5.6 - Hazards and Hazardous Materials

5.6.1 - Introduction

Purpose

The purpose of this section is to describe any existing hazards and hazardous materials and potential impacts related to this topical environmental issue area. This section also identifies mitigation measures to reduce any potentially significant hazards and hazardous materials impacts and describes the residual impact, if any, after imposition of the mitigation.

Sources

Information in this section is based on the following sources:

- City of Orange Municipal Code, December 2008.
- Phase I Environmental Site Assessment Report, CENTEC Engineering, June 16, 2008. The complete study is contained in Appendix G.
- Letter received from the State Department of Toxic Substances Control, October 12, 2007. The complete study is contained in Appendix A.

5.6.2 - Existing On-Site Setting

The now closed golf course was developed in 1968 as a Lazy B Golf Ranch. The tennis courts, clubhouse, swimming pool, and pool house were built in 1981/1982. There had been a 5,000 gallon underground storage tank (UST) located adjacent to the west side of the western building in the maintenance yard near the northwest corner of the proposed project site, which was removed under regulatory supervision in 2002. No significant contamination was detected and the removal received a “closure” status from the City Fire Department in 2003. A copy of this letter and closure report is contained in the Phase I Environmental Site Assessment Report (Phase I ESA, Appendix G). The tennis courts, swimming pool, and clubhouse are still in use as of the date the Notice of Preparation was published and work on the Draft EIR began , but the golf course and driving range ceased operations in November 2006.

In 1988, approximately 10 cubic yards of soil were removed due to surficial contamination from drips and leaks that had occurred from use of an aboveground diesel tank, which is no longer on-site. The soil was excavated and disposed of off-site. Confirmation sampling conducted under Orange County Health Care Agency (OCHCA) supervision confirmed no significant contamination remained.

There was no evidence of fuel dispensers in the yards of the properties surrounding the proposed project site. None of the adjacent properties is listed as known sources of contamination according to public records reviewed, or appear to present a threat of impairment to the proposed project site.

A large aboveground tank (AST) is situated to the northeast of the easterly building on the project site. This AST is no longer in use. There had been leaking USTs at a cemetery beyond one-quarter

mile to the east and at a gravel and sand mining facility beyond one-half mile to the north of the project site. These USTs have been remediated (closed) and are considered too distant to impact the proposed project site.

Hazardous Building Materials

Asbestos

Asbestos is the name given to a number of naturally occurring, fibrous silicate minerals minded for their useful properties, such as thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is commonly found in acoustic insulation, thermal insulation, fireproofing, and in other building materials referred to as Asbestos Containing Materials (ACMs). Asbestos is made up of microscopic bundles of fibers that may become airborne when asbestos-containing materials are damaged or disturbed. When these fibers get into the air they may be inhaled into the lungs, where they can cause significant health problems. The California Occupational Health and Safety Administration (Cal OSHA) defines asbestos containing materials as any material that contains 0.1 percent asbestos by weight.

Due to the post-1980 construction of the clubhouse, caretaker's house, starter's shed, and pool house buildings, asbestos is not suspected of containing ACMs, although these materials may be present. The former starter's shed located next to the clubhouse was used to store miscellaneous golf-related equipment and a charging station for the golf carts. The year 1980 is generally accepted as the point in time that construction excluded the use of ACMs.

Lead

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death. Primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated soil.

The clubhouse, tennis courts, pool and pool house buildings were constructed in 1981-82. Due to the post-1980 construction of the clubhouse and pool house buildings, lead is not suspected as a likely or significant component of building materials in these buildings. The former starter's shed is old enough that there is a possibility that some lead-containing materials may exist. In addition, the caretaker residence constructed in approximately 1940 and maintenance buildings constructed in approximately 1959 have the possibility of containing lead.

Polychlorinated Biphenyls

Polychlorinated biphenyls (PCBs) are mixtures of human-made chemicals with similar chemical structures. PCBs can range from oily liquids to waxy solids Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications, including electrical, heat transfer, and hydraulic equipment; as plasticizers in paints, plastics, and rubber products; in pigments, dyes, and carbonless

copy paper; and many other applications. More than 1.5 billion pounds of PCBs were manufactured in the United States prior to cessation of production in 1977.

The Phase I ESA stated that no electrical transformers were observed on the proposed project site. Southern California Edison, who provides electrical service to the site, maintains that it is highly unlikely that the transformers contain Polychlorinated biphenyls (PCBs) at concentration levels requiring special management under the Environmental Protection Agency's (EPA) rules.

