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4.7 HAZARDS AND HAZARDOUS MATERIALS

Would the project:		Potentially Significant Impact	Potentially Significant Unless APMs Incorporated	Less than Significant Impact	No Impact
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

4.7.1 Introduction

This section of the PEA describes the existing conditions and potential Proposed Project-related impacts from hazards to the environment, public, and worker health and safety associated with the construction, operation, and maintenance of the Proposed Project.

Potential significant impacts were identified relating to worker safety associated with potential soil contamination and existing asbestos containing materials and lead-based paint at the Capistrano Substation site. These impacts would remain at a level less than significant with the

incorporation of APMs HAZ-1 and adherence to existing hazardous materials/wastes and occupational safety regulations. All other impacts were found to be less than significant without the incorporation of APMs.

4.7.2 Methodology

In order to assess potential impacts related to hazards and hazardous materials, the following accepted methods were employed:

- Environmental Data Resources, Inc. (EDR) Database Report;
- Site inspection;
- Historic information sources;
- Hazardous materials site assessment report (Phase I Environment Site Assessment);
- Soil sampling (Phase II Environmental Site Assessment);
- Asbestos inspection survey;
- Review of emergency/evacuation plans;
- Review of local municipality planning documents;
- Review of adopted wildland fire prevention and fire safety electric standard practice; and
- Review of adopted fire hazard maps.

These methods are described in detail in the following subsections.

4.7.2.1 EDR Database Search

As required by Section 5.7 of the CPUC PEA Checklist for Transmission Line and Substation Projects (PEA Checklist), a hazardous materials database search was performed for the Proposed Project area by EDR. The Corridor Study searched databases for a 1 mile buffer around the Proposed Project transmission alignment and substation sites. The EDR Corridor Study report is included as Appendix 4.7-A.

The EDR database report compiles data from local, state, and federal agencies with varying levels of enforcement related to the generation, storage and handling, transportation, and treatment of wastes as well as emergency response activities, and remediation of contaminated soil and groundwater sites. Table 4.7-1, Databases Searched and Potential Impact Ranking, lists some of these databases, and the general ranking assigned by the potential for each type of site to impact the Proposed Project. A complete list of databases searched, along with full descriptions of each database can be found in the EDR report (refer to Appendix 4.7-A).

Table 4.7-1: Databases Searched and Potential Impact Ranking

Database Name	Potential Impact Ranking
Brownfields Sites (US BROWNFIELDS)	High
Clandestine Drug Labs (CDL)	Low
Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS)	Low
CERCLIS No Further Remedial Action Planned (CERCLIS-NFRAP)	Low
Corrective Action Report (CORRACTS)	Low
Emergency Response Notification System (ERNS)	High
Facility and Manifest Data (HAZNET)	Low
Hazardous Materials Information Reporting System (HMIRS)	Low
National Priorities List (NPL or Superfund)	High
Proposed NPL	High
Delisted NPL	Low
Records of Decision (ROD)	High
Resource Conservation and Recovery Act, Large Quantity Generators (RCRA-LQG)	Low
Resource Conservation and Recovery Act, Small Quantity Generators (RCRA-SQG)	Low
RCRA Transporters, Storage and Disposal (RCRA-TSDF)	High
Toxic Chemical Release Inventory System (TRIS)	High
Aboveground Petroleum Storage Tank Facilities (AST)	Low
Active UST Facilities (UST)	Low
California Hazardous Materials Incident Report System (CHMIRS)	High
Cortese Hazardous Waste and Substances List (CORTESE)	High
Department of Toxic Substances Control, Site Mitigation and Brownfields Reuse Program (ENVIROSTOR)	High
Hazardous Substance Storage Container Database (HIST UST)	Low
Hist Cal-Sites (ENVIROSTOR)	High
Leaking Underground Fuel Tank Report (LUST)	High
School Property Evaluation Program (SCH)	High
Solid Waste Information System (SWF/LF [SWIS])	High
Statewide Environmental Evaluation and Planning System UST (SWEEPS UST)	Low
State Response Sites (RESPONSE)	High
Statewide Spills, Leaks, and Cleanups (SLIC)	High
Toxic Pits Cleanup Act Sites (TOXIC PITS)	High
Voluntary Cleanup Program Properties (VCP)	High
Waste Discharge System (CA WDS)	Low
Waste Management Unit Database (WMUDS/SWAT)	Low
Well Investigation Program Case List (WIP)	Low

The following screening criteria (in the general order shown) were used to rank (high, medium, and low) the potential of individual sites listed within the EDR Report to impact the Proposed Project, public, or the environment:

- Data is screened out by distance from Proposed Project features, only those sites adjacent to or within the Capistrano Substation site, Talega Substation site or transmission line ROW were reviewed.

- The databases searched that typically indicate that a confirmed release of hazardous substances occurred at the site are ranked as having a high potential for impacts.
- The databases searched that typically indicate the presence of confirmed contamination at the site are ranked as having a high potential for impacts.
- Databases that reflect administrative records or permits related only to the use or presence of hazardous material at the site are ranked as having a low potential for impacts.
- Following this initial ranking, data for those sites with a possible high potential to cause impacts are individually reviewed to assess the contaminant type. Sites are then individually ranked medium or high based on information available from the database which includes the age of release, substance released, type of release, case/remediation status, and database in which the listing appeared.
- Sites with known or unknown contaminants other than petroleum hydrocarbons (i.e., VOCs, polychlorinated biphenyls [PCBs], asbestos, or metals) are ranked as having a high potential to impact the Proposed Project due to potential health risks associated with direct exposure.
- Sites with only petroleum hydrocarbon contamination are ranked as having a medium potential to impact the Proposed Project due to the less severe nature of the health risks associated with this type of exposure.
- Sites that have been closed, or for which no further remedial action has been required/deemed necessary, were ranked as low potential impact sites.

