

4.7 HAZARDS AND HAZARDOUS MATERIALS

This section addresses a number of issues including: the potential presence of and risk of exposure to hazardous materials at the proposed project site; the potential for exposure to electromagnetic fields (EMF); potential risks associated with the site's adjacency to the Union Pacific Railroad (UPRR) right-of-way (ROW) and a high pressure natural gas line; and the potential for radon gas at the site. The information presented in this section pertaining to hazardous materials at the site is based primarily on a Phase I Environmental Site Assessment (ESA) prepared by EEI (September 2003) and a peer review of the ESA conducted by Citadel Environmental Services, Inc. (January 2011). These reports are provided in Appendix E. Hazards associated with the site's location (land use and density) relative to the Santa Barbara Municipal Airport are discussed in Section 4.9 *Land Use and Planning*.

4.7.1 Existing Conditions

Hazardous Materials

The term "hazardous material" refers to both hazardous substances and hazardous waste. A material is identified as "hazardous" if it appears on a list of hazardous materials prepared by a Federal, State, or local regulatory agency or if it has characteristics defined as hazardous by such an agency. Per the Zoning Ordinance "hazardous waste" is defined as a "A waste, or combination of wastes, which because of the quantity, concentration or physical, and chemical characteristics may either a) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or b) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed or otherwise managed. Hazardous waste would also include those materials described in Title 22: Division 4.5; Chapter 11, California Code of Regulations." solid waste" that exhibits toxic or hazardous characteristics The United States Environmental Protection Agency (US EPA) defines the term "solid waste" to include many types of discarded materials including any gaseous, liquid, semi-liquid, or solid material, which is discarded or has served its intended purpose, unless the material is specifically excluded from regulation. Such materials are considered waste whether they are discarded, reused, recycled, or reclaimed. In summary, the EPA classifies a material as hazardous if it has one or more of the following characteristics at specific thresholds: ignitability, corrosivity, reactivity, and/or toxicity¹.

Potential for Hazardous Materials at the Site

The Phase I ESA (EEI, 2003) includes a review of past and present land use practices and evaluates the presence, or likely presence, of hazardous substances or petroleum products that have been discharged on or within the project site potentially impacting soil, groundwater, or surface waters. The Phase I ESA also included a review of historical uses of the site, site field reconnaissance, and a review of database records for any known contamination at the site and surrounding properties. As part of its third party review of the EEI Phase I ESA, Citadel updated

¹ -For more detail about the classification of hazardous materials, see the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 USC §§ 9601, ET SEQ.; the Resource Conservation and Recovery Act, 42 USC §§ 6902, ET SEQ.; the Federal Clean Water Act, 33 USC §§ 1251, ET SEQ.; the Toxic Substances Control Act, 15 USC §§ 1601, ET SEQ.; the Occupational Safety and Health Act, 29 USC §§ 651, ET SEQ.; the California Hazardous Waste Control Act, California Health and Safety Code §§ 25100, ET SEQ.; the California Toxic Substances Control Act, California Health and Safety Code §§ 25300, ET SEQ.; The Porter-Cologne Water Quality Control Act, California Water Code §§ 13000, ET SEQ.; the Safe Drinking Water and Toxic Enforcement Act, California Health and Safety Code §§ 25249.5, ET SEQ.; as currently in force or as later amended, and all rules and regulations promulgated thereunder.

the record of the site's history and hazardous materials databases search and conducted additional site reconnaissance.

Historical Land Uses

Historical aerial photographs and topographic maps of the project site and vicinity, and previous records were reviewed to ascertain historical land uses of the site.

According to the Phase I ESA and additional historical documentation reviewed by Citadel, including historical aerial photographs of the site and vicinity, the currently developed Parcel A (APN 073-030-021) was undeveloped ~~prior to~~ before 1967. The currently existing building was utilized as a bank until the late 1990s, when occupancy changed to offices associated with television broadcasting. The drive-thru ATM kiosk was originally constructed as part of the Bank of America occupancy and remains in service. Receive-only satellite dishes, which had been removed ~~prior to~~ before Citadel's January 2011 inspection, were previously located in the northwestern portion of the surface parking lot and on the building roof from the late 1990s through the late 2000s. Parcel B (APN 073-030-020) has been undeveloped from 1928 to the present. There have been no documented permanent structures or hazardous materials usage identified on this portion of the site.

The project site topography contours have been altered by prior grading activities that include development of the on-site Southern Pacific Railroad cut, construction of the nearby Storke Road/Highway 101 interchange that deposited soil on the site, development of Santa Felicia Drive to the west, and the creation of dirt roads that cross the site. The most prominent on-site earthwork involves the Southern Pacific Railroad cut, which resulted in a crescent-shaped cut approximately 45 feet wide and approximately 800 feet in length, bounded by 2:1 slopes that reach approximately 12 feet in height. This railroad cut is located within the northeastern quadrant of the site, near the north property line, and previously contained tracks as part of the Southern Pacific Railroad line in the 1890s, before its use was abandoned in 1900-1902.

Oil and Gas

There is no indication that oil or gas has been produced on-site or in the immediate vicinity. Available maps indicate that no oil or gas wells have been drilled at the site. The closest is indicated to be located approximately 500 to 600 feet west of the southwest corner of the site. This well is reportedly plugged and abandoned dry holes.

Site Reconnaissance

A site reconnaissance was conducted on August 23, 2003 by EEI on the 22.32-acre vacant portion of the site (Parcel B), and again in January 2011 by Citadel Environmental for the entire project site, including both the 22.32-acre vacant parcel and the 1.23-acre developed parcel (Parcel A). The purpose of the field reconnaissance in both instances was to observe existing site conditions and ascertain the presence of physical evidence that indicate the presence of recognized environmentally hazardous conditions on the site. The site was inspected for the presence of visual and/or olfactory indications of contamination, distressed vegetation, petroleum-hydrocarbon staining, waste drums, illegal dumping, or improper waste storage or handling. At the time of both EEI's and Citadel's site field investigations, minor dumping of household-related waste was noted in some portions of the property and two transient camps were observed in the northwestern and southeastern portions of the site. No evidence of contamination, distressed vegetation, petroleum-hydrocarbon staining, hazardous waste, waste

drums or improper storage of hazardous/regulated waste was observed on either the undeveloped or developed parcels.

The site reconnaissance included surface observations of the vacant area of the railroad cut. Given that the cut was used for a linear segment of the railroad, did not include a roundhouse or railcar storage and transfer area, and was in use for limited timeframe (approximately 12 years), the potential hazardous materials discharged from the train operations are limited to creosote coating on the railroad ties and metal tracks. However, given the limited timeframe within which these materials would have been present on-site, the lack of odors or soil staining, and the growth of grassland vegetation with no signs of distress, subsurface soil sampling was not deemed warranted.

Existing Structures

Two buildings are located in the southeast corner of the project site. One is an office building housing a television studio company and the other is an ATM kiosk containing two drive-through ATMs. Chemicals or hazardous materials are not used within these buildings, with the exception of standard household-type cleaning chemicals and basic janitorial supplies.

Based on the original date of construction of the on-site buildings, there is a potential that asbestos containing materials (ACMs) may have been used in their construction and remain present at the site. Asbestos is a naturally-occurring fibrous material that has been mined for its useful thermal properties and tensile strength, and was used in many commercial products, particularly building materials, manufactured from the 1940's until the 1970's. ACMs can include building materials such as spray acoustic ceilings, acoustic tiles, various plasters, duct wrap, paper backing of linoleum, non-bituminous roofing felt, wallboard, joint compound (joint "mud"), and thermal insulation for pipes and boilers. The Santa Barbara County Air Pollution Control District (APCD) defines Regulated Asbestos-Containing Material (RACM) as any material that contains greater than 1% asbestos and is friable. Friable means it can be crumbled, pulverized, or reduced to powder by hand pressure when dry. Use of asbestos in the manufacturing of these building materials was banned by 1978, although some products remained on the shelf and were used in the construction of buildings and homes for several years thereafter. Some non-friable ACMs can become RACM (friable) if pulverized during demolition activities. In general, buildings constructed ~~prior to~~ before 1980 have the greatest potential to contain ACMs. The existing office building located on Parcel A was built ~~prior to~~ before 1978. Therefore, the potential for ACMs is considered high.

Asbestos is a known carcinogen and there is no known threshold level of exposure at which adverse health effects are not anticipated. The US EPA has identified asbestos as a hazardous air pollutant pursuant to Section 112 of the Federal Clean Air Act, 40 CFR §61.01. Additionally, the California Air Resources Board (CARB) has identified asbestos as a Toxic Air Contaminant (TAC) California Health and Safety Code §§ 39657. There is a potential for exposure when the ACM becomes damaged to the extent that asbestos fibers become airborne and are inhaled. If inhaled, asbestos fibers can result in serious health problems. Applicable regulations pertaining to the removal or disturbance of ACMs are described below under the section titled *Regulatory Setting*.

Based on the original date of construction of the on-site buildings, there is also the potential for the presence of paints and coatings with detectable or elevated concentrations of lead. Coatings containing any detectable lead are regulated through ~~the~~ 8 California Code of Regulations, ~~Title 8, Section §~~ 1532.1, *Lead in Construction*. Building components and fixtures with a potential for

lead-containing coatings include, but are not limited to: walls, windows, doors, window/door jambs, railings, poles, parking lot striping, and heating, ventilation and air conditioning (HVAC) equipment. Lead is a naturally occurring element, which can result in poisoning when consumed or inhaled. Lead poisoning can cause anemia and damage to the brain and nervous system, particularly in children. Deterioration, damage and disturbance of paints and coatings containing lead can result in hazardous exposure. Applicable regulations pertaining to the removal or disturbance of lead-containing paints and coatings are described below under *Regulatory Setting*.

Utilities Observed

SCE overhead power lines were observed along the eastern, southern, and western site property boundaries. Pole-mounted electrical transformers were observed in association with the overhead power lines along the western property boundary (see Figure 2-14, Transmission Line Relocation). The SCE high-tension overhead power lines and related EMF are discussed below in more detail.

Typical sources of polychlorinated biphenyls (PCBs) include electrical transformer cooling oils, fluorescent light fixture ballasts, and hydraulic oil. PCBs are a probable human carcinogen that were widely used in many industrial and commercial applications because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties. In 1976, the US EPA banned the manufacture and sale of PCB-containing transformers. ~~Prior to~~ Before this date, transformers were frequently filled with a dielectric fluid containing PCB-laden oil. By 1985, the US EPA required that commercial property owners with transformers containing more than 500 parts per million (ppm) PCBs must register the transformer with the local fire department, provide exterior labeling, and remove combustible materials within 5.0 meters of the transformer (40 Code of Federal Regulations § 761.30, "Fire Rule").

The US EPA has the following categories for PCB-containing transformers:

- Non-PCB Containing Transformer, if less than 50 ppm PCB;
- PCB-Contaminated Transformer, if between 50 and 499 ppm PCB; and
- PCB-Transformer, if greater than 500 ppm PCB.

Pole-mounted transformers were identified along the western property boundary. The transformers are owned and operated by SCE.

Other utilities observed include a Southern California Gas Company high pressure natural gas pipeline demarcated with signs and placards along the southern boundary, an associated subsurface vault in the southwest corner, and a subsurface sewer pipeline along the western boundary, demarcated by a series of three sewer manholes.

Database Records Review for Site and Neighboring Properties

Citadel reviewed a regulatory database report provided by Environmental Data Resources, Inc. (EDR) to help identify recognized environmental concerns in connection with the site area. Regulatory database records reported in the EDR database report include Federal, State, and County lists, which are updated on a regular basis with the respective reporting agencies. The project site was not identified as containing hazardous materials in the EDR report. No documented hazardous materials usage or hazardous waste generation was identified in the historical records reviewed by Citadel or EEI.

Neighboring properties identified in the database, which are located within a 0.25-mile radius of the site are shown on Table 4.7-1.

Table 4.7-1
Properties on Hazardous Materials Lists within 0.25-mile of the Project Site

Facility Name	Facility Address	Distance From Site	Database Reference
Tosco – 76 Station # 5241 / Unocal #5241 / Circle K#2705651	6930 Hollister Avenue	1/8th – 1/4th mile – Southeast	LUST, Permitted UST; Historic UST; HIST CORTESE; HAZNET
Howden Fluid Systems	87 Santa Felicia Drive	1/8th – 1/4th mile - Northwest	RCRA-SQG; FINDS, HAZNET
Western Design Corporation	72 Santa Felicia Drive	1/8th – 1/4th mile - Northwest	RCRA-SQG; FINDS; HAZNET
Tamra Pacific Inc.	7127 Hollister Avenue	Less Than 1/8 mile – West-Southwest	SWRCY
The Home Depot Number 6623	6975 Marketplace Drive	1/8th – 1/4th mile - Southeast	RCRA-SQG; FINDS; HAZNET
Jewell Property (former Shell Service Station)	7020 Calle Real	Less Than 1/8 th mile – North	LUST; HIST CORTESE
Exxon Mobil Oil #10	49 Glenn Annie Road	1/8 th – 1/4 th mile –North	LUST; Permitted UST; HIST UST; HIST CORTESE; CHMIRS
Joslyn Electronic Systems Corp	6868 Cortona Drive	1/8 th – 1/4 th mile –East	RCRA-SQG; SLIC; FINDS; HAZNET; HIST UST
Costco Wholesale No. 474	7095 Marketplace Drive	1/8 th – 1/4 th mile –South	RCRA-SQG; FINDS
Chevron Station 92580	6895 Hollister Avenue	1/8th – 1/4th mile - Southeast	RCRA-SQG, LUST, Permitted UST; HIST UST; HIST CORTESE; HAZNET
BEI Industrial Encoder Division	7230 Hollister Avenue	1/8 th – 1/4 th mile –West	RCRA-SQG; RCRA-NLR; FINDS; HAZNET
Santa Barbara Focal Plane	69 Santa Felicia Drive	1/8th – 1/4th mile – Northwest	RCRA-NLR; FINDS; HAZNET
Miravant Medical Technologies	336 Bollay Drive	1/8 th – 1/4 th mile – Southeast	RCRA-SQG; FINDS; HAZNET

The neighboring properties within 0.25_miles were identified on the following database lists:

- Resource Conservation and Recovery Act (“RCRA”), 42 U.S.C. §§ 6901, et seq., ~~Resource Conservation and Recovery Act -Small Quantity Generator (RCRA-SQG)~~: RCRA is US EPA’s comprehensive information system providing access to data supporting the RCRA of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data and recording abilities of the Resource Conservation and Recovery Information System (RCRIS). The RCRA_Info database includes selected information on sites that generate, store, treat or dispose of hazardous waste as defined by RCRA. Conditionally exempt small quantity generators (CESQGs)

generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. The database may be accessed at <http://www.epa.gov/epawaste/inforesources/online/index.htm>.

- **RCRA-No Longer Regulated (NLR):** The database includes selective information on sites, which generate, transport, store, treat and/or dispose of hazardous waste, as defined by RCRA. RCRA – NLR facilities do not presently generate hazardous waste.
- **Permitted Underground Storage Tank (UST):** The permitted UST records contain a listing of all historic and permitted underground storage containers for hazardous materials usage. This database is maintained by the State Water Resources Control Board (SWRCB).
- **Historic Underground Storage Tank (HIST UST):** The HIST UST records contain a historic listing of all permitted underground storage containers for hazardous materials usage dated October 15, 1990. This database was generated by the State Water Resources Control Board (SWRCB), but is no longer active or maintained. It is intended to provide an historical reference at a specific period of time. This list can include USTs identified on the UST list, as well.
- **Leaking Underground Storage Tank (LUST):** Records contain an inventory of reported LUST incidents. This database is maintained by the SWRCB.
- **Spills, Leaks, Investigations, and Cleanups (SLIC):** This list includes facilities that have had known spills, leaks, investigations or clean-ups of hazardous wastes or substances (information provided by the California Regional Water Quality Control Board (RWQCB)).
- **CORTESE Identified Hazardous Waste and Substance Sites (CORTESE):** This database from the California Environmental Protection Agency (Cal EPA) identifies historic and current public drinking water wells with detectable levels of contamination, hazardous substance facilities selected for remedial action, facilities with known toxic material identified through the abandoned site assessment program, sites with USTs having a reportable release and all solid waste disposal facilities from which there is known migration.
- **Historic CORTESE Identified Hazardous Waste and Substance Sites (HIST CORTESE):** The HIST Cortese identifies CORTESE sites identified on an historic list from April 1, 2001. This database was generated by the California Environmental Protection Agency (Cal EPA), but is no longer active or maintained. It is intended to provide an historical reference at a specific period of time. This list includes CORTESE sites also included on the CORTESE list.
- **California Hazardous Materials Incident Report System (CHMIRS):** The CHMIRS list contains information on reported hazardous materials incidents (accidental releases or spills).
- **Facility Index System (FINDS):** FINDS contains both facility information and pointers to other sources that contain more detail.
- **HAZNET:** Hazardous waste information system. Data that is extracted from the copies of hazardous waste manifests received each year by the California Department of Toxic Substances Control (DTSC).
- **Solid Waste Recycling Facilities in California Database (SWRCY):** A list of recycling facilities in California.

The neighboring properties identified only on the RCRA – SQG and RCRA – NLR lists within a 0.25-mile distance, and properties identified at a distance of greater than 0.25-mile from the site, were determined not to represent an environmental concern to the site based on the reported operations at the facility, the regulatory status of hazardous materials incidents at the facility (case closed), and/or the distance between the facility and the site.

Additional records were reviewed by EEI to assess the potential environmental impact to the site from the LUST and Permitted UST facilities. In addition to the FirstSearch database info, EEI contacted the Santa Barbara County Fire Department Protection Services Division District (SBCFPSD) as reported in the 2003 Phase I Environmental Site Assessment (included in Appendix E) regarding hazardous materials usage and storage at the site and neighboring properties. According to the PSDSBCF, no permits were issued allowing hazardous materials at the site is not permitted for hazardous materials usage and there are no known existing environmental hazardous materials concerns located on with the site usage. EEI identified four neighboring properties as potential environmental concerns to the site, including the Tosco Service Station #5241 located at 6930 Hollister Avenue (also identified as Unocal #5241 and Circle K #2705651); the Chevron Service Station #9-2580 at 6895 Hollister Avenue; the Jewell Property at 7020 Calle Real; and the Exxon Mobil Oil Corporation Service Station #18-ETG at 49 Glen Annie Road, based on their location relative to the site, and their inclusion on the LUST, Permitted UST, HIST UST and/or HIST CORTESE lists in the environmental database search report. In addition to the PSDSBCF files, EEI reviewed records at the Central Coast Regional Water Quality Control Board (CCRWQCB) for LUST and Spills, Leaks, Investigations and Cleanups (SLIC) sites in the area. The site was not identified with a LUST or SLIC case. In addition to the LUST cases identified in the PSDSBCF files, EEI reviewed one (1) SLIC case, for the Joslyn Electronic Systems Corporation at 6868 Cortona Drive. Citadel conducted follow-up reviews of the LUST and SLIC files via the geotracker.waterboards.ca.gov ~~geotracker.swrcb.ca.gov~~ website, which is maintained by the RWQCB and SWRCB.

In addition to the hazardous materials usage and storage sites facilities identified and researched by EEI in 2003, the City of Goleta has identified two additional facilities hazardous materials usage and storage sites, which are identified on the CORTESE list and are located in the vicinity of the site: 72 Santa Felicia Drive, located adjacent to the west of the site, and 7200 or 7230 Hollister Avenue, located approximately 700 feet to the west of the site. A preliminary assessment of the 72 Santa Felicia Drive site determined that a defense contractor formerly operated on the property and maintained a chemical storage area there. The preliminary assessment did not identify any conditions warranting additional investigation and the investigation was subsequently closed. Based on the absence of any identified concerns regarding chemical usage, chemical storage, hazardous waste generation and/or hazardous waste storage at this location, an assessment of the potential impact of this former facility on the site is not warranted.

Based on the information obtained from the RWQCB case files, the known groundwater impacts in the general vicinity of the site do not present an environmental concern to the project site due to their distance (ranging from 450 to 1,180 feet) and their hydrogeologically cross or down-gradient locations in relation to the project site. No additional assessment of the impact of these neighboring facilities on the site is warranted.

Business Plan and Generator Sites Within a 2,000-Foot Radius of the Site

In consultation with the ~~Santa Barbara County Fire Protection District~~SBCF's Department Hazardous Materials Unit (HMU), a data base search was conducted to determine the types of

chemicals that are used, and waste generated, within a 2,000-foot radius of the project site. A complete list of the types of chemicals and quantities by facility name and address is provided in Appendix E. A review of these chemicals determined that none are listed as acutely hazardous in the ~~8~~ California Code of Regulations §§ 5139, *et seq.* Subchapter 7. *General Industry Safety Orders* Group 16. *Control of Hazardous Substances*, Article 109. *Hazardous Substances and Processes*, §5189. *Process Safety Management of Acutely Hazardous Materials*, Appendix A—*List of Acutely Hazardous Chemicals, Toxics and Reactives*. Storage, use, and disposal of hazardous chemicals are subject to Business Plans, which are enforced by the HMU to prevent contamination of the environment. There is no record of hazardous materials and waste generators having contaminated the project site.

Electromagnetic Fields (EMF)

Electrical systems produce both electric and magnetic fields. Electric fields result from the strength of the electric charge, while magnetic fields result from the motion of the charge.

This following discussion exclusively addresses AC (alternating current) ELF (extremely low frequency, 60 Hz) magnetic fields. The term commonly used is “EMF,” which is used to denote “electromagnetic fields” or “electric and magnetic fields” and is commonly used as shorthand for 60Hz magnetic fields. EMF is invisible, non-ionizing, low-frequency radiation. Electric and magnetic fields are common throughout nature and are produced by all living organisms. However, concern about EMF exposure generally pertains to human-made sources of electromagnetism and the increased levels of exposure that may have adverse biological effects. Exposure to electric fields from transmission lines typically do not present a human health risk since these fields are effectively shielded by materials such as trees, walls, etc. Therefore, the majority of concerns related to EMFs focus on exposure to magnetic fields (i.e., the invisible fields created by moving charges) from transmission lines. Magnetic fields cannot be easily shielded, but can be differentiated depending upon the configuration of the lines. The closer the phases (wires that carry the circuit current) are configured, the greater effect of field cancelation, which reduces the distance from the circuit that the magnetic field would be detectable. The magnetic fields or “field strength” is expressed in milliGauss (mG).

A common and useful way of thinking about electricity is by analogy with water in a pipe. The current (measured in Amps) in an electrical circuit is analogous to the flow of the water in a pipe; the voltage (measured in Volts) is analogous to the pressure that pushes the water through the pipe. Whenever electricity is conducted through transmission lines, distribution lines, or is used in appliances, both electric and magnetic fields exist close to the lines or appliances. Magnetic fields are caused by current, or flow of electricity. Electric fields are caused by voltage, or the potential to do work. Magnetic field levels are directly proportional to current. If the current is doubled, all other things being equal, the fields double. In the production of magnetic fields, voltage is immaterial.

Existing Electrical Power Distribution/Transmission Facilities

There are several existing electrical power distribution facilities adjacent to the site. A SCE electrical substation is located adjacent to the northeastern corner of the site, at the northern terminus of Glen Annie Road. A number of above and below ground distribution and transmission circuits emanate from this substation. There are two aboveground 66 kV transmission circuits mounted on wooden and steel poles traveling away from the substation toward the south, along the western side of Glen Annie Road. At the southwest corner of Glen Annie Road and Hollister Avenue, one of the two 66 kV lines goes underground at the location

of a tubular steel pole and travels eastward, under Hollister Avenue toward Storke Road and then the UCSB campus. The other 66 kV line remains above ground, turns westward at this same tubular steel pole location, and travels along the north side of Hollister Avenue, near the southern boundary of the project site, mounted on a series of wooden poles. Existing transmission line locations are illustrated in Section 2.0 Project *Description*, Figure 2-14.

At the second wooden pole, west of Glen Annie Road along the southern boundary, two 16 kV distribution circuits inside two risers emerge from underground, connect to cross-arms under the 66 kV line, and travel westward on the same pole line as the aboveground 66 kV line. At approximately the southwestern corner of the project site, an aboveground 16 kV branch line taps into one of the 16 kV lines and travels north on a wooden pole along the western boundary of the project site until it terminates approximately 550 feet from Hollister Avenue. This 16kV line supplies electricity to the office and research facilities immediately to the west of the site via pole-mounted transformers on two of the wooden poles.

In addition to these facilities there are a number of underground distribution lines traversing the area under and in the vicinity of Glen Annie Road and Hollister Avenue. As discussed in the following section, these circuits do not have any material impact on the EMF environment at the project site.

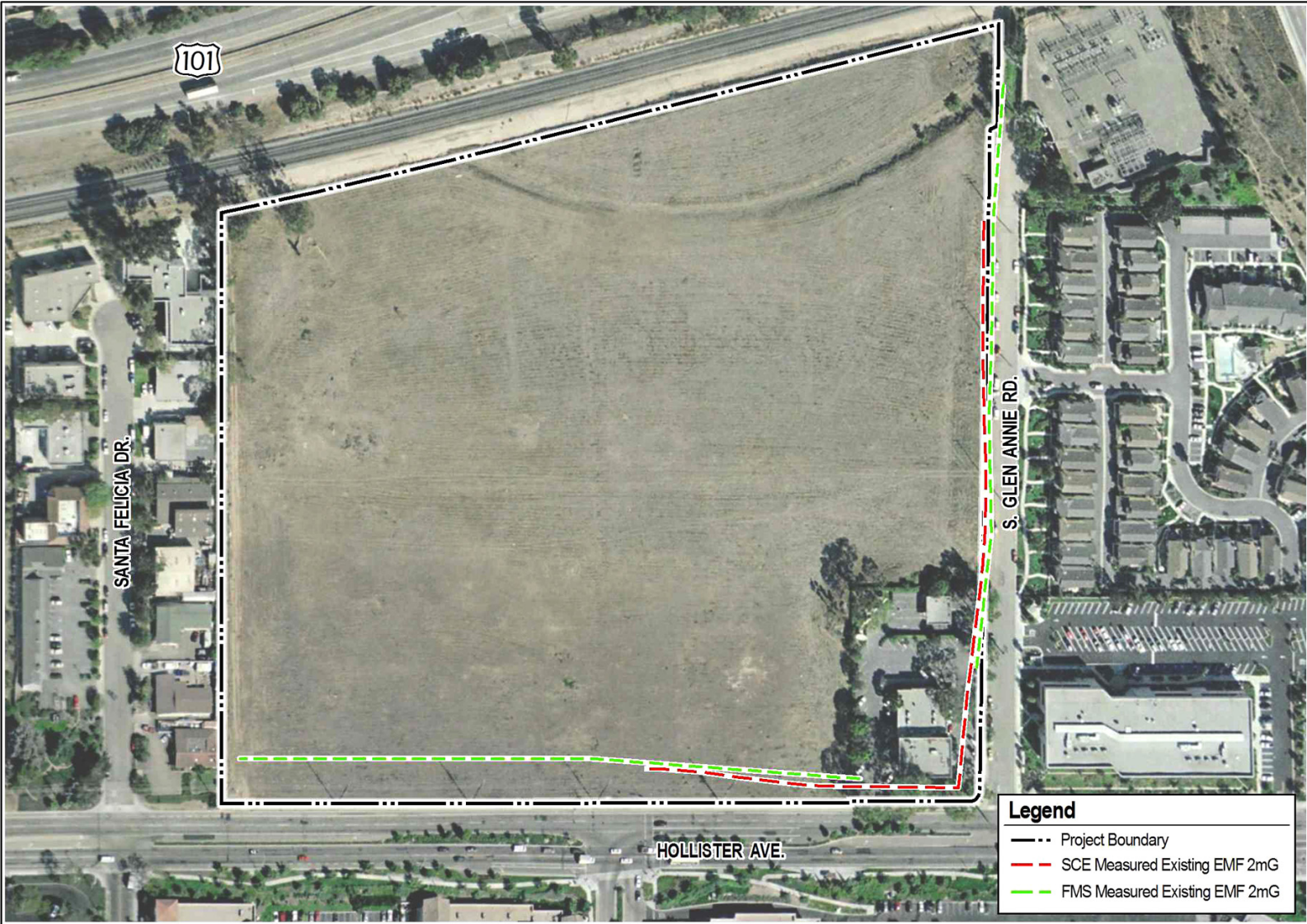
Existing Field Strengths from Existing Electrical Facilities

In order to establish a baseline field strength level for this site, two sets of measurements were taken along the west and south boundaries of the site. One set was taken by a SCE EMF Specialist Engineer on October 4, 2010 and the second was taken by Field Management Services (FMS) on December 28, 2010. Measurements were taken using a Dexsil 1000 professional magnetometer, mounted to a customized survey wheel. The Dexsil 1000, mounted on the survey wheel, takes a full set of measurements (one in each of the three vectors – x, y, and z and simultaneously calculates and records the Resultant value of the three vectors by calculating the square root of the sum of the squares. The Dexsil 1000 is accurate to within 0.10 mG. The second set of measurements was taken to check for accuracy and gauge for any temporal variations. The values and the field patterns are very similar. Between the two sets, a total of 17 measurements were recorded. The results of both measurements are presented in **Figure 4.7-1**. The patterns of both measurements indicate that field strength of EMF rapidly diminishes as the distance increases. Doubling the distance cuts the field strength by a factor of four.

Along the eastern boundary, the EMF levels are generated by the two 66 kV circuits only.

Along the western boundary, an insignificant contribution to EMF is made from the existing 16 kV line, which currently supplies electricity only to businesses on the west of the site.

Along the southern boundary, the EMF levels are generated by a combination of one 66 kV circuit and two 16 kV circuits. The 16 kV circuits tend to have a greater EMF generation (a function of amps) relative to the 66 kV circuits. The 16 kV circuits along the southern boundary are underground for approximately 365 linear feet at the east portion of the south boundary. The dominant field in the eastern 365 linear feet is generated by the overhead 66 kV line. In this location, a 2 mG measurement was recorded at a distance of approximately 17 feet from the line. Once the two 16 kV circuits emerge from below ground and run above ground for the remainder of the southern boundary, approximately 720 linear feet, the 2 mG EMF reading was measured at distances of between 54 and 59 feet from the lines.



Base Source: Westar Associates, 2011.

EMF and Public Health

Use of electric power is ubiquitous, and it is nearly impossible to avoid exposure to EMF, as it is emitted by everyday electrical instruments (e.g., cell phones, hair dryers). Concern regarding magnetic field exposure focuses on continuous exposure, such as in a bedroom or an office building, where people might spend up to eight hours or more a day.

After several decades of study regarding potential public health risks from exposure to power line EMF, research results remains inconclusive. Several national and international panels have conducted reviews of data from multiple studies and state that there is insufficient evidence to conclude that EMF causes cancer or other health-related effects. Additionally, the data have not identified a specific level of exposure (or type of exposure) that could be called “dangerous.” Opinions on the matter vary. Recently the International Agency for Research on Cancer (IARC), which is part of the World Health Organization (WHO), and the California Department of Health Services (DHS) both classified EMF as a “possible carcinogen” (WHO, 2011a) (CDHS, 2002). The “possible carcinogen” label is used when the available evidence is not convincing enough to conclude that a public health risk exists, but neither can it be concluded that an agent is entirely safe. By itself, this assessment does not establish specific policies that should be used. Government agencies at the state and federal levels have adopted a range of “cautionary policies” which are appropriate for the level of legitimate concern. The IARC also acknowledged that there remains insufficient data to declare EMF exposures as an established health hazard. Also, according to the World Health Organization, no adverse health effects from low level, long-term exposure to radiofrequency or power frequency fields have been confirmed to date (WHO, 2011b). At this point in time, no specific level of exposure has been shown to be hazardous.

While there is inconclusive evidence that EMF exposure results in a health hazard, suggestions for safe and low-cost methods of reducing exposure are generally considered during the siting of new transmission substations and transmission line facilities. This is supported by the California Public Utility Commission (CPUC), which requires that all new transmission facilities have an “EMF Management Plan” per CPUC Decisions 93-11-013 and 06-01-042. The EMF Management Plan discusses available field reduction options, their potential to reduce EMF, and their costs.

EMF Reduction

EMF levels can be reduced in three primary ways: through shielding, field cancellation, or by increasing the distance from the source. Shielding is effective for the electric fields because they can be blocked by most materials, including walls, buildings, and trees (but is of limited effectiveness for magnetic fields). Magnetic fields around transmission lines can be reduced either by cancellation or by increasing the distance between the receptor (i.e., human, animal, or electrical equipment) and the source (current-carrying conductors).

Field cancellation is achieved by arranging transmission lines such that the magnetic fields (created by the flow of electricity) that are emitted from each of the single phases (wires) cancel each other as the fields overlap. The closer together the phases, the greater the cancelling effect. For example, for three phases, a “triangle” configuration has the greatest cancelling effect as the three phases would have the most compact juxtaposition with respect to each other (i.e., magnetic field emissions of each line would be partially cancelled by portions of the fields of the other two). Thus, the overall magnetic fields of the transmission line would be reduced as a result of the maximized cancellation effect between the three phases. This technique has practical limitations because of the potential for short circuits if the wires are

placed too close together. There are also worker safety issues to consider if spacing is reduced, such as placing a worker in a condition where arcing/occupational electrocution may occur from limiting access between the lines or making the lines heavy with the weight of needed insulation.

The distance between the source of magnetic fields (the transmission lines) and the receptor (persons inhabiting the project) can be increased by either placing the wires higher above ground, laying deeper underground cables, or by increasing the width of the ROW. However, each of these options carries other non-EMF hazards (e.g., undergrounded cables may encounter water, may be difficult to find for maintenance, and once found repair work is conducted in a confined area; above ground cables encounter wind tensions, may combust, may be struck by objects or may fall on an object). These methods can prove effective in reducing the EMF levels from transmission lines that may be encountered by receptors because, as described previously, the EMF strength is reduced rapidly with distance.

Proximity to the Union Pacific Railroad

The proposed project site is located adjacent to the UPRR right-of-way. The railroad carries passenger cars as well as freight trains. Some freight trains may carry hazardous materials. Issues associated with the site's proximity to the railroad involve the potential for an accident (a derailment in particular) that could result in release of hazardous material or ignite a fire. The associated public health risk depends upon the materials released during an accident, the toxicity of the materials, and the wind direction that may carry the emissions from the release toward any occupied uses. The probability of such an occurrence is assessed below under 4.7.3 *Project Impacts*.

Proximity to a High Pressure Natural Gas Line

There is a high-pressure natural gas pipeline that runs along and within the southern boundary of the project site. The line parallels Hollister Avenue and connects to an underground vault located within the southwest corner of the site. The pipeline is 16 inches in diameter and is owned and operated by the Southern California Gas Company (SCGC). This pipeline is manually operated² and is at least 20 years old.³ The 16" high-pressure pipeline has a maximum allowable operating pressure (MAOP) of 975 pounds per square inch (psi) and operations fluctuate between 550 and 970 psi depending on demand, which tends to vary seasonally. To the south of the site, within Hollister Avenue, SCGS also owns and operates a 10-inch high-pressure and a 6-inch medium-pressure natural gas pipeline. The 10-inch high-pressure line has a MAOP of 400 psi and operates at approximately 275 psi. The 6-inch medium-pressure line has a MAOP of 60 psi and operates at 45 psi. It should be noted that the MAOP and the "burst pressure" are not the same, and that burst pressure of the pipelines (if at full integrity) is often 50 percent or greater than the MAOP.⁴

² As opposed to an automated system that requires the pressure/shut-off of the gas transmission system that would allow a mainline valve to be opened and closed by a remote operator located at a gas control center and that would automatically close when they detect a line rupture (e.g. falling pressure, increasing flow rate) or any other condition that they are programmed to detect).

³ Email correspondence from Karl Monteleone, SCGC to Scott Kolwitz, City of Goleta, August 11, 2011.

⁴ Email correspondence from Bruce Spencer, SCGC to Scott Kolwitz, City of Goleta, August 2, 2011 and telephone communication between Bruce Spencer, SCGC and Brian McCarthy, Envicom Corporation, December 20, 2011.

Radon Gas

Radon is an odorless and tasteless, naturally occurring gas that has been linked to lung cancer. Radon exists in all soils throughout the United States and is produced from the breakdown of naturally occurring radium and uranium within the ground.

Radon gas studies performed by the California Bureau of Mines and Geology and the Department of Health Services (DHS) from 1989-1993 indicate that Santa Barbara County falls within the Zone 1 designation, which suggests that there is a low to moderate potential for exposure to radon gas at or above the EPA recommended level of 4.0 pico curies per liter (pCi/L) (City of Goleta, 2007). According to DHS, 278 radon tests were conducted in the zip code including the project site (93117). Radon levels greater than or equal to 4 pCi/L were observed in 44 of the tests conducted in this area (EEI, 2003).

Regulatory Framework

Federal

Superfund Amendments and Reauthorization Act - 42 U.S.C. Sections 11001 et. seq.

The Superfund Amendments and Reauthorization Act (SARA) amended the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. Sections 9601, et. seq.) on October 17, 1986. SARA reflected EPA's experience in administering the complex Superfund program during its first six years and made several important changes and additions to the program. SARA also required the EPA to revise the Hazard Ranking System to ensure that it accurately assessed the relative degree of risk to human health and the environment posed by uncontrolled hazardous waste sites that may be placed on the National Priorities List.

Resource Conservation and Recovery Act 42 U.S.C. Sections 6901, et seq.

Resource Conservation and Recovery Act (RCRA) gives the EPA the authority to control hazardous waste from the "cradle-to-grave." This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also set forth a framework for the management of non-hazardous wastes.

~~The 1986 amendments to RCRA enabled the EPA to address environmental problems that could result from RCRA enables the EPA to regulate underground tanks storing petroleum and other hazardous substances including, without limitation but not limited to, rehabilitation of contaminated soils resulting from environmental releases. RCRA focuses on active and future facilities. However, once hazardous materials have been released to the environment, they are deemed a waste as soon as the medium they have impacted is disturbed or moved. Therefore, contaminated soil can be regulated under RCRA. The California Department of Toxic Substance Control implements RCRA in California via Unified Program Agencies. In Santa Barbara County, the Unified Agency is the Santa Barbara County Fire Department.~~

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

In cases where the presence of asbestos-containing materials and lead-based paints is likely, State and Federal standards are applicable. EPA Guidance Document 340/1- 92-013 "A Guide to Normal Demolition Practices under the Asbestos NESHAPs" should be referred to prior to initiation of a demolition project.

Lead Exposure in Construction Interim Final Rule

On June 3, 1993, Federal OSHA implemented 29 Code of Federal Regulations (CFR) Part 1926.62 "Lead Exposure in Construction Interim Final Rule." California subsequently adopted 29 CFR 1926.62 and incorporated it into its own standard Title 8 Code of California Regulations (CCR) Section 1532.1. Regulations on The lead standards apply to all construction work in which lead is present in any amount (29 C.F.R. Code of Federal Regulations, Part 1926.62; 8 CCR § 1532.1). "Construction work" is defined as work involving construction, demolition, alteration, repair, painting, or decorating. The regulations require employers to implement stringent employee protection provisions, such as respiratory protection, biological monitoring (blood lead levels), training, and hygiene facilities, even prior to establishing exposure levels. Once an employer has conducted an initial exposure assessment, and depending upon the results of the assessment, changes can be made in the level of personal protective equipment necessary, and the frequency of air and biological monitoring (blood lead levels) can be altered.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 banned bans the manufacture, processing, distribution, and use of PCBs in totally enclosed systems. In 1976, the U.S. EPA banned the manufacture and sale of PCB-containing transformers. Prior to Before this date, transformers were frequently filled with a dielectric fluid containing PCB-laden oil. By 1985, the EPA required that commercial property owners with transformers containing more than 500 parts per million (ppm) PCBs must register the transformer with the local fire department, provide exterior labeling, and remove combustible materials within 5.0 meters of the transformer (40 Code of Federal Regulations § 761.30: "Fire Rule"). The EPA Regional 9 PCB Program regulates remediation of PCBs in several states, including California.

Rail Safety Improvement Act

Following the 2008 Metrolink rail accident in Chatsworth, a significant change in rail safety oversight occurred when Congress passed the Rail Safety Improvement Act (RSIA) of 2008. Among other things, the Act requires the installation, by December 31, 2015, of Positive Train Control on all freight and passenger trains that share tracks, all freight mainline over which poison- or toxic-by-inhalation hazardous materials are transported, and such other tracks as the Secretary of Transportation may prescribe. The Act also makes significant changes to law regarding railroad safety management, railroad safety risk reduction strategies, and hours of service. The CPUC (described below) works with the Federal Railroad Administration in the implementation of the Act (CPUC, 2008).

National Electric Safety Code

The National Electric Safety Code (NESC) sets standards for safeguarding of persons during installation, operation, and maintenance of electrical supply lines. The Code sets minimum electrical clearances and mechanical strengths accepted by the industry as safe and reliable.

Code of Federal Regulations – Natural Gas Pipelines

The Federal Energy Regulatory Commission (FERC) is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects. Title 49: Transportation, Part 192 –Transportation of Natural and Other Gas Pipeline, Subpart A –General, of the Code of Federal Regulations, provides various "Classes" of location, which correspond to a magnitude of consequence based on the density of

persons that may be affected by a rupture. The Code of Federal Regulations, Part 192.5~~Section 192.5~~ Class Locations, provides a definition of Classes for locations, Classes 1 through 4, Class 1 being the least consequential areas and Class four being the higher consequential areas. The ~~Code CFR~~Code of Federal Regulations also provides standards for operating pressure, vault accessibility and design requirements, and integrity management of pipelines in accordance with the American Standards for Mechanical Engineering (ASME).

State

California Office of Emergency Services

The California Office of Emergency Services coordinates the emergency response to an accidental release of acutely/extremely hazardous materials.

California Department of Toxic Substance Control

The California Department of Toxic Substance Control implements RCRA in California via Unified Program Agencies. The hazardous waste regulations are governed ~~with by the~~ Title 22 California Code of Regulations Title 22, Division 4.5.

California Occupational Safety and Health Act (Cal/OSHA)

Cal/OSHA was enacted ~~in 1973~~ to protect workers and the public from safety hazards and to enforce California laws and regulations pertaining to workplace safety and health. Workplace safety is the prime responsibility of Cal/OSHA whether protecting workers who may handle hazardous material at an industrial site or protecting certified personnel responsible for remediation of hazardous substances. ~~Title 8, CCR, Sections §§ 337-340~~ require employers to monitor worker exposure levels to listed hazardous materials and to notify workers of exposure. Regulations stipulate the requirements for injury and illness prevention programs, proper equipment and use procedures, medical exams and training requirements, and reporting requirements.

Central Coast Regional Water Quality Control Board

The Regional Water Quality Control Board (RWQCB) and Santa Barbara County Fire Department's ~~Fire Prevention Division~~Protection District, Site Mitigation Unit (SMU) enforce Federal and State site remediation regulations. The SMU is the lead agency for the project area and has instituted a Site Mitigation Program responsible for the supervision of cleanup at sites located throughout the County. The ~~County Fire Protection District~~ will grant closure of an impacted site when confirmatory samples of soil and groundwater reveal that levels of contaminants are below the standards set by the SMU and the RWQCB.

California Public Utility Commission

California Public Utility Commission (CPUC) under General Order 90 (GO-90) establishes power line construction standards in California, ~~whereas the remaining 49 states have adopted the voluntary standards contained within the National Electric Safety Code (NESC C3).~~ Neither ~~This set of standards does not establishes~~ establish regulations or safety standards for EMF. ~~R~~Rather, they set minimum electrical clearances and mechanical strengths accepted by the industry as safe and reliable. California's GO-95 contains ~~more~~ detailed design and construction details.

The electrical clearances identified in General Order 90 ~~specified in both documents~~ protect against public or occupational electrocution so long as reasonable safety precautions are taken.

Extending a metallic boom or antenna into or within close proximity to high voltage power lines, climbing poles and towers without proper training, steel and aluminum extension ladders close to power lines, etc., are all obvious potential hazards.

~~One of the noteworthy differences between California's GO 95 and NESC C3 is the requirement within the NESC to "limit the steady state current due to electrostatic effects to 5 mA if the largest anticipated truck, vehicle, or equipment under the line were short circuited to ground." This rule applies to power lines with AC voltages to ground exceeding 98 kV thus would include 220 kV and 500 kV transmission lines but would exclude the 66 kV lines adjacent to the project site.~~

Per CPUC Decision No. 93-11-013 (November 2, 1993), the CPUC requires that utilities use "low-cost or no-cost" mitigation measures for facilities requiring certification under powerline facilities or substations (General Order 131-D). The decision directed the utilities to use four percent of a project's total cost as a benchmark to determine what would be considered low-cost mitigation. The CPUC did not adopt any specific numerical limits or regulation on EMF levels related to electric power facilities. On January 26, 2006, the CPUC (CPUC Decision No. 06-01-042) again determined that it is "unable to determine whether there is a significant verifiable relationship between EMF exposure and negative health consequences" and reaffirmed the policy of low-cost/no-cost mitigation with the same benchmark of 4 percent and policies to improve utility design guidelines.

State Railroad Inspection Plan and AB1935

The CPUC has safety and security regulatory authority over all rail transit agencies (RTAs) in California and works in cooperation with the Federal Transit Administration (FTA) and the RTAs to enhance public safety and security (CPUC, 2008). CPUC staff focus on verification of the System Safety and Security Plans of each RTA to ensure that these plans meet all State and Federal rules and regulations.

The CPUC's railroad inspection program is guided by its State Railroad Inspection Plan and AB 1935. Taken together, these rules require the CPUC to ensure that all railroad locomotives, equipment, and facilities are inspected as necessary in accordance with the RSIA.

Local

City of Goleta General Plan/Coastal Land Use Plan

The City of Goleta's General Plan/Coastal Land Use Plan Safety Element requires applications for development to provide site-specific hazards studies (SE 1.3), restrictions or prohibitions in hazardous areas (SE 1.4, SE 1.5), utilization of building and fire codes (SE 1.6, SE 7.1, SE 7.2), reduction of radon hazards (SE 1.9), provide geotechnical and geologic studies (SE 4.3, SE 4.11), setback structures from faults (SE 4.4), evaluation/avoid soil-related hazards (SE 5.2, SE 5.4, SE 10.7), provide Fuel Modification Plans (SE 7.4), require automatic fire sprinkler systems (SE 7.5), be consistent with clear zone and airport approach zone regulations (SE 9.1) including height restrictions (SE 9.2) and limitations on development and uses (SE 9.3, SE 9.5, SE 9.6, SE 10.5), and provide real estate disclosure (SE 9.7)

City of Goleta Inland Zoning Ordinance

The City of Goleta's Inland Zoning Ordinance and other implementing ordinances (including subdivision and grading ordinances) require development plans to identify the location of areas

of geologic, seismic, flood, and other hazards (Section 35-317.3(2). Article III, Chapter 35 of the Santa Barbara County Inland Zoning Ordinance, as adopted by reference in the Goleta Municipal Code).

Santa Barbara County Site Mitigation Unit

The Santa Barbara County Fire Department Fire Prevention Division Site Mitigation Unit (SMU) oversees both the Certified Unified Program Agency (CUPA) inspection and disclosure program for Underground and Aboveground Storage Tanks (USTs and ASTs), as well as the Leaking Underground Fuel Tank (LUFT) program (by way of grant funding from the State of California Water Resources Control Board) in all cities and unincorporated portions of Santa Barbara County. The SMU oversees general permitting and operation of USTs and ASTs as the CUPA. If any releases or contamination associated with a UST is identified, County Fire oversees the assessments and remediation under the LUFT program.

Santa Barbara County Air Pollution Control District

The Santa Barbara County Air Pollution Control District (APCD) oversees emissions regulations in the region, including asbestos emissions from construction, with regulations requiring that buildings be surveyed for the presence of asbestos containing materials (ACMs) ~~prior to~~ before disturbance and that ACM removal procedures limit emissions.

Electromagnetic Fields

There are no city or county regulations pertaining to the design or installation of electrical power transmission or distribution circuits or the placement of development near these facilities. California Public Utility Commission (CPUC) provides regulation and safety oversight with respect to utility locations, construction, and maintenance. The City of Goleta has a guideline policy of evaluating impacts of EMF on projects of this type consistent with Santa Barbara County's policy:

“At this time, given the current information regarding potential health impacts and the uncertainty surrounding these impacts, the Board of Supervisors did not adopt a specific threshold for ELF exposure. Instead, the Board of Supervisors directed staff to evaluate ELF exposure on a case by case basis against the current scientific data.”

SCE has an adopted *EMF Design Guidelines for Electrical Facilities* (Southern California Edison Company 2004) that provide design guidance to reduce EMF exposure in accordance with the mitigation policies per CPUC Decision No. 93-11-013 (November 2, 1993).

4.7.2 Thresholds of Significance

The City of Goleta's *Environmental Thresholds and Guidelines Manual* contains thresholds that categorize the significance of impacts to public safety resulting from the involuntary exposure to hazardous materials. However it focuses on identifying activities that include the installation of, or modification to, facilities that handle hazardous materials, the transportation of hazardous materials, or non-hazardous land uses exercised in proximity to hazardous facilities. The proposed project ~~would~~ does not involve such facilities.

The following thresholds of significance are based on Appendix G of the CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact with respect to hazards and hazardous materials if it would:

- 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
- 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, would it create a significant hazard to the public or the environment.

A standard threshold for exposure to EMF has not been adopted as part of the CEQA Guidelines, and there are no established Federal or State health and safety standards for EMF. The City's *Environmental Thresholds and Guidelines Manual* addresses background information related to EMF, but no specific threshold has been adopted, and the matter is considered on a case-by-case basis. The County of Santa Barbara considered the adoption of specific significance criteria with respect to 60Hz magnetic fields, and the EMF threshold adopted by the County in 1994 provides "At this time, given the current information regarding potential health impacts and the uncertainty surrounding these impacts, the Board of Supervisors did not adopt a threshold for ELF exposure." In the absence of a threshold, CEQA impacts are addressed on a case-by-case basis. For purposes of this document, and consistent with previous environmental reviews, the thresholds considered also provide that a significant impact caused by EMF would occur if "New development is exposed to ELF magnetic fields equal to or greater than 2 mG." Upon incorporation in 2002, the City of Goleta continued using the 2 mG threshold. However, as health consequences have not been established to date, a conclusive basis for the use of 2 mG as a significance threshold has similarly not been established. For purposes of this document, Table 4.7-2 shows guidelines suggested by national and world health organizations. These guidelines are provided herein as informational thresholds for context of the levels recorded at the project site.

Table 4.7-2
60-Hz EMF Guidelines Established by Health and Safety Organizations

Organization	Magnetic Field	Electric Field
American Conference of Governmental and Industrial Hygienists (ACGIH) (occupational)	10,000 mG ^a 1,000 mG ^b	25 kV/m ^a 1 kV/m ^b
International Commission on Non-Ionizing Radiation Protection (ICNIRP) (general public, continuous exposure)	833 mG	4.2 kV/m
Non-Ionizing Radiation (NIR) Committee of the American Industrial Hygiene Association (AIHA) endorsed (in 2003) ICNIRPs occupational EMF levels for workers	4,170 mG	8.3 kV/m
Institute of Electrical and Electronics Engineers (IEEE) Standard C95.6 (general public, continuous exposure)	9,040 mG	5.0 kV/m
U.K., National Radiological Protection Board (NRPB)	833 mG	4.2 kV/m
Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). Draft Standard, Dec. 2008 ^c	3,000 mG	5 kV/m
Comparison to steady (DC) EMF, encountered as EMF outside the 60-Hz frequency range:		
Earth's magnetic field and atmospheric electrical fields, steady levels, typical of environmental exposure ^d	[550 mG]	[0.2 kV/m up to >12 kV/m]
Magnetic Resonance Imaging Scan, static magnetic field intensity ^d	{20,000,000 mG}	n/a
Source: EMF Questions & Answers, National Institute of Environmental Health Sciences, National Institutes of Health, 2002.		
a. Represents ACGIH guidelines for the general worker.		
b. Represents ACGIH guidelines for workers with cardiac pacemakers.		
c. Australian Government, Australian Radiation Protection and Nuclear Safety Agency, website.		
d. These EMF are steady fields, and do not vary in time at the characteristic 60-cycles-per-second that power line fields do. However, if a person moves in the presence of these fields, the body experiences a time-varying field.		

4.7.3 Project Impacts

Exposure to Hazardous Materials During Construction

Impact HAZ 1: Demolition of existing structures could result in the release of hazardous materials.

Significance Before Mitigation: Potentially Significant

Asbestos Containing Materials

The project would demolish the existing office building. That demolition may expose ACMs that may have been used in its construction including, but not limited to, drywall wall systems, vinyl flooring materials, flooring mastics, thermal insulation and acoustic materials, acoustic ceiling materials, stucco, window putty, piping, pipe fittings, and roofing materials. Federal and State regulations govern the renovation and demolition of structures where ACMs are present. All demolition that could result in the release of ACMs must be conducted according to federal and State standards.

The National Emission Standards for hazardous Air Pollutants (NESHAP) mandates that building owners conduct an asbestos survey to determine the presence of ACMs prior to the commencement of any remedial work, including demolition. If ACMs are found, abatement of asbestos would be required prior to any demolition activities. Until the appropriate levels of testing and remediation have occurred for all ACMs in accordance with applicable regulations, the proposed project would result in the potential for a significant impact.

Lead Exposure

At the time the on-site structures were built (in the 1960s), building materials commonly included lead-based paints or other coating substances. Since the office building and kiosk would be demolished, there is potential for demolition workers, or handlers of the resultant debris, to be exposed to lead that may be within any lead-based building materials. Building components and fixtures with a potential for lead-containing coatings include, but are not limited to, walls, windows, doors, window/door jambs, railings, poles, parking lot striping, and heating, ventilation and air conditioning (HVAC) equipment. If surfaces with these lead based paints are improperly disturbed, removed, or disposed of construction workers could be exposed to lead in unsafe concentrations. OSHA regulations are in place to assure that these materials are safely removed ~~prior to~~ before or during demolition and renovation activities. However, until these structures are surveyed for lead based paints and their removal or stabilization is provided for pursuant to applicable regulations, demolition of these structures could result in a significant impact associated with potential release and/or improper disposal of building components coated with lead-based substances.

Polychlorinated Biphenyls

The site contains equipment with the potential to have historically contained, or currently contain, PCB-laden oil, such as fluorescent lighting ballasts and pole-mounted transformers. Removal of equipment containing PCB-laden oil would result in potential release into the environment and exposure of construction workers and nearby building occupants to this substance. Prior to the implementation of measures to assure the identification of PCBs at the site and the proper handling and disposal of oils and equipment, the proposed project would result in the potential for a significant impact.

Exposure to Hazardous Materials Generated in the Project Vicinity

Impact HAZ 2: The proposed project would be developed in an area with hazardous materials sites in the vicinity.

Significance Before Mitigation: Less Than Significant

Identified Hazardous Materials Sites

A Phase I ESA was conducted for the project site and determined that neighboring properties identified hazardous materials sites (described above) within a 0.25-mile distance, and properties identified at a distance of greater than 0.25-mile from the site, did not to represent an environmental concern to the site based on the reported operations at the facilities, the regulatory status of hazardous materials incidents at the facility (e.g., closed case), the distance between the facility and the site, or the hydro-geologically cross-gradient location from the site. In addition, although some trash was noted, site reconnaissance did not reveal the presence of hazardous chemicals. Therefore, on-site impacts related to nearby hazardous materials sites are considered less than significant.

Hazardous Materials Business Plan and Generator Sites Within a 2,000-Foot Radius

A search of the SBCFD HMU database was conducted to determine the types of chemicals that are in use within a 2,000-foot radius of the project site. There are light-industrial and commercial uses in the vicinity of the project site that use hazardous chemicals in the course of operation. None of the chemicals used within this radius are listed as acutely hazardous according to the California Code of Regulations. The data base list of hazardous chemicals and addresses are provided within Appendix E. Business Plans and Emergency Response Plans are required for hazardous materials users based on types and quantities of the substances used. These plans are administered by the HMU and are designed to ensure all nearby chemicals are handled appropriately to minimize potential health effects of the users and the surrounding environment. With these plans and regulations in place, impacts are considered less than significant.

New Uses Involving the Use, Storage, or Disposal of Hazardous Materials

Impact HAZ 3: Implementation of the proposed project could expose people to risk of upset involving the use, storage, or disposal of hazardous materials.

Significance Before Mitigation: Potentially Significant

Hazardous materials to be used and stored on the proposed project site are limited to those typically associated with residential and commercial uses.

Residents of the proposed project would likely store chemicals typical of apartment-style living. These would include typical household cleaning chemicals, detergents, bleaches, minor amounts of interior paint, etc. Since enclosed garages would be included it is expected that paint and a limited amount of private vehicle maintenance chemicals, such as oil and lubricants, would be stored.

Hazardous materials associated with residential apartment facilities maintenance may also be used and stored on-site. These would include pool chemicals (e.g., cleaning chemicals and chlorine) for maintenance of the common area clubhouse pool, fertilizers and pesticides for exterior grounds and landscaping, cleaners, and exterior paints. To maintain project amenities on a regular basis, grounds keeping staff would have to store these items on-site. Without proper precautions in place, the use and/or disposal of such chemicals could expose residents as well as the public and the environment to these types of hazardous materials. Such risks are considered potentially significant.

Hazardous materials associated with shopping centers may include consumer products pre-packaged for direct distribution to, and use by, the general public. Specific tenants would be determined by market conditions and would change over time. Occupants of the commercial component may include inventory stock and sale of hazardous materials, such as pesticides, herbicides, insecticides, pool chemicals, fertilizers, cleaners, lubricants, etc. These chemicals are considered hazardous if spilled into the environment or ingested. However, these items would be pre-packaged and sealed per manufacturing specifications and contain the appropriate warning labels. Sales of consumer products pre-packaged for retail sale would be required to register with the County of Santa Barbara Environmental Health Services and would be regulated to ensure these items are properly stored and distributed. Operations and maintenance of the grounds and facilities for the commercial components would include use of chemicals fertilizers, herbicides, and pesticides. Although this would likely entail a contractor bringing these items on-site for regular use as needed, these items may also be stored within the grounds.

Facilities engaged in the use, storage and generation of hazardous materials without the development of approved Hazardous Materials Business Plan and health and safety plans could result in a potentially significant impact.

Exposure to Electromagnetic Fields

Impact HAZ 4: Implementation of the proposed project could place people within the electromagnetic field of existing and/or relocated overhead electrical transmission and distribution lines.

Significance Before Mitigation: Potentially Less Than Significant

Relocation and reconfiguration of the existing overhead transmission lines is proposed as part of the development of the proposed project. The proposed transmission line relocations are illustrated in Section 2.0 *Project Description*, Figure 2-14. The 66 kV line that currently runs along the west side of Glen Annie Road, the east boundary of the project site, and turns west down Hollister Avenue, on the south boundary of the project site, would be relocated to the west and north boundaries of the site. Emanating from the substation to the northeast of the site, the 66 kV line would remain aboveground, mounted on proposed new wooden poles and travel westerly along the north boundary to the northwestern corner of the project site, before running

south along the western boundary on a new, likely tubular steel, pole line until it reaches the southwest corner of the site at Hollister Avenue. From there the line would continue west along Hollister Avenue as it does currently. The second aboveground 66 kV transmission line would continue to run south along Glen Annie Road on the east boundary of the project site to Hollister Avenue, where it is under-grounded and travels east toward UCSB. The existing tubular steel pole at the northwest corner of Hollister Avenue and Glen Annie Road would be removed, and a new, likely tubular steel, pole would be erected further north on the western side of Glen Annie Road where it would transition to an underground location.

The proposed relocation is still in the design process. However, future design changes as a result of further design review are expected to be minor and would be within ~~the State regulations of Cal. P.U.C.PUC- General Order 95~~. Therefore, modeling of potential EMF based on the currently anticipated rerouting of one transmission line and the remaining transmission lines would be considered an accurate representation of the final approved design. However, low-cost mitigation that may be included during SCE improvement plan design may include such things as:

- Relocation of Southern California Edison Transmission poles further eastward; and/or
- Relocation of Southern California Edison Transmission lines upwards, downwards and/or eastward; and/or
- Reconfigure Southern California Edison Transmission lines such that magnetic fields are reduced.

The proposed changes to the overhead electrical distribution on and near the site would alter the EMF levels within the project site and on adjacent properties. As provided previously, the field strength, expressed in milligauss (mG), measured at any particular location is affected by several factors, which include:

- Current load
- Phase relationship between conductors
- Separation of conductors
- Distance from the source
- Influence from other sources

To predict future EMF emissions from the proposed transmission line and pole realignments and configurations, a 2-dimensional computer model was prepared using "2-D Fields," a program developed by SCE that incorporates these factors. To determine the maximum EMF levels, maximum loading conditions were assumed. Loading refers to the amount of current that would be transmitted through the lines based on demand at a given time. The maximum loading used in this case is a theoretical maximum based on SCE data for 2010 that assumes maximum current. Using the most conservative approach to these computer simulations the highest historical values (Hiles, 2011) were assigned to both of the 66 kV circuits and both lines were assumed to have cancellation phasing, which is required in the design of new lines pursuant to (California Public Utilities Commission Decision, 1993). Peak loading of this type would rarely, if ever, equal more than 2 percent of the available circuit usage and would certainly identify the outer limits of field values in the foreseeable future.

EMF modeling of the transmission line realignment and phase configurations generated a distance at which 2 mG of EMF would be experienced under the highly unlikely assumptions for

maximum peak loading described immediately above. The modeling also predicted the highest levels of EMF that would be experienced within habitable structures at their closest point to the transmission line realignment. As there would be a different configuration of phases (wires) for the north boundary transmission line and the east (Glen Annie Road) transmission line, there would be a difference in distance at which the 2 mG and the highest EMF level could occur for each line. Levels below 2 mG were not considered in describing the levels that occur within habitable buildings. The transmission line along the north boundary would be supported on poles at 65 feet in height and include a “triangle” or “delta” phase configuration with two phases situated north of the pole centerlines and one phase south of the pole centerlines. The east boundary transmission line would be supported on poles up to 70 feet in height and a vertical (stacked-type) phase configuration, situated to the west (project side) of the pole centerlines. Graphic representations of these configurations are provided in Appendix E. Since the EMF readings are a radius from the center of the phase configurations, the levels of EMF would differ as a function of both the distance and height at which the receptor would be located relative to the EMF radius. As such, the project building heights and distance from the source were taken into account. Diagrams of the buildings and superimposed relative 2 mG radius are also included in Appendix E.

Modeling of the EMF along the north boundary as a result of the pole line relocation would result in a 2 mG reading at a radius of 56 feet from the lines. ~~This level would partially occur within the north side of the second story of Building No. 13.~~ Given the setbacks of the buildings along the north boundary, levels of EMF within habitable space are not expected to reach 2 mG.

The modeled 2 mG EMF level radius for the remaining single line along Glen Annie to the east would occur at a radius distance of 60 feet from the line. ~~and would partially extend into the second floor living space of residential Building Nos. 15 and 17 that front Glen Annie Road.~~ In addition proposed Building G, which contains the live-work condominium units would experience a 2 mG exposure within the second and third stories toward the rear of the structure. Modeling of the EMF using the theoretical maximum loading assumptions results in a maximum potential EMF reading of up to 15 mG within the habitable space.

Along the western site boundary, the primary contribution of magnetic fields would be from the newly relocated 66 kV line. An insignificant contribution would be made from the existing 16 kV line, which currently supplies businesses immediately to the west of the site only. The modeled EMF level provided a 2 mG radius that would not occur within the proposed occupied structures or within the existing buildings along Santa Felicia Drive.

| Along the southern boundary EMF levels would be generated by the two 16 kV underground circuits only, as the 66 kV circuit would be relocated to the north boundary. The existing 365 linear foot portion of the two 16 kV underground circuits along the eastern portion of the southern boundary would remain unchanged. The recorded EMF levels along this portion would be reduced. However, since the 16 kV circuits generate a higher EMF (as a function of amps) than the relocated 66 kV circuit, for a conservative approach, the 2 mG EMF level is assumed to be at a distance of approximately 17 feet for this portion (same as measured). | Building H within the southeast portion of the site, would be setback ~~20-25~~ feet from Hollister Avenue. For the remainder of the southern boundary (720 feet), the two 16 kV lines would be placed underground within Hollister Avenue, further south of the project site than current conditions, which would reduce exposure to magnetic frequency, and at closer phasing as allowed for within underground conduit, which would provide greater cancelling effects of the magnetic frequency. As such, the conservatively estimated 17-foot distance of the 2 mG level

from these circuits would be pulled further south within the property boundary. Building A ~~would also be placed at a setback of 24.5 feet from Hollister Avenue.~~ Additionally, Mitigation Measure HAZ 5-2 would require compliance with a 25-foot setback from the centerline of a high-pressure pipeline effectively increasing the setback to 30 feet for both Building A & H, ~~therefore~~ Accordingly, occupants of Buildings A and H would not be exposed to EMF of 2 mG or higher.

As stated earlier, and although labeled as a “possible carcinogen,” there is no significant scientifically verifiable relationship between EMF exposure and negative health consequences at 60 Hz EMF levels. The modeled range of 2 to a maximum of 15mG that may be measured within Building G is significantly below the International Commission on Non-Ionizing Radiation Protection guidelines for general public continuous exposure of 833 mG, as provided in Table 4.7-2. Therefore impacts are considered potentially less than significant.

Development of New Uses in Proximity to a High Pressured Natural Gas Pipeline

Impact HAZ-5: Implementation of the proposed project would develop commercial and residential uses in close proximity to an existing high-pressure natural gas pipeline.

Significance Before Mitigation: Potentially Significant

Integrity of the Pipeline

The greater the density of people within proximity to a natural gas pipeline, the greater the potential consequences are should a rupture of a pipeline occur. Based on the type of proposed development and location of structures relative to the Southern California Gas Company natural gas pipeline along the south boundary, the project location would appear to be considered “Class 3,” consequence area pursuant to Title 29 of the CFR. In pertinent part, a Class 3 location is:

- (i) Any class location unit that has 46 or more buildings intended for human occupancy; or*
- (ii) An area where the pipeline lies within 100 yards of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theatre, or place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. (The days and weeks need not be consecutive).*

In the case of the proposed project, each separate apartment or condominium would be considered a “building intended for human occupancy.”

Pursuant to FERC and CGC, the various Class location require corresponding operating pressures, which also depend on the type of material, and operating integrity of the vault and pipeline. The pipeline and vault are graded with respect to strength; for instance, a high-pressure gas pipeline installed after the 1980's is rated X80 or above (the more recent ratings are X100 and X120). These grades refer to the strength and material of the pipeline and thus its resistance to failure and corrosion. If the pipe is old (less than X80 in strength), and the valves require manual operation, and the pressure is higher than standards would allow for a Class 3 location, then there is a risk factor that could have a high consequence.

It is highly likely that the pipeline and vault along the southern boundary were installed many

years ago when the area was relatively undeveloped. ~~and therefore, there was, therefore,~~ ~~small threat to public health and safety little consequence~~ in the event of rupture or leak. Over time, urban development and densities have increased in the area. Accordingly there is a greater threat to public health and safety. ~~thus, consequences from are rupture or leak may be more considerable.~~ In the recent past and on an on-going basis, upgrades to the transmission pipeline along Hollister Avenue have been conducted in segments as new urban developments are proposed.⁵ The integrity of the pipeline, as it relates to the CFR, remains unknown to date. Without the pipeline integrity assessment, potential impacts associated with the integrity of the pipeline are considered potentially significant.

Setbacks from Pipeline

Goleta General Plan/Coastal Land Use Plan Policy SE 8.13 Setback from Gas Pipelines requires a 25-foot setback from the centerline of any underground high-pressure natural gas pipeline for occupied structures except in instances where the City finds the 25-foot setback poses an undue hardship to proposed development, provided that any reduced setback shall not be less than 15 feet. Other ~~uses,~~ non-structural uses such as driveways, pedestrian pathways, utilities, etc., above the pipeline are considered compatible. Based on the current site plan, Buildings A and H (likely future restaurant buildings) ~~are must to~~ be located within the required 25-foot required setback. Building A would be setback 24.5 from Hollister Avenue and Building H would be setback 20 feet from Hollister Avenue.

Because the current site plan could place occupied structures within the 25-foot setback from a natural gas pipeline, and because grading and trenching associated with site improvements may accidentally impact the pipeline, potential impacts related to natural gas pipeline rupture as a result of the project construction are considered potentially significant.

Risk of Upset Associated with the Site's Proximity to the Union Pacific Railroad

Impact HAZ-6: Implementation of the proposed project would place residential structures and persons in proximity to the existing UPRR railroad tracks, creating a potential risk of upset associated with derailment, chemical leaks, and fire.

Significance Before Mitigation: Less Than Significant

Freight trains occasionally travel along the UPRR adjacent to the project site. These trains may carry hazardous materials, which could be released during an accident. The public health risk posed by an accidental release would depend upon the materials involved, their toxicity, and the wind direction that could carry emissions from the release. The prevailing weather pattern at the time of release would affect the rate of dilution and the direction of transport of any gaseous or volatilized materials. These variables cannot be accurately predicted.

Upset may also result from the explosion of highly volatile materials. Because the closest proposed homes would be 95 feet from the track, explosion and fire could pose a health risk in addition to that which could result from inhalation of volatile chemicals and fumes. There are fuel pipelines within the railway right-of-way that could also be ruptured during an accident. However, derailments typically do not rupture well-buried pipelines within the railway right-of-way except in highly unusual circumstances. The last major fuel pipeline rupture and explosion

⁵ -Telephone communication between Bruce Spencer, SCGC and Brian McCarthy, Envicom Corporation, December 20, 2011.

in California within a railroad bed occurred during track clean-up from a previous accident, not from the derailment itself.

The impact potential can be evaluated only in terms of probabilities. The possibility of impact is determined by a combination of the probability of an accident, the probability that the spilled cargo is hazardous, and the probability that winds are blowing from the spill toward occupied receptor sites. Dangerous cargo represents approximately six (6) percent of total freight movement in the United States (Reuters, December 15, 2006), and far less than one-half of all hours have winds from the tracks toward the proposed project site.

In this analysis, spillage of content was assumed to require derailment of cars carrying hazardous cargo. The derailment history of freight trains in the United States in the last ten years has been 0.005 derailments per one-million ton miles of cargo (safetydata.fra.dot.gov). At 10 to 12 freight trains per day (URS, 2003), each averaging 2,500 tons per train, the tracks adjacent to the project site carry approximately 1,000,000 tons per year. The segment directly adjacent to the project site carries approximately 200,000 ton-miles. The risk of derailment adjacent to the project site is calculated as follows:

- $200,000 \text{ ton miles} \times 0.005 \text{ derailments per ton-mile per year} = 0.001 \text{ derailments/year}$.

~~Based upon this calculation, a derailment would occur in other words, once every 1,000 years, a derailment would be expected to occur adjacent next to the project site.~~ The risk of adverse impacts from such a derailment is calculated as follows:

- $\text{Once every } 1,000 \text{ years} \times 0.06 \text{ probability of hazardous cargo} \times 0.5 \text{ probability of adverse wind equals one derailment every } 30,000 \text{ years that life could be at risk for at this project site from a derailment.}$

The probability of adverse impacts from a possible train derailment is similar to the fatality risk associated with natural phenomena such as lightning strikes meteor impacts. Therefore, risks associated with the site's proximity to the UPRR line are considered less than significant.

Exposure to Naturally Emitted Radon Gas

Impact HAZ 7: Implementation of the proposed project may expose residents to low to moderate concentrations of naturally occurring radon gas.

Significance Before Mitigation: Potentially Significant

Since there have been no radon tests conducted on-site to date and Santa Barbara County in general has a low to moderate potential for exposure to Radon gas, potential health risks posed by possible exposure of residential units to radon levels above 4.0 pci/L are considered potentially significant impact.

4.7.4 Cumulative Impacts

The proposed project in combination with other developments in the area, as described in Section 3.0 *Related Projects*, would not result in significant cumulative impacts because the potential hazardous materials impacts because these impacts would be limited to the site and adjacent uses.

The reconfiguration of the electrical transmission lines would result in a total reduction of EMF, although it would place new residents in proximity of the lines. Distribution lines that would

serve the project would be routed through underground facilities, allowing for greater ~~cancellation~~ cancellation of magnetic fields through the phasing configurations. The project would not result in a significant cumulative impact on the EMF environment of the city. Similarly, inasmuch as the electrical power for the proposed project will be contained within the project, there is not expected to be a significant increase or decrease of EMF in the context of growth of the overall area.

The City of Goleta General Plan/Coastal Land Use Plan Final EIR identifies a significant unavoidable impact resulting from the inherent risk associated with the transport of hazardous materials along major transportation routes (including US 101, SR217, Hollister Avenue, and the Union Pacific railroad tracks) in close proximity to the community. Significant hazards include the risk of a trucking or rail accident and subsequent release of hazardous materials. The overall risk associated with transport of hazardous materials would be expected to increase following build-out the General Plan/Coastal Land Use Plan as more population is introduced in close proximity to transportation routes. The proposed project would contribute to this impact by introducing population in close proximity to US 101, UPRR railroad tracks, and Hollister Avenue. This is considered a significant and unavoidable contribution to a significant cumulative impact as identified in the General Plan/Coastal Land Use Plan Final EIR.

4.7.5 Mitigation Measures

Impact HAZ 1: Demolition of existing structures could result in the release of hazardous materials in course of demolition of existing structures.

HAZ 1-1: Asbestos surveys ~~shall~~ must be conducted on all structures prior to demolition. In cases where the presence of asbestos-containing materials is likely or confirmed, it ~~shall~~ must be removed according to applicable State and Federal standards. All asbestos removal ~~shall~~ must be performed by an experienced, state-licensed, Cal/OSHA- and SBAPCD-registered asbestos contractor. All work ~~shall~~ must take place under the guidance of an independent, California Certified Asbestos Consultant. The Consultant ~~shall be~~ is responsible for reviewing the project drawings, designing engineering controls used to control airborne asbestos contamination, visual inspections of engineering controls, and ambient air monitoring to determine airborne fiber levels.

Plan Requirements and Timing: ~~Before the City~~ Prior to issuance of a demolition permit, asbestos survey and remediation report(s) ~~shall~~ must be conducted on all structures, and all asbestos removal ~~shall~~ must be performed by an experienced, state-licensed, Cal/OSHA- and SBAPCD-registered asbestos contractor.

Monitoring: The Planning and Environmental Services Director, or designee, City staff shall must verify compliance with this mitigation measure by ~~upon~~ reviewing the permittee's demolition permit application and ~~through~~ verify compliance via site inspections.

HAZ 1-2: Lead paint surveys ~~shall~~ must be conducted on all structures prior to renovation or demolition. In cases where lead-containing paints are likely or confirmed, it ~~shall~~ must be removed according to State and Federal standards. Testing ~~shall~~ must include a profile of waste characteristics for disposal in accordance with all local regulations. Lead surveys and remediation ~~shall~~ must be conducted in accordance with all Federal and State OSHA regulations with remediation plans

that outline specific work practices for handling lead.

Plan Requirements and Timing: ~~Before the City issues a~~Prior to approval of the demolition permit, the lead survey and remediation plan shall ~~must~~ be approved and completed.

Monitoring: ~~City~~The Planning and Environmental Services Director, or designee, must ~~staff shall~~ verify compliance with this requirement ~~before the City issues prior to issuance of a demolition permit and~~ confirm compliance via ~~shall be verified upon-site investigations.~~

HAZ 1-3: Pole-mounted transformers, light ballasts or other equipment suspected to contain PCBs ~~shall~~ must be inspected for the presence of PCBs ~~prior to~~ before any disturbance or removal. All equipment found to contain PCBs ~~shall~~ must be removed and disposed in accordance with all applicable local, State and Federal regulations including, but not limited to 22 California Code of Regulations Title 22 and 40 CFR Part 261 ~~CCR Title 22 and EPA 40 CFR.~~

Plan Requirements and Timing: Utility Plans ~~that~~ must include notes requiring inspection and plan for removal and disposal.

Monitoring: The Planning and Environmental Services Director, or designee, must ~~City staff shall~~ verify compliance with this requirement before issuing a ~~prior to grading permit.~~

HAZ 1-4: In the unlikely event that hazardous materials are encountered during grading and / or excavation activities anywhere on the project site, earthwork ~~shall~~ must be temporarily suspended in order to coordinate investigation / remediation efforts with the oversight of the Santa Barbara County Fire Department Site Mitigation Unit (SMU). An environmental professional (~~e.g.i.e. a~~ Pprofessional Ggeologist) is recommended to provide oversight and project monitoring to ensure the health and safety of all workers. A remedial plan ~~shall~~ must be developed by a Pprofessional Ggeologist approved by the City and submitted to the Planning and Environmental Services Director, or designee, ~~local agency~~ for approval as required before ~~prior to~~ continued work in the area.

Plan Requirements and Timing: Before the Planning and Environmental Services Director, or designee, approves ~~Prior to approval of the grading plan, the remediation plan~~ must ~~shall~~ be reviewed and approved by County Fire PSD Santa Barbara County Fire Department SBCF ~~before~~ prior to continuing excavation. The permittee must ~~shall~~ obtain a compliance letter from Santa Barbara County Fire Department County Fire PSD ~~prior to~~ before continuing grading in the affected area. Approval and implementation of all required specifications ~~shall~~ must be completed before ~~prior to~~ grading in the affected area.

Monitoring: SBCF must ~~County Fire PSD shall~~ inspect remediation activities and verify that they conform to the approved ~~as to~~ plan in the field.

Impact HAZ 2: The proposed project would be developed in an area with hazardous materials sites in the vicinity.

No mitigation measures are required.

The following mitigation measure is recommended for incorporation into project conditions of approval to address potential changes in hazardous materials use in industrial area west of the site in Santa Felicia Drive area and the Storke/Hollister Research Center to the east.

HAZ 2-1 (Recommended): The permittee ~~shall~~ must provide notices ~~ensure that to~~ all owners and tenants of both the residential and commercial structures along the west boundary, ~~and those along the east boundary across from the Storke/Hollister Research Center, regarding are provided disclosure notice of the industrial nature of the land uses and allowed uses under the Goleta Municipal Code zoning code for adjacent properties in the Santa Felicia Drive office/industrial area.~~ The notification disclosure ~~shall~~ must include information related to the types of hazardous materials and quantities that may be used within the facilities. The notification disclosure ~~shall~~ must also include contact information for the regulatory agency responsible for managing the Business Plans and Emergency Response Plans for that area (e.g. County Santa Barbara Fire Department Hazardous Materials Unit (HMU)).

Plan Requirements and Timing: ~~Before the City issues a Prior to Land Use Permit issuance,~~ the permittee ~~shall~~ must provide ~~the City~~ Planning and Environmental Services ~~Director, or designee,~~ with the notification disclosure document detailing the existing hazardous materials information in effect at the time, as well as a plan for keeping the notification documents updated and distributed by facility property management to tenants upon signing of lease agreements and to future owners upon sale of the units.

Monitoring: ~~The Planning and Environmental Services Director, or designee, must City staff shall~~ verify compliance with this requirement ~~before the City issues a prior to Land Use Permit and~~ and verify compliance throughout the life the project.

Impact HAZ 3: Implementation of the proposed project could expose people to risk of upset involving the use, storage, or disposal of hazardous materials.