Federal law prohibited the use of PCBs in transformers manufactured after 1977. In addition, SCE has never specified the purchase of distribution transformers utilizing PCBs as the insulation and cooling fluid A statistically valid test of approximately 20,000 SCE distribution transformers, the concentration of PCBs in the mineral oil was less than 50 parts-per-million (ppm) in over 96 percent of the transformers. The EPA classifies concentrations of PCBs of less than 50 ppm as non-PCBs.

A telephone interview on August 3, 2009, with Mr. Steven Collins, REA, Principal of CENTEC Engineering, confirmed the findings of their Phase I Environmental Site Assessment that there is no possibility of other equipment on the project site containing PCBs.

Pesticides

A pesticide is any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest. The term pesticide applies to insecticides, herbicides, fungicides, and various other substances used to control pests. The health effects of pesticides depend on the type of pesticide. Examples of health risks posed by pesticides include cancer, nervous system damage, hormone or endocrine disruption, and eye or skin irritation. The Phase I ESA stated the likelihood of pesticides being present onsite is very unlikely. Pesticides would only have been used for spot treatment and small amount would have been used. Watering and irrigation would have diluted any pesticides.

Radon

Radon is a carcinogenic, radioactive gas resulting from the natural breakdown of uranium in soil, rock, and water. Radon gas enters a building through cracks in foundations and walls. Once inside the building, radon decay products may become attached to dust particles and inhaled, or the decayed radioactive particles alone may be inhaled and cause damage to lung tissue. The U.S. Environmental Protection Agency (EPA) has established a safe radon exposure threshold of 4 picocuries per liter of air (pCi/I).

Radon is generally not considered a significant area of concern for Southern California. A 1990 study by the Sate of California Department of Health Services, in conjunction with the EPA, concluded that California ranks the third lowest state in the country for percentage of dwellings exceeding the recommended action level for radon. This study also concluded that Southern California generally has an even lower incidence and likelihood of elevated levels of radon than the rest of the State. A telephone interview on August 3, 2009, with Mr. Steven Collins, REA, Principal of CENTEC

Engineering, confirmed the findings of their Phase I Environmental Site Assessment that there is no potential for radon to occur on the project site.

High-Voltage Power Lines

High-voltage power lines emit electromagnetic fields (EMFs), which have been alleged to be a cause of cancer. However, scientific research has never conclusively established a link between EMFs and cancer. There are no high-voltage power lines on the project site or within the site vicinity.

Hydrocarbons/Aboveground and Underground Storage Tanks

Petroleum hydrocarbons are derived from crude oil, which is refined into various petroleum products such as diesel, gasoline, kerosene, lubricants, and heavy fuel oils. Hydrocarbons constituents include benzene, N-heptane, and toluene, and generate health effects such as cancer, leukemia, asthmatic bronchitis, kidney damage, and eye irritation. Hydrocardbons are stored in aboveground storage tanks (ASTs) and USTs (underground storage tanks). Leaking ASTs and USTs can result in contamination of groundwater sources or fire and explosion.

Review of Potential Hazardous Conditions in Project Vicinity

The Phase I ESA reviewed databases maintained by various federal and State agencies. The databases included federal and State lists of known or suspected contaminated sites, known handlers or generators of hazardous waste, known waste disposal facilities, and permitted underground storage tanks (USTs). The complete database listings are provided in the Phase I ESA. Search radius of each database varies depending on the database is federal versus State, constituent, and the original enabling legislation and implementing policies. According to the Phase I ESA, search radius of 1.50 miles is consistent with the provisions of the American Society for Testing and Materials (ASTM). For some of the databases the search radius was expanded by 0.50 miles beyond the ASTM guidelines. The following summarizes the conclusions of the federal and State database review:

- The U.S. Environmental Protection Agency (EPA) National Priority List (NPL) of hazardous waste sites was reviewed for sites within a one-mile radius of the proposed project site. The NPL includes uncontrolled or abandoned hazardous waste sites that have been assigned the highest risk based on EPA's Hazard Ranking System and targeted for long-term remediation under the Federal Superfund program. No such sites were identified within the search radius.
- The EPA Comprehensive Environmental Response, Compensation, and Liability Information System inventory of potential hazardous waste sites was reviewed for sites within a 0.5-mile radius of the proposed project site. This list includes sites that are or have been evaluated for possible inclusion on the NPL. No such sites were identified within the search radius.
- The EPA maintains a database of Resource Conservation and Recovery Act (RCRA) facilities that are undergoing corrective actions or where there has been a release of hazardous substances into the environment. The inventory was reviewed for Corrective Action Sites within a one-mile radius of the proposed project site. No such sites were identified within the search radius.