Using the above screening criteria, agency-listed hazardous waste and contamination/spill sites located adjacent to or within the Proposed Project area were ranked as high or medium, as appropriate.

4.7.2.2 Site Inspection

A hazardous materials site inspection of the San Juan Capistrano Substation, Talega Substation and Talega to Capistrano transmission line corridor was conducted on March 7, 2008 and March 21, 2008. Existing land uses and site conditions were analyzed in order to determine if evidence of the utilization, storage, or release of hazardous materials is present within Proposed Project impacted areas. Additional site inspections of the Proposed Project area were conducted in September and October of 2011. Site inspections were conducted by Mr. Joshua Taylor, who meets the definition of an Environmental Professional as outlined within the Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process (ASTM Standard E 1527-05 [Section X2]).

4.7.2.3 Historic Information Sources

In further attempt to identify potential sources of hazardous materials and/or contamination in the vicinity of the Proposed Project area, certain commonly utilized historical information sources were reviewed for evidence of land uses that can indicate the presence of hazardous materials. These historic information sources are further described below.

Aerial Photographs

Historic and current aerial photographs were reviewed for the Proposed Project area in order to discern current and past land uses that may have involved the utilization of hazardous materials or wastes. Multiple sources of contemporary (2000-present) photographs were reviewed for the entire Proposed Project area, and historical aerial photographs of the Capistrano Substation site and vicinity were also reviewed. These historical aerial photographs would have dates ranging from approximately 1938 to 2002 (see Appendix 4.7-B).

Historic Site Plans and Engineering Drawings

Historical site plans and engineering drawings for the Capistrano Substation property were reviewed and analyzed in order to determine where past land uses may have involved the handling and use of hazardous materials. Historic site plans from 1917, 1933 and 1964 were reviewed.

4.7.2.4 Phase I Environmental Site Assessment and Lead Based Paint/Asbestos

In 2002, a Phase I Environmental Site Assessment was performed by Hadley and Aldrich for the Capistrano Substation site. The Phase I Environmental Site Assessment included an asbestos and lead-based paint survey, as further described in Section 4.7.2.6. The 2002 Phase I Environmental Site Assessment Report was utilized to assess the existing conditions at the Capistrano Substation site.

4.7.2.5 Soil Sampling (Phase II Environmental Site Assessment)

A Phase II Environmental Site Assessment is being conducted for the existing Capistrano Substation site. The Phase II investigation is being prepared by TRC and is being conducted in two stages. Stage 1 (already complete) consisted of advancing soil borings in the Lower Yard (western portion of the Capistrano Substation site) (refer to Figure 3-4) and around the perimeter of the upper yard (eastern portion of the Capistrano Substation site). Soil borings were advanced in the lower yard to determine the presence of soil contamination, if any, prior to redevelopment of that portion of the site. Soil borings were advanced in the lower yard in the vicinity of the locations of the former transformer pad and associated lightning arrestors, the two former cooling tower locations, the two former septic tank locations, and the two former sump/pit locations inside of the existing abandoned concrete building. Soil borings were also advanced around the perimeter of the upper yard (existing active 138/12kV substation) as a preliminary investigation of the upper yard. Stage 2 activities would be conducted adjacent to the equipment in the upper yard following completion of the proposed new 138kV gas insulated substation and 12kV air insulated substation on the lower yard portion of the substation site and deactivation and de-energization of the upper yard equipment.

4.7.2.6 Asbestos and Lead Based Paint Inspection Surveys

Two separate asbestos and lead based paint surveys have been conducted for the abandoned concrete building located in the lower yard portion of the existing Capistrano Substation site. The results of these surveys were utilized within this section of the PEA to assess potential impacts related to hazardous building materials at the Capistrano Substation site. Each of the two survey reports are briefly described below.

Advanced Environmental Group, Inc. (February 2008) Asbestos Survey

On February 26, 2008, an asbestos inspection survey was conducted by Advanced Environmental Group, Inc. for the SDG&E Capistrano Substation, with emphasis on the abandoned concrete building located in the lower yard. The purpose of the survey was to inspect areas for asbestos containing building materials and collect bulk samples for asbestos determination. The asbestos survey was performed by a Certified Asbestos Consultant working for Advanced Environmental Group, Inc. The scope of work for the asbestos inspection survey was to:

- Conduct a survey to assess the existence of friable and non-friable asbestos containing materials;
- Provide laboratory analysis utilizing Polarized Light Microscopy (PLM) for bulk samples; and
- Provide a report to include comments on disturbance of asbestos containing materials, location, cost estimates for removal of asbestos containing materials found, discussion and conclusion.

The results of this survey were used in determining potential impacts within this section of the PEA.

Sigma Engineering, Inc. (2002) Asbestos and Lead Based Paint Survey

As part of a Phase I Environmental Site Assessment performed for the Capistrano Substation site in 2002, