4.10 PUBLIC HEALTH AND HAZARDS

This section of the draft environmental impact report (DEIR) addresses potential impacts related to hazardous materials and hazards associated with historic and current use of the project site and surrounding areas. It is based on review of the Phase I environmental site assessment (ESA) prepared for the project site by ENGEO, Inc. (ENGEO) in April 2004; on the updated Phase I ESAs prepared by ENGEO in June 2005, December 2005, and March 2006; on the peer review of the Phase I ESAs by Geocon Consultants, Inc. in June 2006; and on EDAW's review of the U.S. Environmental Protection Agency's (EPA's) Envirofacts Web site databases. The potential for impacts on emergency response plans is addressed in Section 4.11, "Traffic and Transportation," service levels by fire personnel and other emergency responders are discussed in Section 4.12, "Utilities and Public Services," and potential impacts of the project on groundwater are discussed in Section 4.6, "Hydrology and Water Quality" of this DEIR.

4.10.1 ENVIRONMENTAL SETTING

DEFINITIONS OF TERMS

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations (CFR) as "a substance or material that…is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means 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 if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, 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.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness[, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

LAND USE CONDITIONS ON THE PROJECT SITE

The site currently has no existing structures except for a well and high-voltage power lines. The western one-third of the site consists of an almond orchard, and the eastern two-thirds consist of agricultural fields. The northern, southern, and part of the northeastern boundary of the fields contain irrigation ditches that connect to the Wilson Substation (approximately 1 mile northeast of the site) along State Route 140. The project site includes an irrigation water supply well in the northeast corner of the project site, high-power transmission lines that transect the site from north to south within the western portion of the project site, water lines in the south-central portion of the project site, and underground irrigations lines and an aboveground sprinkler system associated with operation of the orchard (ENGEO 2005).

The project site is surrounded by agricultural fields and a few rural residential dwellings across Tower Road to the east, Gerard Avenue to the south, undeveloped open lands and industrial lands to the north, and an orchard and the Merced Irrigation District (MID) canal to the west.

USE OF AGRICULTURAL CHEMICALS

Pesticides were applied to the project site in conjunction with past and current agricultural production. A review of historic aerial photos of the property dating back to 1942 show the cultivation of row crops, and photos after 1986 shows the property used for orchards (ENGEO 2004). Chemicals potentially used in agricultural activities could result in residual concentrations of persistent pesticides in the soil. Persistent pesticides leave residues that remain in the environment without breaking down, such as organochlorine pesticides (e.g., dichlorodiphenyltrichloroethane [DDT], Toxaphene, and Dieldrin).

ELECTROMAGNETIC FIELDS

Electric and magnetic fields (EMFs) are invisible energy fields that surround any electrical device, including electrical transmission lines. Together these fields are called EMFs. Electric and magnetic energy travels in waves that are commonly referred to as electromagnetic radiation or radiofrequency radiation. EMF indicates the presence of electromagnetic or radiofrequency energy. There are several forms of EMFs, depending on the wavelength and frequency of the radiation. The frequency is usually expressed in terms of a unit called the hertz (Hz). One million hertz is known as a megahertz (MHz). The different forms of EMFs are produced by a variety of sources, including electrical energy facilities. EMFs may also be differentiated based on the ability of the particular EMF to cause ionization, a process that can produce molecular changes that can lead to damage in biological tissue, including genetic material. Changes in genetic material may be a cause of cancer. Those types of electromagnetic radiation with enough energy to ionize biological material include X-radiation (1 trillion MHz) and gamma radiation (FCC 2003).

All types of electric energy facilities and appliances generate EMFs. In part because of their visibility in areas of human habitation, electric energy transmission facilities generate the greatest public concern. Electric energy facilities generate EMFs at a frequency of 60 Hz. At this frequency, the EMF is considered nonionizing and is not expected to cause molecular changes that lead to the damage of body tissue. Once emitted from the source, an EMF dissipates in a circular pattern and weakens with distance from the emitting source. Electrical fields are shielded or weakened by materials that conduct electricity (including trees, buildings, and human skin). Magnetic fields pass through most materials and are therefore more difficult to shield (CPUC 2006).

A variety of epidemiological and laboratory studies, including those sponsored and funded by international, federal, and state organizations and agencies, have been carried out regarding EMF exposure and its potential human health risks. Regarding electric energy facilities, a connection between exposure to the type of EMF generated by electric energy facilities and childhood cancer (e.g., leukemia) has been suggested. However, studies have not concluded that there is such a connection.

Two Pacific Gas and Electric parallel transmission lines, a 115-kilovolt (kV) line and a 230-kV line, generally run north to south through the central area of the site and terminate northeast of the project site at the Wilson Substation. The area containing these power lines would remain as an easement, and all site development would take place on the approximately 80% of the project site that lies west of this easement.

RESULTS OF RECORDS SEARCH FOR HAZARDOUS MATERIALS

A Phase I ESA was prepared by ENGEO in April 2004 for the project site. Supplemental Phase I ESAs were conducted in June 2005, December 2005, and March 2006 to evaluate any changes in the property since the Phase I ESA. These additional Phase I ESAs included supplemental site reconnaissance, updated state and federal environmental database searches for the property site and surrounding area, and review of previously unavailable data. The purpose of the Phase I ESA and the Phase I ESA updates was to document recognized environmental concerns (RECs) on the subject property related to current and historical uses of the area and to evaluate the potential for a release of hazardous materials from on-site or off-site sources that could significantly affect environmental conditions at the project site. The site reconnaissance and records search conducted for the Phase I

ESAs did not find documentation or physical evidence of RECs in soil or groundwater associated with the use of the proposed project site.

During completion of the Phase I ESA (2004), ENGEO reviewed historical U.S. Geological Survey (USGS) topographic maps dated 1917, 1948, 1961, 1976, and 1987 with coverage of the project area. No evidence was observed on the maps to suggest that the property included historical buildings or was disturbed by human activities such as quarrying, subsurface or surface mining or dredging. ENGEO observed no stained soil, stressed vegetation, solid waste disposal, wastewater conveyance, or septic systems on the project site. Similarly, ENGEO observed no hazardous substances, petroleum products, underground storage tanks (USTs), odors, unidentified substance containers or drums, or polychlorinated biphenyls (PCBs) associated with pole-mounted transformers. No structures that could potentially contain lead-based paint or asbestos were identified on the project site. (ENGEO 2004, 2005a, 2005b.)

A review of regulatory agency lists indicated the presence of two known contaminated sites within a 1-mile radius of the project site:

- The Weaver Union and Weaver Union Elementary School site is located at 3076 Childs Avenue, approximately one-quarter to one-half mile northwest of the project site. One leaking UST and contaminated soil were removed from this site. The Merced County Division of Environmental Health (MCDEH) closed the case in 1988.

- The McLane Pacific site is located at 3876 Childs Avenue, approximately one-half to 1 mile from the project site. One leaking UST and contaminated soil were removed from this site and MCDEH closed the case in 1998.

MCDEH's 1984 samples of domestic and industrial water supply wells in the vicinity of the former General Electric Company (GE)/Kendall Plant located at 1715 Kibby Road identified the presence of trichoroethene (TCE). GE's surface disposal pond for spent TCE is reported to be approximately 2,500 feet north of the project site. (ENGEO 2006.) This location is hydrologically side-gradient of the project site, and any contaminated groundwater would generally flow south.

A shallow groundwater monitoring well, MW-9, was observed on the property near the northern boundary. This well is associated with the monitoring well network for the GE study of TCE in groundwater. In February 2006, ENGEO collected groundwater samples from MW-9 for analysis of volatile and semivolatile organic compounds. Laboratory analysis of these samples showed no volatile or semivolatile organic compounds that exceeded laboratory reporting limits. In addition, groundwater flow on the project site is along an east-west axis indicating that the site is side-gradient to the TCE plume. Given the analytical data and groundwater flow direction, it is very unlikely that TCE is present in groundwater on the project site. (ENGEO 2006.) Additionally, for the past several years GE has been conducting shallow groundwater remediation activities at the site (Tucker and Raggio, pers. comm., 2008)

EDAW searched EPA's Envirofacts Web site and the State Water Resources Control Board's (SWRCB's) Geotrack Web site to confirm and update information presented in these ESAs. The EPA's Envirofacts Web site and the SWRCB's GeoTracker Web site identifies toxic releases, hazardous waste, or other violations (EPA 2006, SWRCB 2006). The Envirofacts Web site presents information from several regulatory agencies and databases, including those for the EPA, California Department of Toxic Substance Control (DTSC), and Office of Emergency Services, and contains a variety of environmental information maintained by EPA, such as the locations of releases of more than 650 toxic chemicals. According to these Web sites, no additional sites other than those discussed above are listed in any of the regulatory databases (EPA 2006, SWRCB 2006).

DTSC maintains a hazardous waste and substances site list (Cortese list) pursuant to Government Code Section 65962. As of June 2006, the project site is not on this list (DTSC 2006).

WILDLAND FIRES

Wildland fire hazards exist in varying degrees over most of Merced County in that portion of the County not covered by water and urban uses (City of Merced 1997). Wildland fires can be initiated by natural phenomena, such as lightning; however, wildland fires can also be started by human activities, such as improper disposal of lit cigarettes, use of highly flammable fuels, and malfunctioning electrical equipment. The fire season extends approximately 5–6 months, from late spring to fall, and hazards arise from a combination of climatic, vegetative, and physiographic conditions. Wildland fire hazards exist in varying degrees over approximately 90% of Merced County (Merced County 1990).

According to the California Department of Forestry and Fire Protection's (CDF's) Fire Resource Assessment Program, the City of Merced and the project site is located in a "developed" zone for wildland fires (CDF 1998). The CDF also identifies wildland fire areas and Very High Fire Hazard Severity Zones for all counties in California. None of these areas or zones are located in or near the City of Merced (California Resources Agency 2003). In addition, the City of Merced is not in a State Responsibility Area (SRA), which is defined as part of the state where the CDF is the primary service responsible for providing basic wildland fire protection assistance (CDF 1998). To mitigate risks and impacts from fires, the City of Merced has adopted a Fire Protection Master Plan (FPMP), and responds to wildland fires within the city limits. In 2001, the department responded to 77 wildfires (City of Merced 2003). Additional information on the City of Merced Fire Department is provided in Section 4.12, "Utilities and Public Services."

4.10.2 REGULATORY SETTING

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

U.S. ENVIRONMENTAL PROTECTION AGENCY

EPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are contained mainly in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the CFR (see "Definitions of Terms" above), are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws:

- Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S. Code [USC] 6901 et seq.);
- Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also called the Superfund Act) (42 USC 9601 et seq.); and
- Superfund Amendments and Reauthorization Act (SARA) of 1986 (Public Law 99–499).

These laws and associated regulations include specific requirements for facilities that generate, use, store, treat, and/or dispose of hazardous materials. EPA provides oversight and supervision for federal Superfund investigation/remediation projects, evaluates remediation technologies, and develops hazardous materials disposal restrictions and treatment standards.

Hazardous Substances

Hazardous substances are a subclass of hazardous materials. They are regulated under CERCLA and SARA (and the federal Clean Water Act for water resources; see Section 4.6, "Hydrology and Water Quality"). Under CERCLA, EPA has authority to seek the parties responsible for releases of hazardous substances and ensure their cooperation in site remediation. CERCLA also provides federal funding (the "Superfund") for remediation. SARA Title III, the Emergency Planning and Community Right-to-Know Act, requires companies to declare potential toxic hazards to ensure that local communities can plan for chemical emergencies. EPA maintains a

National Priority List of uncontrolled or abandoned hazardous waste sites identified for priority remediation under the Superfund program. EPA also maintains the CERCLIS database, which contains information on hazardous waste sites, potential hazardous waste sites, and remedial activities across the nation.

Hazardous Wastes

Hazardous wastes, although included in the definition of hazardous materials and hazardous substances, are regulated separately under RCRA. A waste can legally be considered hazardous if it is classified as ignitable, corrosive, reactive, or toxic. Title 22, Section 66261.24 of the California Code of Regulations (CCR) (i.e., 22 CCR 66261.24) defines characteristics of toxicity. Under RCRA, EPA regulates hazardous waste from the time that the waste is generated until its final disposal ("cradle to grave"). RCRA also gives EPA or an authorized state the authority to conduct inspections to ensure that individual facilities are in compliance with regulations, and to pursue enforcement action if a violation is discovered. EPA can delegate its responsibility to a state if the state's regulations are at least as stringent as the federal ones. RCRA was updated in 1984 by the passage of the federal Hazardous and Solid Waste Amendments, which required phasing out land disposal of hazardous waste.

Regulation of Pesticides

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 USC 136 et seq.) provides federal control of pesticide distribution, sale, and use. EPA was given authority under FIFRA not only to study the consequences of pesticide usage but also to require users (farmers, utility companies, and others) to register when purchasing pesticides. Later amendments to the law required users to take exams for certification as applicators of pesticides. All pesticides used in the United States must be registered (licensed) by EPA. Registration assures that pesticides will be properly labeled and that if used in accordance with specifications, they will not cause unreasonable harm to the environment.

U.S. Department of Transportation

The U.S. Department of Transportation (DOT), in conjunction with EPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. The Hazardous Materials Transportation Act of 1974 (49 USC 5101 et seq.) directs DOT to establish criteria and regulations regarding safe storage and transportation of hazardous materials. Hazardous materials regulations are contained in 49 CFR 171–180 and address transportation of hazardous materials, types of materials defined as hazardous, and the marking of vehicles transporting hazardous materials. In particular, 49 CFR 173, titled "Shippers' General Requirements for Shipments and Packagings," defines hazardous materials for transportation purposes; within this portion of the code, 49 CFR 173.3 provides specific packaging requirements for shipment of hazardous materials, and 49 CFR 173.21 lists categories of materials and packages that are forbidden for shipping. 49 CFR 177, titled "Carriage by Public Highway," defines unacceptable hazardous materials shipments.

Occupational Health and Safety Administration

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor is responsible for enforcement and implementation of federal laws and regulations pertaining to worker health and safety. Workers at hazardous waste sites must receive specialized training and medical supervision according to the Hazardous Waste Operations and Emergency Response regulations (29 CFR 1910.120).

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY

DTSC, a division of the California EPA, has primary regulatory responsibility over hazardous materials in California, working in conjunction with the federal EPA to enforce and implement hazardous material laws and regulations. DTSC can delegate enforcement responsibilities to local jurisdictions.

The hazardous waste management program enforced by DTSC was created by the Hazardous Waste Control Act (California Health and Safety Code Section 25100 et seq.), which is implemented by regulations described in CCR Title 26. The state program thus created is similar to, but more stringent than, the federal program under RCRA. The regulations list materials that may be hazardous and establish criteria for their identification, packaging, and disposal.

Environmental health standards for management of hazardous waste are contained in CCR Title 22, Division 4.5. The intent of these regulations is to ensure the protection of public health associated with the use of recycled water. The regulations establish acceptable levels of constituents and pathogens in recycled water for a range of uses and prescribe means of assuring reliability in the production of recycled water. The California Department of Health Services has jurisdiction over the distribution of recycled water and the enforcement of Title 22 regulations. In addition, as required by California Government Code Section 65962.5, DTSC maintains a Hazardous Waste and Substances Site List for the state, called the Cortese List.

California's Secretary for Environmental Protection has established a unified hazardous waste and hazardous materials management regulatory program (Unified Program) as required by Senate Bill 1082 (1993). The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for the following environmental programs:

- hazardous waste generator and hazardous waste on-site treatment programs;
- Underground storage tank (UST) program;
- hazardous materials release response plans and inventories;
- California Accidental Release Prevention Program;
- Aboveground Petroleum Storage Act requirements for spill prevention, control, and countermeasure plans; and
- California Uniform Fire Code (UFC) hazardous material management plans and inventories.

