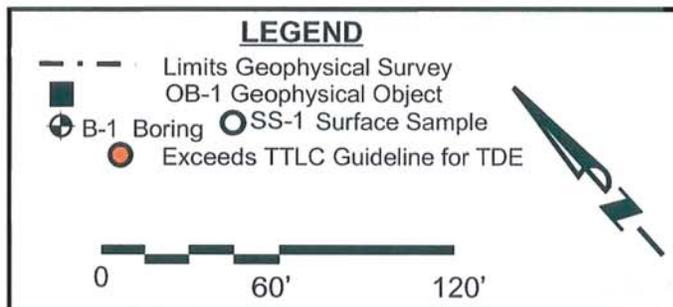
Sample and Boring Locations

Figure 4.5-1  
 City of Ventura



Reference: Google Earth

Basemap Source: Earth Systems Southwest, November 2006.  
 Image Source: Google Earth, 2007.



Address Location and Vicinity  
 Sample and Boring Locations

Figure 4.5-2  
 City of Ventura

Soil Staining at the Irrigation Well. Soil staining was identified by the Phase I ESA at the western most irrigation well. Discussions with Earthsystems staff revealed that this recognized environmental condition (REC) was ruled out as requiring further investigation because the lubricating oil is non-toxic and because this conditions is commonly associated with water wells, and is typically not considered an issue of concern (personal communication with Scott Stormo of Earthsystems Southwest, August 2008). This is because of the generally minor quantities of oil that could seep through the ground to the water and because of the non-toxic nature of the oil. Well abandonment will involve excavation to a depth of five feet and capping the well, with backfilling of soil. The potential for adverse health effect to humans and/or wildlife does not pose a significant threat.

Asbestos Cement. A piece of asbestos cement (AC) approximately 5 feet long and 6 inches in diameter was observed in the southern field area in a pile of agricultural debris. Historically, AC pipe was typically installed in irrigation systems expected to have moderate water pressures, which would exceed the strength of concrete pipe but be less than the design strength of AC pipe. The topography of the plan area falls within that range, so it is possible that AC pipe was used in the on-site irrigation system, particularly in the southern portion of the site. Asbestos containing material poses a health threat due to its ability to adversely affect humans through respiration.

Underground Storage Tank. A 12-foot long, 4-foot diameter underground storage tank was found at location OB-3 (as delineated on Figure 4.5-2), north of the contaminated soil location at SS-220. Soils under the tanks were sampled to detect total petroleum hydrocarbons; however, none were detected near the base of the UST and only trace amounts of Toluene were detected. Trace amounts are quantities that are detectable, but are not large enough to be measured.

**b. Regulatory Setting.** State and Federal governmental agencies regulate the use, storage, and transport of hazardous materials through numerous legal and regulatory requirements. Among other requirements, existing regulations require businesses that store, use, or manufacture specific amounts of hazardous materials to report the quantities and types of materials to the local administering agency. For the City of Ventura, the Ventura County Environmental Health Department (VCEHD) is the regulatory agency with primary responsibility for ensuring that businesses in the County handle, store, and dispose of and clean up hazardous materials in accordance with applicable laws and regulations. The Ventura Fire Department also implements requirements pertaining to the use and storage of flammable and explosive materials. Additionally, the Ventura County Air Pollution Control District (VCAPCD) oversees the permitting process for hazard remediation for certain hazardous materials.

The U.S. Environmental Protection Agency sets Preliminary Remediation Goals for residential and industrial uses, which are normally utilized in determining the allowable levels of a potential contaminant at a particular site. Similarly, the California Title 22 Total Threshold Limit Concentration (TTLIC) is used for determining whether a material is classified as a hazardous waste. However, the regulatory status of pesticide residues is dependent upon how the residue was formed. Pesticide residues that result from legal use of the product are not subject to hazardous waste regulations, because the material is present as a result of its intended

use. Residues from spills are subject to hazardous waste regulations, because spills are not an intended use and a spilled material is a “waste” if it can no longer be used. In addition, if a soil containing pesticide residues is disposed of, then the hazardous waste regulations apply because the soil has become a waste. Regardless of whether the hazardous waste regulations apply, adverse health effects can result from exposure to pesticide residues. Mitigation of adverse health effects may be warranted, even if the material is not classified as a hazardous waste.