- The Resource Conservation and Recovery Information System (RCRIS) database provides a list of permitted hazardous waste treatment, storage, or disposal facilities. The (RCRIS) database was searched for these facilities within a 0.5-mile radius of the proposed project site. No such sites were identified within the search radius.
- Under the Federal RCRA, generators of hazardous waste are required to obtain a generator identification number from the EPA. The database was searched for hazardous waste sites within 0.125-mile of the proposed project site. No such sites were identified within the search radius.
- The RCRIS Violations and Enforcement Report list RCRA facilities with violations and enforcement actions. The database was reviewed for sites within 0.125-mile of the proposed project site. No such sites were identified within the search radius.
- The California State Superfund report contains information regarding sites that have been placed on the State Priority List (SPL) by the California Department of Toxic Substances Control. The Hazardous Waste Sites database was reviewed for sites within a one-mile radius of the proposed project site. No such sites were identified within the search radius.
- The California Department of Toxic Substances Control CalSites database includes known and potentially contaminated sites. The database was reviewed for site within a one-mile radius of the proposed project site. No such sites were identified within the search radius.
- The California Underground Leaking Storage Tank (LUST) report is a list of all active and inactive LUSTs located within California. The database was reviewed for sites within a 0.5-mile radius of the proposed project site. No such sites were identified within the search radius.
- The California Above Storage Tank (AST) report is a list of all active and inactive ASTs located within California. The database was reviewed for sites within a 0.25-mile radius of the proposed project site. No such sites were identified within the search radius.
- The California Underground Storage Tank Report (CUSTR) is a comprehensive listing of all registered active and inactive USTs in California. The database was reviewed for sites within 0.25-mile of the proposed project site. No such sites were identified within the search radius.
- The California Solid Waste Information System Report (SWLF) is a comprehensive listing of all facilities that have filed a permit with the California Waste Management Board for the operation of a solid waste landfill. The list was reviewed for sites within a 0.5-mile radius of the proposed project site. No such sites were identified within the search radius.
- The Emergency Response Notification System (ERNS) database includes information on sudden or accidental releases of hazardous substances and petroleum into the environment. The database was reviewed for sites within 0.125-mile of the proposed project site. No such sites were identified within the search radius.

The Phase I ESA concluded that, as a result of the environmental database review, there were no recognized known or suspected contaminated sites, known handlers or generators of hazardous waste, known waste disposal facilities, and permitted underground storage tanks (USTs) on or within one-half mile of the project site.

5.6.3 - Regulatory Setting

Federal

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs were in compliance with the required standard.

Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The act was intended to be comprehensive in encompassing both the prevention of, and response to uncontrolled hazardous substances releases. The act deals with environmental response, providing mechanisms for reacting to emergencies and chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for, and respond to, failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

State

California Health and Safety Code

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirement of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section 25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

Transport of Hazardous Materials

Transportation of hazardous materials is regulated by Caltrans, the California Highway Patrol, and Orange County Fire Authority, which is supported by the Orange Fire Department. Drivers must have a hazardous materials endorsement to operate a commercial vehicle carrying hazardous

materials, including explosives. During the transport of materials, a route map must be maintained that indicates safe routing and safe stopping places along the route.

California Fire Code Article 77 states that a permit from the local fire department must be obtained for both the storage and use of explosive materials. In addition, the responsible party must file a $100,000 corporate surety bond or have public liability insurance for the same amount. Section 7703 of the California Fire Code describes requirements for use, handling, and transportation of explosive materials.

Local

County of Orange

The County Environmental Health Division Certified Unified Program Agency coordinates six programs regulating hazardous materials and waste. The programs include management of hazardous waste, underground storage tanks, aboveground storage tanks, hazardous materials disclosure, business plan, and California accidental release. County and city fire agencies within the County have joined the Certified Unified Program Agency as participating agencies.

City of Orange Municipal Code

The City Municipal Code sets forth requirements regarding the adoption of Uniform Building Code (May 27, 2008 Edition, "Restrictions in the Fire District"). More specifically, Section 1603 of the code sets forth building restrictions for developments located in high hazard areas; those restrictions include fire-resistant protection of exterior walls and openings, fire-retardant roofs, and unenclosed under floor areas with allowable exceptions.

Orange Fire Department

The City recognizes that the handling, transport, and disposal of hazardous waste and hazardous materials pose a risk to the public and service providers. To reduce the risks associated with the use and handling of these materials, the City uses the criteria developed by the County Hazardous Materials Service Section for its own program. The City of Orange Fire Department provides oversight in the planning process by providing a department representative during the environmental review process. Additionally, the City supports the efforts of the department to enforce State "Right-to Know" laws, which require disclosure of information to the public regarding use, storage, and transport of hazardous materials.