HAZ 3-1: ~~Before Prior to~~ any storage or usage of regulated hazardous materials on-site (including pool maintenance chemicals, fertilizers, herbicides, pesticides, insecticides, lubricants, etc.), the permittee ~~must~~ shall obtain approval from the Santa Barbara County Fire Department for a Hazardous Materials Business Plan (HMBP) covering the use and storage of all regulated hazardous chemicals and materials to be used and/or stored onsite. Qualified environmental personnel or safety engineers ~~shall~~ must develop and implement a business plan and a health and safety plan in order to ensure that compliance issues regarding the proper containment, usage, disposal and transportation practices are used, if required.

Plan Requirements and Timing: The ~~SB~~ Santa Barbara County Fire Department approved HMBP ~~must~~ shall be submitted to the Planning and

Environmental Services Director, or designee, or approval before the City prior to issues a Land Use Permit LUP issuance.

Monitoring: The Planning and Environmental Services Director, or designee, must City staff shall verify compliance with this requirement before the City issues a certificate of prior to occupancy. The HMBP shall must be updated and enforced through the life of the project.

Impact HAZ 4: Implementation of the proposed project could place people within the electromagnetic field of existing and/or relocated overhead electrical transmission and distribution lines.

No mitigation measures are required. The following mitigation measure is recommended for incorporation into project conditions of approval.

HAZ 4-1 **(Recommended):** The permittee shall must provide an EMF Disclosure Statement and an EMF Information Package containing a balanced range of EMF educational and information materials to potential buyers and tenants occupants of Building G along the eastern property boundary.

Plan Requirements and Timing: The permittee shall must provide this disclosure and Information Package as part of the project CCRs to the City Attorney and Planning & Environmental Services Director, or designee, to verify the disclosure and Information Package is fair and adequate. This disclosure shall must be accompanied by a plan for keeping the notification documents updated and distributed by facility property management to tenants upon signing of lease agreements and to future owners upon sale of the units. The disclosure shall must be reviewed and approved prior before recordation of to recordation of the Final Map.

Monitoring: The Planning and Environmental Services Director, or designee, must City staff shall verify that the disclosure and Information Package has been is incorporated into the CCRs before prior to sale of residential units of Building G the live work unit(s) and that an adequate EMF Information Package has been assembled by the permittee and has been made is easily available for review by prospective occupants buyers. The Planning and Environmental Services Department Director, or designee, must shall review and approve the contents of the Package for objectivity, balance, and completeness.

HAZ 4-2 **(Recommended):** The permittee shall must request that the California Department of Real Estate insert the following into the final Subdivision Public Report: "the subject property is located near power lines and a power substation. Purchasers should be aware that there is ongoing research on adverse health effects associated with long-term exposure to low-level magnetic fields. Although no causal link is established, there is sufficient evidence to require reasonable safety precautions. The buyer may wish to become informed on the issue before making a decision on a home purchase in this location."

Plan Requirements and Timing: The permittee shall must provide this disclosure request to the California Department of Real Estate for inclusion in the Subdivision Public Report. The disclosure shall must be reviewed and approved

~~prior before the City issues to issuance of any Land Use Permit LUP for the project any residential building.~~

Monitoring: ~~The Planning and Environmental Services Director, or designee, must City staff shall verify that the California Department of Real Estate Subdivision Public Report contains this disclosure statement.~~

Impact HAZ-5: Implementation of the proposed project would develop commercial and residential uses in close proximity to an existing high-pressure natural gas pipeline.

HAZ 5-1: ~~The permittee shall must ensure provide evidence from that the Southern California Gas Company that the integrity of the natural gas pipeline segment and vault along the southern boundary are installed and maintained in accordance with the specifications of the CFR Code of Federal Regulations, for operating pressure, vault accessibility and design requirements, and integrity management of pipeline in accordance with the American Standards for Mechanical Engineering and CGC and for the type of use requested and the appropriate Class rating. An integrity assessment shall must be conducted consisting of, but not limited to, the following:~~

- Instrument surveys to providing a detailed assessment of the pipe and pipeline coating.
- Assessments performed at 10-foot intervals to ascertain if any protection deficiencies exist on the pipe.
- Consideration for environmental factors such as proximity to an earthquake fault, landslide areas, or major waterways.
- Detailed pipeline characteristics, including materials, age, diameter, operating pressure, and wall thickness.
- Identification of any integrity issues that required immediate repair.
- Recommendations for replacement or retrofit of manually operated valves with remotely controlled or automatic shut-off valves on the gas transmission system.
- Recommendations for Automated Remotely Controlled Valves (RCVs) to allow a mainline valve to be opened and closed by a remote operator located at a gas control center.
- Recommendations for Automatic Line Rupture Shut-off Valves (ASVs) that automatically close when they detect a line rupture (e.g. falling pressure, increasing flow rate) or any other condition that they are programmed to detect.
- Provisions for long-term inspections and maintenance. These provisions shall include submittal of inspection and maintenance records to the ~~City~~ Planning and Environmental Services Director, or designee.

Plan Requirements and Timing: ~~Prior Before the City issues any grading permit approval, the permittee shall must provide the gas pipeline integrity assessment to the City Planning and Environmental Services Director, or designee, for approval. The Assessment and review. Construction plans shall must consider the integrity assessment and incorporate design requirements to the project as~~

~~deemed appropriate be reviewed and approved by the Planning and Environmental Services Director, or designee, and the Community Services Department Director, or designee, before the City issues Land Use Permit for any commercial building, a Certificate of Occupancy, prior to grading permit approval. All upgrades, repairs, or replacements of the pipelines for the segment applicable to the project shall be in place prior to issuance of. The permittee must maintain improvements for the life of the project.~~

Monitoring: ~~The gas pipeline integrity assessment shall must be reviewed and approved by the Planning and Environmental Services Director, or designee, and the City Community Services Department Director, or designee. The Planning and Environmental Services Director, or designee, and the Community Services Director, or designee must conduct field inspections during grading and construction to verify compliance. shall ongoing maintenance and assessments be provided to the City Planning and Environmental Services Director, or designee, and the Community Services Director, or designee, for the life of the project.~~

HAZ 5-2: The permittee ~~shall must~~ demonstrate compliance with the 25-foot setback from the centerline of the high-pressured natural gas pipeline along the southern boundary.

Plan Requirements and Timing: ~~Prior Before the City issues a to grading permit, approval, the permittee must shall file documentation that it may install pipelines within obtain approval of the gas line easement holder. Construction plans for these improvements shall must be reviewed and approved by the Planning and Environmental Services Director, or designee, and the Community Services Department Director, or designee, Department before the City issues prior to a grading permit approval. Before Prior to construction the start of site preparation and grading activities the gas line locations shall must be clearly staked or otherwise clearly marked, and mechanical equipment shall be prohibited from operating within the appropriate distance as specified by Southern California Gas standards. Appropriate a Avoidance measures, including a prohibition of mechanical equipment from operating within the appropriate distance as specified by Southern California Gas standards, shall must be included on all grading and utility construction plans.~~

Monitoring: Evidence of Southern California Gas Company review and approval of the grading and utility plans ~~shall must~~ be provided to ~~City Planning and Environmental Services Director, or designee, and the Community Services Director, or designee.~~ Field inspection during grading and construction ~~shall must~~ verify compliance.

Impact HM-6: Implementation of the proposed project would place residential structures and persons in proximity to the existing UPRR railroad tracks, creating a potential risk of upset associated with derailment, chemical leaks, and fire.

HAZ 6-1: A Buyer Notification regarding risk of upset associated with the site's proximity to the Union Pacific Railroad ~~shall must~~ be recorded ~~and.~~ This information shall also be included in project CC&Rs.

Plan Requirements and Timing: The permittee ~~shall~~ must provide the Planning and Environmental Services Director, or designee, and the City Attorney City of Goleta with a copy of the notification ~~and CC&Rs~~ for review and approval. ~~Evidence of recordation shall be provided prior~~ The notification must be included in the project CC&Rs, which must be reviewed and approved by the City Attorney before recordation of the ~~tract~~ final map.

Monitoring: The Planning and Environmental Services Director must ~~City staff shall~~ verify compliance with this requirement ~~prior to~~ before final map recordation.

HAZ 6-2: The permittee must ~~shall~~ develop a mitigation plan for project residents that provides safe-harbor and/or evacuation procedures in the event of a train accident and potential release of hazardous materials.

Plan Requirements and Timing: The permittee ~~shall~~ must provide the Planning and Environmental Services Director, or designee, City of Goleta with a copy of the mitigation plan for review and approval. The plan ~~shall~~ must be included in the project CC&Rs, which shall ~~must~~ be reviewed and approved by the City Attorney ~~of Goleta prior to~~ before recordation of the ~~tract~~ final map.

Monitoring: The Planning and Environmental Services Director, or designee, must ~~City staff shall~~ verify compliance with this requirement before ~~prior to~~ map recordation of the final map.

Impact HM 7: Implementation of the proposed project may expose residents to low to moderate concentrations of naturally occurring radon gas.

HAZ 7-1: ~~Prior to approval of~~ Before the City issues any Land Use Permits for construction of any habitable structures, radon testing shall be conducted. If radon gas is present above the recommended EPA exposure level (4.0 pci/L), habitable structures ~~shall~~ must be designed to provide venting and/or any other EPA approved mitigation measures identified to reduce such exposure.

Plan Requirements & Timing: A radon report including recommendations for appropriate EPA approved mitigation measures ~~shall~~ must be submitted to the Planning and Environmental Services Director, or designee, Building and Safety, the Santa Barbara County Fire Department Hazardous Materials Unit, and the Santa Barbara County Environmental Health Services Office for review and approval ~~prior to~~ before the City issues approval of any Land Use Permit(s) for construction of any habitable structures.

Monitoring: The Planning and Environmental Services Director, or designee, must ~~City staff shall~~ ensure verify compliance with this requirement before the City issues ~~prior to approval of~~ any Land Use Permit(s) for construction of any habitable structures. The City Building Inspector ~~shall~~ must verify compliance in the field ~~prior to~~ before the City issues a certificate of ~~any occupancy for each building clearance.~~

HAZ 7-2: ~~Prior to any storage of usage of regulated hazardous materials on site (including pool maintenance chemicals, fertilizers, herbicides, pesticides, etc.)~~

~~the Santa Barbara County Fire Department should be contacted regarding requirements for a hazardous materials business plan for the site.~~

~~**Plan Requirements & Timing:** Qualified environmental personnel or safety engineers shall develop and implement a business plan and a health and safety plan in order to ensure that compliance issues regarding the proper containment, usage, disposal and transportation practices are used, if required.~~

~~**Monitoring:** City staff shall ensure compliance with this requirement prior to issuance of a certificate of occupancy for any commercial or residential use that will use, store, or handle hazardous materials.~~

4.7.6 Residual Impacts

Implementation of existing regulations as well as Mitigation Measures HAZ 1-1, HAZ 1-2, HAZ 1-3, HAZ 1-4, HAZ 3-1, HAZ 5-1, HAZ 5-2, HAZ 6-1, and HAZ 6-2, and ~~HAZ 7-2~~ would reduce the project's residual impacts related to hazardous materials upset and exposure to **less than significant (Class II)**.

~~While Mitigation Measures HAZ 4-1 and HAZ 4-2 would notify occupants of the potential for exposure EMF, there is no feasible means to shield Buildings 13, 15, 17 and G or substantially increase the magnetic canceling effects. Therefore, Impact HAZ 4 would remain a **significant unavoidable (Class I)** impact.~~