#### 4.7.2 Impact Analysis

**a. Methodology and Thresholds of Significance.** The assessment of potential hazardous impacts is based on a Phase I and II ESA conducted for the plan area. For the purpose of this analysis, a significant effect would occur if Specific Plan implementation would create a substantial hazard to the public or the environment through exposure to existing contamination. Specifically, impacts are considered potentially significant if contaminant concentrations would potentially exceed published regulatory action levels. If contaminants exceed published regulatory thresholds, the impact can be reduced to a less than significant level if remediation is undertaken to remove, treat, or otherwise reduce the contaminant concentrations to below regulatory action levels.

#### **b. Project Impacts and Mitigation Measures.**

**Impact HAZ-1** Soils within the plan area have been utilized for agricultural operations, contaminants pose potential health hazards to humans and the risk of upset. Impacts associated with development of the plan area would be Class II, *significant but mitigable*.

The Parklands Specific Plan would involve development on lands currently and historically used for agricultural production. As noted in the *Setting*, the Phase II ESA identified potential hazards associated with contaminated soil due to former use of organochlorine pesticides (TDE), asbestos-cement debris likely from subsurface irrigation systems, and an underground storage tank. Asbestos and the UST impacts are discussed in Impacts HAZ-1 and HAZ-2, respectively.

Based on the results of the Phase II ESA conducted for the plan area, contaminated soil exceeding applicable preliminary remediation goals (PRGs) is present within the plan area. The “Address Location” area included two instances where Toxaphene and one sample where Dieldrin exceeded the established PRGs (see Table 4.5-1 and Figure 4.5-2). Two other samples with Toxaphene levels at the residential PRG were found within the field area (see SS-105 and SS-106 in Table 4.5-1 and on Figure 4.5-1). However, because these two samples do not exceed the residential PRG, no further action is necessary.

TDE was found in concentrations exceeding the TTLC value of 1.0 mg/kg in eight of ten samples within the northwest field area. Unless remediated, such contamination has the potential to result in a hazard to human health. The contaminated soil would be classified as hazardous waste if transported off-site and the hazard associated with the contamination is related to contact. The chemicals are not mobile or soluble in water, but contaminated soil

could present a hazard to humans and animals through contact or ingestion. The potential for adverse effects to human health and risk of upset is therefore significant.

**Mitigation Measures.** The following measure shall be implemented to mitigate potentially significant adverse health hazards relating to plan area soil contamination.

**HAZ-1 Contaminated Soil.** Two areas of soil contamination necessitate either onsite sequestration, or offsite disposal or some combination of both as described below. These include soils in the following locations.

- 1) The upper ½ foot of soil in the northwest quadrant of the plan area (see Figure 4.5-1) due to contamination with TDE, including the upper ½ foot of soils in the western part of the NW storage location (see Figure 4.5-1).
- 2) The upper ½ foot of soils within a 10-foot radius of SS-220 (see Figure 4.5-2) due to contamination with TDE.

**Onsite Sequestration.** The upper ½ foot of soil (or as recommended by the Ventura County Environmental Health Division) shall be removed from both locations, and shall be sequestered on-site in a manner approved by the Ventura County Environmental Health Division. Sequestration necessitates isolation from human and wildlife contact and would require that the soil be buried onsite at depths unlikely to be disrupted, or would require capping by pavement or asphalt. Areas suitable for capping might include beneath the parking garages, or beneath roadways. Onsite sequestration shall be conducted as directed by Ventura County Environmental Health.

**Offsite Disposal.** The upper ½ foot of soil shall be removed from both areas and shall be transported off site and disposed of as hazardous waste at an approved facility in accordance with applicable rules and regulations.

**Significance After Mitigation.** Implementation of the mitigation measures identified above would reduce human health risks associated with possible contamination from pesticides to a less than significant level.

**Impact HAZ-2 Development facilitated by the proposed Specific Plan would require the removal of materials containing asbestos. Demolition or removal of these items could result in dispersal of this contaminant. This is a Class II, significant but mitigable, impact.**

Based on the results of the Phase II ESA conducted for the project, a piece of asbestos concrete (AC) pipe was found (see Figure 4.5-1 in the central portion of the plan area). Removal of this

piece of AC piping and any other AC piping discovered during construction could pose a health hazard and risk of upset due to potential dispersal of asbestos. Sensitive receptors are located adjacent the western boundary of the plan area (mobile homes are closest, at about 20 feet from the boundary), while medical offices and a senior assisted living community are located across Telegraph Road to the north about 100 feet away. To the east across Wells Road, a school and more medical offices are located about 90 feet away. The EPA has determined that there is no completely safe level of exposure to asbestos. Exposure to asbestos occurs when its fibers are released into the air and inhaled. The danger occurs when smaller fibers in the air become embedded in the lungs, and the body has no way to remove them. Usually, symptoms do not appear for 20 or more years after the first exposure. Exposure to asbestos increases the risk of lung cancer in individuals by five times. Cancer of the stomach and internal organs such as the mouth, esophagus, larynx, kidneys, and colon can also be caused by asbestos exposure. The presence and removal of asbestos concrete pipe is a potentially significant impact.

**Mitigation Measure.** The following measure shall be implemented to mitigate potentially significant adverse health and safety impacts to a less than significant level.

**HAZ-2. Asbestos Cement.** Prior to any demolition or renovation, the identified asbestos cement piping located in the southern field area in a pile of agricultural debris (see Figure 4.5-1) and any other AC piping discovered during construction shall have the asbestos containing material removed according to proper abatement procedures recommended by the asbestos consultant and as required by the VCAPCD. All abatement activities shall be in compliance with California and Federal OSHA, and with the VCAPCD requirements. Only asbestos trained and certified abatement personnel shall be allowed to perform asbestos abatement. All asbestos containing material removed from onsite shall be transported by a licensed to handle asbestos-containing materials and disposed of at a licensed receiving facility and under proper manifest.

**Significance After Mitigation.** Implementation of the above mitigation measure would reduce human health risks associated with the removal of asbestos-containing materials to a less than significant level. In the long-term, removal of asbestos-containing materials from the plan area would generally improve health and safety conditions for area residents.

**Impact HAZ-3**     **An underground storage tank (UST) was found on the plan area. These would require removal pursuant to Ventura County Environmental Health Department regulations. Impacts associated with this UST would be Class II, significant but mitigable.**

As discussed in the *Setting*, the Phase II ESA conducted for the plan area identified a UST at location OB-3, north of the contaminated soil location at SS-220 (see Figure 4.5-2). Soils around the tanks were sampled to detect total petroleum hydrocarbons. None were detected near the base of the UST and only trace amounts of Toluene were detected. Nevertheless, the presence of the tank presents a potentially significant upset hazard.

**Mitigation Measures.** The following measure shall be implemented to mitigate potentially significant adverse health and safety impacts to less than significant.

**HAZ-3 Underground Storage Tank.** The underground storage tank (see OB-3 on Figure 4.5-2) shall be properly excavated and disposed of according to the guidelines of the Ventura County Fire Department and the Ventura County Environmental Health Division. These guidelines require the following:

- 1) Preparation of an application for permanent closure available for download at <http://www.ventura.org/rma/envhealth/programs/cupa/hzustpgm.htm>
- 2) Excavation oversight by a Ventura County Environmental Health Division Inspector
- 3) A permanent closure report submitted to the Ventura County Certified Unified Program Agency (CUPA) with copies of all receipts, manifests, transport documents, sample results, chain of custody, plot plans, and unauthorized release form (if necessary).
- 4) Soil samples must be collected in approved containers for analysis pursuant to Environmental Protection Agency Method 5035 for hydrocarbon samples. Los Angeles Regional Water Quality Control Board

**Significance After Mitigation.** Implementation of the above mitigation measure would reduce human health risks associated with the UST located within the plan area to a less than significant level.

**c. Cumulative Impacts.** Cumulative development in Ventura would have the potential to expose future area residents, employees, and visitors to hazards by developing and redeveloping areas that may previously have been contaminated. As discussed in Section 3.0, *Environmental Setting*, planned cumulative development associated with buildout of the 2005 General Plan in the City of Ventura would add more than 8,300 dwelling units, as well as about 1.2 million square feet of retail development, 1.2 million square feet of office development, 2.2 million square feet of industrial development, and more than 500,000 square feet of hotel development. The magnitude of hazards for individual projects would depend upon the location, type, and size of the development and the specific hazards associated with individual sites. Therefore, hazard evaluations would need to be completed on a case-by-case basis. If soil and groundwater contamination is found to be present on sites of planned and future development, these conditions would be required to be mitigated so as to meet regulating agency remediation goals. Implementation of appropriate remedial action on all contaminated sites on a case-by-case basis would avoid potential hazard impacts associated with cumulative development in the City. In the long-term, remediation of existing soil and groundwater contamination would improve health and safety conditions in the community.