5.6.4 - Significance Thresholds

According to Appendix G of the State CEQA Guidelines, a project would normally have a significant effect on the environment if it would result in the following:

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

b.) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment;

c.) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;

d.) 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;

e.) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;

f.) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;

g.) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan, and/or;

h.) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

5.6.5 - Project Impacts

Impacts Not Found To Be Significant

The Initial Study determined that impacts related to the creation of a significant public hazard through and use of hazardous materials and interference with an adopted emergency response plan were less than significant. No impacts were related to emitting acutely hazardous materials near a school, a project located on an identified hazardous waste site, hazards from proximity to an airport, or wildland fires. Refer to the Initial Study in Appendix A for a complete discussion.

Potentially Significant Impacts

Potential impacts could result from ground-clearing activities, structure removal, and site grading activities associated with preparing the site for development that could involve petroleum-based products during the short-term construction phase. Potential long-term operational impacts would be associated with the storage and use of household hazardous waste products.

Accident Conditions

Impact 5.6-1	**The project has the potential to 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.** **[CEQA Hazards and Hazardous Materials Threshold 7(b)]**

Short-Term Construction Phase

During the short-term site preparation construction phase, the proposed project would involve storing small quantities of petroleum-based products on-site. Typically, a construction team will store fuel in a single 550-gallon tank. The tank would be stored in a temporary ditch, lined with visqueen. Visqueen is a polyethylene sheet used to cover or line areas during building construction. In the unlikely event small amounts of fuel are spilled they are contained in the ditch thereby preventing contact with and percolation into the ground. Upon completion of the construction phase, these materials would be removed from the site. No petroleum-based products would be stored off-site during the installation of the water lines in Coyote Lane and Meads Avenue.

The caretaker residence, starter's shed, and maintenance building pre-date 1980 and potentially contain lead-containing materials, ACMs, or both may be present. Although unlikely, the clubhouse, tennis courts, pool and pool house buildings that were constructed after 1980 could contain lead-containing materials, ACMs, or both depending on the building materials still in the contractor's inventory. With incorporation of Mitigation Measures HAZ-1 and HAZ-2, less than significant impacts would result.

Long-Term Operational Phase

The development of the proposed project would introduce new land uses to the project site. Typical materials commonly associated with residential uses include but are not limited to household cleaning and janitorial products, herbicides, pesticides, insecticides, and solvents.

The residential use of hazardous materials is regulated at the federal, State, and local levels. The mandatory regulations that apply to these materials and that are applicable to all projects would result in less than significant impacts related to the use of common household materials.

Therefore, the development of the proposed project would not result in a significant impact due to potential hazards as a result of any hazardous conditions or operations on the project site.

5.6.6 - Mitigation Measures

Accident Conditions

HAZ-1 Prior to demolition of the buildings, an asbestos survey shall be conducted and any suspicious materials shall be disposed of in accordance with published agency requirements. The project applicant or demolition contractor shall provide written notification to the South Coast Air Quality Management District and to the Community Development Director or designee five business days in advance of demolition activities. The demolition contractor shall determine the percent of ACMs in the volume of the material to be disposed. If the volume of ACMs exceeds 1.0 percent, the material shall be taken to a landfill permitted to accept these materials. If the volume of ACMs is less than 0.99 percent, the material shall be taken to a permitted Class III landfill. Written records of the survey and disposal, if

any, shall be provided to the Community Development Director or designee within five business days after completion of the survey and five business days after completion of the disposal, respectively.

HAZ-2 Prior to demolition of the buildings, a lead based paint survey shall be conducted and any suspicious materials shall be disposed of in accordance with published agency requirements. The project applicant or demolition contractor shall provide written notification to the South Coast Air Quality Management District and to the Community Development Director or designee five business days in advance of demolition activities. The demolition contractor shall determine the percent of ACMs in the volume of the material to be disposed. If the volume of ACMs exceeds 1.0 percent, the material shall be taken to a landfill permitted to accept these materials. If the volume of ACMs is less than 0.99 percent, the material shall be taken to a permitted Class III landfill. Written records of the survey and disposal, if any, shall be provided to the Community Development Director or designee within five business days after completion of the survey and five business days after completion of the disposal, respectively.

5.6.7 - Project Design Features

There are no Project Design Features associated with this topical environmental issue area.

5.6.8 - Level of Significance After Mitigation

Implementation of the recommended mitigation measures would reduce potentially significant impacts related to hazardous materials below the level of significance associated with the short-term construction-related phase of the project. Less than significant impacts would result from the long-term operational phase of the project.

Accident Conditions

With the implementation of recommended Mitigation Measures HAZ-1 and HAZ-2 impacts related to the accidental release of hazardous materials into the environment during the short-term construction period would be less than significant. Mandatory regulations related to household hazardous waste products would result in less than significant impacts during the long-term operational phase of the project.