The six environmental programs within the Unified Program are implemented at the local level by local agencies—Certified Unified Program Agencies (CUPAs). CUPAs carry out the responsibilities previously handled by approximately 1,300 state and local agencies, providing a central permitting and regulatory agency for permits, reporting, and compliance enforcement. MCDEH is the designated CUPA in Merced County for both unincorporated areas and incorporated cities.

STATE WATER RESOURCES CONTROL BOARD

The SWRCB has primary responsibility to protect water quality and supply. The project site is located within the jurisdiction of the Central Valley Regional Water Quality Control Board (RWQCB). As described in Section 4.6, "Hydrology and Water Quality," the RWQCB is authorized by the Porter-Cologne Water Quality Control Act of 1969 to protect the waters of the state. The RWQCB provides oversight for sites where the quality of groundwater or surface waters is threatened. Extraction and disposal of contaminated groundwater because of investigation/remediation activities or because of dewatering during construction would require a permit from the RWQCB if the water were discharged to storm drains, surface water, or land (see Section 4.6, "Hydrology and Water Quality").

In addition, the SWRCB regulates the use of aboveground storage tanks through the Aboveground Petroleum Storage Act (Health and Safety Code Sections 25270–25270.13). The act requires that facilities storing petroleum in a single tank greater than 1,320 gallons or facilities storing petroleum in aboveground tanks or containers with a cumulative storage capacity of greater than 1,320 gallons file a storage statement, pay a facility fee, and prepare and implement a federal Spill Prevention Control and Countermeasure (SPCC) plan.

CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF OCCUPATIONAL HEALTH ADMINISTRATION

The California Department of Industrial Relations, Division of Occupational Safety and Health Administration (Cal/OSHA), assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are more stringent than federal OSHA regulations, and are presented in CCR Title 8. Standards for workers dealing with hazardous materials include practices for all industries (General Industry Safety Orders); specific practices are described for construction, and hazardous waste operations and emergency response. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

CALIFORNIA OFFICE OF EMERGENCY SERVICES

The California Office of Emergency Services (Cal/OES) is the state office responsible for establishing emergency response and spill notification plans related to hazardous materials accidents. Cal/OES regulates businesses by requiring specific businesses to prepare an inventory of hazardous materials (CCR Title 19).

CALIFORNIA DEPARTMENT OF TRANSPORTATION AND CALIFORNIA HIGHWAY PATROL

The California Department of Transportation (Caltrans) and California Highway Patrol (CHP) enforce and monitor DOT hazardous materials and waste transportation laws and regulations in California. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP. When transporting explosives, inhalation hazards, and highway route-controlled quantities of radioactive materials, safe routing and safe stopping places are required, as described in 26 CCR Section 13 et seq. A route map must be carried in the vehicle.

ELECTROMAGNETIC FIELDS

In 1991, the California Public Utilities Commission (CPUC) began an investigation into the possible health effects of EMFs. A consensus group consisting of citizens, utility representatives, union representatives, and public officials was established to define near-term research objectives and develop interim procedures to guide electric utilities in educating their customers, reducing EMF levels, and responding to potential health concerns. The consensus group concluded that it "finds that the body of scientific evidence continues to evolve. However, it is recognized that public concern and scientific uncertainty remain regarding the potential health effects of exposure (of EMFs generated by electric energy facilities). The consensus group does not find it appropriate to adopt any specific numerical standards in association with EMF until [there is] a firm scientific basis for adopting any particular value" (CPUC 2006). The result of these findings led CPUC to recommend that the state's utilities carry out "no and low cost EMF avoidance measures" in construction of new and upgraded utility projects. However, no requirements were established (CPUC 2006). The state does not have setback requirements from electrical transmission lines for uses not related to schools (residential, office, commercial, parks).

LOCAL PLANS, POLICIES, REGULATIONS, AND ORDINANCES

MERCED VISION 2015 GENERAL PLAN

The Safety Element of the City's *Merced Vision 2015 General Plan* (City General Plan) contains various goals and policies to ensure that the residents and visitors to the City of Merced are not exposed to unsafe conditions resulting from urban development and activity. The following specific local policies apply to development of the uses proposed in this project:

GOAL AREA S-1: General Disaster Preparedness

- **Policy S-1.1:** Develop and maintain emergency preparedness procedures for the City.

GOAL AREA S-7: Hazardous Materials Safety for City Residents

- **Policy S-7.1:** Prevent injuries and environmental contamination due to the uncontrolled release of hazardous materials.

- **Policy S-7.2:** Ensure that hazardous materials are cleaned up before a property is developed or redeveloped.

MERCED COUNTY DIVISION OF ENVIRONMENTAL HEALTH

The City of Merced has adopted the Merced County Hazardous Waste Management Plan, which MCDEH enforces (City of Merced 1997). As the CPUC for Merced County (both unincorporated areas and incorporated cities), MCDEH issues permits to and inspects businesses that use, store, or handle quantities of hazardous materials and/or waste greater than or equal to 55 gallons, 500 pounds, or 200 cubic feet of a compressed gas at any time. MCDEH is also responsible for:

- implementing hazardous material management plans and inventories, which include an inventory of hazardous materials used, handled, or stored at any business in the County;

- permitting and inspecting businesses that handle acutely hazardous materials, such as those that would be used in the project site, that require a risk management and prevention program; and

- assisting local fire departments in responding to emergencies involving hazardous materials.

Regulated activities, such as the proposed project, are managed by MCDEH, which is overseen by the California Environmental Protection Agency (Cal/EPA) and the Department of Toxic Substances Control via the County's Certified Unified Program Agency (CUPA) certification requirements.

4.10.3 ENVIRONMENTAL IMPACTS

METHOD OF ANALYSIS

This analysis considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from the proposed project and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks. As discussed above, compliance with applicable federal, state, and local health and safety laws and regulations by residents and existing businesses in the project area would generally protect the health and safety of the public. Local and state agencies would be expected to continue to enforce applicable requirements to the extent that they do so now.

The following reports documenting potential hazardous conditions at the project site were reviewed for this analysis:

- land use plans for the proposed project;
- available literature, including documents published by city, county, state, and federal agencies;
- applicable elements from the City General Plan;
- Phase I Environmental Site Assessment, Merced Distribution Center, prepared by ENGEO (2004);
- Environmental Site Assessment Update, Proposed Industrial Warehouse Distribution Center, prepared by ENGEO (2005a);
- Environmental Site Assessment Update, Proposed Industrial Warehouse Distribution Center, prepared by ENGEO (2005b);
- Phase I Environmental Site Assessment Supplemental Letter, Proposed Industrial Warehouse Distribution Center, prepared by ENGEO (2006); and
- Wal-Mart Distribution Center Phase I Environmental Site Assessment Peer Review, prepared by Geocon Consultants, Inc (2006).

The information obtained from these sources was reviewed and summarized to establish existing conditions and to identify potential environmental effects, based on the standards of significance presented in this section. In determining the level of significance, the analysis assumes that development in the project area would comply with relevant federal, state, and local ordinances and regulations.

The independent research and analysis of EMFs addresses the health effects associated with EMFs, what is generally accepted as a safe distance for sensitive land uses (schools, residential) near high-tension power lines to avoid EMF-related adverse health effects, and an analysis of whether the proposed project would expose sensitive uses to those effects.

The primary building on the site is the proposed approximately 1.1-million-square-foot regional distribution warehouse that would be used primarily as a materials handling operation whereby most goods typically are conveyed through the distribution center. On an ongoing basis the project would have one 6,000-gallon new oil tank, one 2,500-gallon waste oil tank, two 20,000-gallon diesel USTs, and two aboveground 500-gallon diesel storage tanks, as well as a variety of potentially hazardous household chemicals that are stored in the warehouse before being distributed to retail outlets. This analysis evaluates the potential for these materials to be released to the environment.

THRESHOLDS OF SIGNIFICANCE

For the purpose of this analysis, the following thresholds of significance, as identified by the State CEQA Guidelines (Appendix G) have been used to determine whether implementation of the proposed project would result in significant hazards or hazardous materials impacts. Based on Appendix G of the State CEQA Guidelines, a hazards or hazardous materials impact is considered significant if implementation of the proposed project under consideration would do any of the following:

- 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 or through the routine transport, use, or disposal of hazardous materials;

- result in safety hazards to people residing or working in the project area;
- 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 that 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;
- be located within an airport land use plan, within 2 miles of a public airport, or in the vicinity of a public airstrip, such that a safety hazard would result 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; or
- 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.

The project site is located over 4 miles west of the Merced Municipal Airport and approximately 10 miles northwest of the Castle Airport. Therefore, the project is not located within an airport land use plan or within 2 miles of a public or private airport. As such, no safety hazards related to airports are anticipated, and this issue area will not be evaluated further in this DEIR.

IMPACT ANALYSIS

IMPACT 4.10-1 **Create a Safety Hazard to Construction Workers and the General Public from Potential Release of Unknown or Previously Undiscovered Hazardous Materials during Construction.** *No "recognized environmental concerns" (RECs) have been identified to date on the project site. However, excavation and construction activities in the area could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. In addition, if contaminated sites in the area are not remediated before use of the site, then residents and others could be exposed to hazardous materials. This impact would be* ***significant****.*

The site reconnaissance and records search conducted for the Phase I ESAs did not find documentation or physical evidence of RECs in soil or groundwater associated with the use of the proposed project site. The development of the project site could require abandonment of the irrigation water supply well in the northeast corner of the project site. If this action is necessary, the well would be removed and filled in accordance with applicable state and local regulations. The past and present use of the project site has been largely agricultural, and persistent pesticides were likely applied to the project site in conjunction with agricultural production. These chemicals could potentially result in residual concentrations of persistent pesticides in the soil. The Phase I ESA, supplemental Phase I ESAs, and peer review of the Phase I ESAs have concluded that, while environmentally persistent pesticides may be present in the soil, the project does not proposed residential use of the project site, and the proposed light industrial development of the project site would result in land uses that are acceptable even in the presence of potential pesticide concentrations that are persistent (Brake, pers. comm., ENGEO 2005b).

A review of regulatory agency lists identified two known leaking USTs within a 1-mile radius of the project site: the Weaver Union and Weaver Union Elementary School site at 3076 Childs Avenue, and the McLane Pacific site at 3876 Childs Avenue. Leaking USTs and contaminated soils were removed from both of these sites, and both cases were closed by MCDEH (ENGEO 2005b).

TCE has been recorded in domestic and industrial water supply wells by MCDEH in the vicinity of the GE/Kendall Plant facility. GE's surface disposal pond for spent TCE is reported to be approximately 2,500 feet north of the project site. Groundwater flow on the project site is along an east-west axis indicating that the site is side-gradient to the TCE plume. As discussed above, ENGEO collected groundwater samples for analysis of volatile and semivolatile organic compounds. Laboratory analysis of these samples showed no volatile or semivolatile organic compounds that exceeded laboratory reporting limits. Given the analytical data and groundwater flow direction, it is very unlikely that TCE is present in groundwater on the project site. (ENGEO 2006.)

Development of the project would involve site grading, excavation for utilities, trenching, dewatering of open trenches, and backfilling. Construction of proposed facilities could result in the exposure of construction workers and the general public to hazardous materials, including petroleum hydrocarbons, pesticides, herbicides, and fertilizers; contaminated debris; elevated levels of chemicals that could be hazardous; or hazardous substances that could be inadvertently spilled or otherwise spread. For individuals not involved in construction activities, the greatest potential source of exposure to contaminants would be airborne emissions, primarily through construction-generated dust. Excavation and construction activities at or near areas of currently unrecorded soil and/or groundwater contamination could also expose construction workers and the general public to hazardous materials. If contaminated sites in the area are not remediated before use of the site, then residents and others could be exposed to hazardous materials. Any exposure to hazardous materials could pose a health risk to construction workers and the general public; therefore, this impact would be ***significant***.

Mitigation Measure 4.10-1: Remediate Unknown or Previously Undiscovered On-Site Hazardous Materials. If, during site preparation and construction activities, previously undiscovered or unknown evidence of hazardous materials contamination is observed or suspected through either obvious or implied indicators (i.e., stained or odorous soil), construction activities shall immediately cease in the area of the find.

MCDEH and the City of Merced Environmental Health Division staff shall be immediately consulted, and the project applicant shall contract with a qualified consultant registered in DTSC's Registered Environmental Assessor Program to assess the extent to which soil and/or groundwater has been adversely affected by past activities. This investigation shall follow DTSC guidelines and shall include, as necessary, analysis of soil and/or groundwater samples taken at or near the potential contamination sites. If necessary, risk assessments shall include a DTSC Preliminary Endangerment Assessment or no further action determination, or equivalent. Any required remediation shall include a DTSC Remedial Action Work Plan or equivalent. The site shall be remediated in accordance with recommendations made by a qualified environmental consultant registered in DTSC's Registered Environmental Assessor Program; MCDEH; the City of Merced Environmental Health Division staff; Central Valley RWQCB; DTSC; or other appropriate federal, state, or local regulatory agencies as generally described above. The agencies involved would be dependent on the type and extent of contamination. Site preparation and construction activities shall not proceed until remediation is completed to the satisfaction of MCDEH and the City of Merced Environmental Health Division.

Implementation of this mitigation measure would remove any known or previously undiscovered contaminated soil or other hazardous materials from the site in accordance with County standards and would reduce the potential hazards associated with known or unknown contaminated soil or other hazardous materials to a ***less-than-significant*** level.

Implementation of Mitigation Measures 4.2-1c and 4.2-1d would reduce exposure to contaminants through airborne emissions by ensuring compliance with Regulation VIII, which is required by law, and include additional San Joaquin Valley Air Pollution Control District-recommended control measures. As a result, generation of construction-related dust emissions would be reduced to a ***less-than-significant*** level.

IMPACT 4.10-2 **Create a Significant Hazard to Construction Workers and the General Public through the Use of Hazardous Materials during Construction of the Project.** *The proposed project would involve the storage, use, and transport of hazardous materials at the project site during construction activities. Compliance with federal, state, and local hazardous materials regulations, which would be monitored by the state and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during construction. Therefore, impacts related to creation of significant hazards to the public or the environment would be* ***less than significant****.*

Hazardous materials would be used in varying amounts during construction of the proposed project. Construction and maintenance activities would use hazardous materials, such as fuels (gasoline and diesel), oils and lubricants, paints and paint thinners, glues, and cleaners (which could include solvents and corrosives in addition to soaps and detergents). Construction workers and the general public could be exposed to hazards and hazardous materials as a result of improper handling or use during construction activities (particularly by untrained personnel); transportation accidents; or fires, explosions, or other emergencies. Construction workers could also be exposed to hazards associated with accidental releases of hazardous materials, which could result in adverse health effects. The project applicant, builders, and contractors, would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during project construction.

The proposed project would be required to comply with DOT, Caltrans, and CHP regulations on the transportation of hazardous materials. The DOT, in conjunction with EPA, is responsible for enforcement and implementation of federal laws and regulations pertaining to transportation of hazardous materials. Hazardous materials regulations are codified in 49 CFR 171–180 and address transportation of hazardous materials, types of materials defined as hazardous, categories of materials and packages that are forbidden for shipping, and the marking of vehicles transporting hazardous materials.

Caltrans and the CHP enforce and monitor DOT hazardous materials and waste transportation laws and regulations (e.g. 49 CFR 171–180) in California. Together, these agencies determine container types used and license hazardous waste haulers for hazardous waste transportation on public roads. All motor carriers and drivers involved in transportation of hazardous materials must apply for and obtain a hazardous materials transportation license from CHP. When transporting explosives and inhalation hazards, safe routing and safe stopping places are required, as described in 26 CCR Section 13 et seq. A route map must be carried in the vehicle. Compliance with these regulations would reduce the risk of exposure to humans and the environment related to the transportation of hazardous materials.

Hazardous materials regulations, which are codified in CCR Titles 8 and 22, and their enabling legislation set forth in Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, were established at the state level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances. Construction specifications would include the following requirements in compliance with applicable regulations and codes (e.g., CCR Titles 8 and 22, Uniform Fire Code, and Division 20 of the California Health and Safety Code):

- all reserve fuel supplies and hazardous materials must be stored within the confines of a designated construction area;
- equipment refueling and maintenance must take place only within the staging area;
- construction vehicles shall be inspected daily for leaks; and
- an SPCC plan shall be prepared and implemented.

Off-site activities (e.g., utility construction) would also be required to comply with these regulations. These regulations and codes must be implemented, as appropriate, and are monitored by the state and/or local

jurisdictions, including MCDEH, the City of Merced Environmental Health Division, and the City of Merced Fire Department.

Contractors would be required to comply with the California EPA's Unified Program; regulated activities would be managed by MCDEH, the designated Certified Unified Program Agency for Merced County, in accordance with the regulations included in the Unified Program (e.g., hazardous materials release response plans and inventories, California UFC hazardous material management plans and inventories). Such compliance would reduce the potential for accidental release of hazardous materials during construction of the proposed project. As a result, it would lessen the risk of exposure of construction workers to accidental release of hazardous materials, as well as the demand for incident emergency response.

Because construction of the project would implement and comply with federal, state, and local hazardous materials regulations and codes monitored by the state (e.g., Cal/OSHA, DTSC, CHP, Caltrans) and/or local jurisdictions (e.g., City of Merced Fire Department, City of Merced Environmental Health Division, and MCDEH), impacts related to creation of significant hazards on construction workers and the general public through routine transport, use, and disposal would be unlikely with project development. Therefore, this impact would be ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-3 Create a Significant Hazard to the General Public through the Routine Use of Hazardous Materials during Operation of the Project. *The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. Compliance with federal, state, and local hazardous materials regulations, which would be monitored by the state and/or local jurisdictions, would reduce impacts associated with the use, transport, and storage of hazardous materials during operation of the project. Therefore, impacts related to creation of significant hazards to the public or the environment would be less than significant.*

The proposed project would use many materials, some of which are considered hazardous, during the course of its daily operations. On an ongoing basis the project would have one 6,000-gallon new oil tank, one 2,500-gallon waste oil tank, two 20,000-gallon diesel USTs, two aboveground 500-gallon diesel storage tanks, as well as an electric forklift battery charging/maintenance area and a truck maintenance building for routine maintenance of tractor/trailers. In addition, a variety of hazardous materials in the warehouse, most of which are typically found in households (i.e., detergents, solvents, aerosols, paints, fertilizers, pesticides), would remain in the packaging/containers for distribution to retail outlets. For information related to the potential for the project to generate Toxic Air Contaminants and associated health risk, please see Section 4.2 "Air Quality," specifically Impact 4.2-4. Employees and the general public could be exposed to hazardous materials as a result of improper handling or use; transportation accidents; environmentally unsound disposal methods; or fire, explosion, or other emergencies. The project applicant would be required to use, store, and transport hazardous materials in compliance with local, state, and federal regulations during operation of the proposed project.

As discussed above under Impact 4.10-2, the proposed project would be required to comply with DOT, Caltrans, and CHP regulations on the transportation of hazardous materials. DOT regulations address transportation of hazardous materials, types of materials defined as hazardous, categories of materials and packages that are forbidden for shipping, and the marking of vehicles transporting hazardous materials (e.g. 49 CFR 171–180).

Caltrans and the CHP enforce and monitor DOT hazardous materials and waste transportation laws and regulations. These regulations include determining container types used and license hazardous waste haulers for hazardous waste transportation on public roads; requiring all motor carriers and drivers involved in transportation

of hazardous materials to apply for and obtain a hazardous materials transportation license from CHP, and requiring a route map in the vehicle.

Chapter 6.5 (Section 25100 et seq.) of the California Health and Safety Code, was established at the state level to ensure compliance with federal regulations to reduce the risk to human health and the environment from the routine use of hazardous substances in the workplace. Specific requirements include identifying hazardous materials in the workplace, providing safety information to workers that handle hazardous materials, and adequately training workers. These regulations must be implemented by the proposed project, as appropriate, and are monitored by the state (i.e., Cal/OSHA in the workplace and DTSC for hazardous waste) and/or local jurisdictions (i.e., City of Merced Fire Department, City of Merced Environmental Health Division, and MCDEH).

The City of Merced has adopted the Merced County Hazardous Waste Management Plan, which is enforced by MCDEH (City of Merced 1997). As the CPUC for Merced County (both unincorporated areas and incorporated cities), MCDEH issues permits to and inspects businesses that use, store, or handle quantities of hazardous materials and/or waste greater than or equal to 55 gallons, 500 pounds, or 200 cubic feet of a compressed gas at any time. MCDEH is also responsible for:

- implementing hazardous material management plans and inventories, which include an inventory of hazardous materials used, handled, or stored at any business in the County;
- permitting and inspecting businesses that handle acutely hazardous materials, such as those that would be used in the project site, that require a risk management and prevention program; and
- assisting local fire departments in responding to emergencies involving hazardous materials.

Regulated activities, such as the proposed project, are managed by MCDEH as the CUPA, a certification issued and regulated by Cal/EPA and DTSC. Such compliance would reduce the potential for accidental release of hazardous materials during operation of the proposed project. As a result, it would lessen the risk of exposure of the general public to accidental release of hazardous materials, as well as the demand for incident emergency response.

In addition, the SWRCB regulates the use of aboveground storage tanks through the Aboveground Petroleum Storage Act (Health and Safety Code Sections 25270–25270.13). The act requires that facilities storing petroleum in a single tank greater than 1,320 gallons or facilities storing petroleum in aboveground tanks or containers with a cumulative storage capacity of greater than 1,320 gallons file a storage statement, pay a facility fee, and prepare and implement a federal SPCC plan.

The proposed project would be required to comply with all applicable federal, state, and local regulations pertaining to safe-transit practices, workplace safety, spill prevention, and other hazardous materials-related concerns. MCDEH, the City of Merced Environmental Health Division, the City of Merced Fire Department, and other agencies would be required to enforce compliance, including issuing permits and tracking and inspections of hazardous materials transportation and storage. As a result, the proposed project would not create a significant hazard to employees or the general public during materials transport or project operations. Therefore, this impact would be considered ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-4 Create a Significant Hazard through the Transport of Hazardous Materials Adjacent to Schools in the Vicinity of the Project. *The proposed project would require transportation of materials, some of which are considered hazardous, during construction of the proposed project and through the course of its daily operations. Based on the designated truck routes to and from the project site (see Section 4.11, Traffic and Transportation), no tractor trailer traffic is expected to travel past any of these schools; however, there is a potential for trucks to stray from their expected routes occasionally and pass by these schools. Therefore, impacts related to creation of significant hazards to students would be* ***significant****.*

Two elementary schools and one high school are located in the vicinity of the proposed project. Pioneer Elementary School is located at 2950 Gerard Avenue approximately 1.4 miles southwest of the project site on the southwest corner of Coffee Street and Gerard Avenue. Weaver Elementary School is located at 3076 East Childs Avenue approximately 1 mile west of the project site on the northeast corner of Coffee Street and Childs Avenue. Golden Valley High School is located at 2121 East Childs Avenue approximately 1.7 miles west of the project site on the northeast corner of Childs Avenue and Parsons Avenue.

Based on the designated truck routes to and from the project site (see Section 4.11, Traffic and Transportation), no tractor trailer traffic is expected to travel past any of these schools during construction or operation of the project. However, there is a potential for trucks to stray from their expected routes occasionally and pass by these schools. Transportation of hazardous materials on roadways adjacent to these schools would potentially expose students to hazardous materials resulting from transportation accidents, such as hazardous materials spills, fires, or explosions. This impact would be ***significant***.

Mitigation Measure

Implementation of Mitigation Measure 4.11-2a would reduce significant impacts associated with the exposure of students to hazardous materials resulting from transportation accidents to a ***less-than-significant*** level by requiring a traffic safety plan during construction of the project and by designating specific truck routes during operation of the project.

IMPACT 4.10-5 Exposure to Electromagnetic Fields. *The proposed project would be in close proximity to electrical transmission lines on the project site and would potentially result in health hazards associated with exposure to EMFs emitted from these lines. Because the proposed warehouse building and associated uses would be constructed approximately 400 feet from these transmission lines, the exposure to EMFs would be minimal and the proposed location of on-site facilities would be adequate to reduce potential hazards associated with electromagnetic fields. This impact would be* ***less than significant****.*

According to the Phase I ESA, two overhead power lines, one 115-kV line and one 230-kV line, run north-to-south through the eastern portion of the site, continuing to the north and south off-site. These power lines would remain on the project site following construction of the proposed project. The area containing these power lines would remain as an easement, and all site development would take place on the approximately 80% of the project site that lies west of this easement. Because the proposed project would be in close proximity to these transmission lines, there is the potential for EMFs emitted from these lines to result in potential health hazards to workers on the project site.

The state does not have setback requirements from electrical transmission lines. However, ongoing research shows that once emitted from the source, an EMF dissipates rapidly in a circular pattern and weakens with distance from the emitting source. At a distance of 300 feet and at times of average electrical demand, the EMF from transmission lines would be similar to typical background levels found in most homes. (U.S. Department of Health and Human Services 2002.) Because the proposed warehouse building and associated uses would be constructed approximately 400 feet west of the on-site overhead power lines, the exposure to EMFs would be minimal and the proposed location of site facilities would be adequate to reduce potential hazards associated with electromagnetic fields. This impact would be ***less than significant***.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-6 Exposure of People or Structures to Wildfire Fires. *The project site is not located in a designated wildland fire area, a High Fire Hazard Severity Zone, or a SRA area. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This impact would be less than significant.*

The CDF's Fire Resource Assessment Program identifies the City of Merced and the project site as a "developed" zone for wildland fires (CDF 1998). No areas or zones in the City are defined as Very High Fire Hazard Severity, and the City is not in a SRA, which is defined as part of the state where the CDF is the primary service responsible for providing basic wildland fire protection assistance (CDF 1998). The City of Merced Fire Department responds to wildland fires within the Merced city limits, and would be capable of providing fire protection services to the project site (Franco, pers. comm.). The department's response time goal for emergency calls is 4–6 minutes 90% of the time. Refer to Section 4.12 "Utilities and Public Services" for more information related to fire protection service. Therefore, the project would not expose people or structures to significant risk of loss of injury involving wildland fires. This impact would be ***less than significant***.

Mitigation Measure

No mitigation is required.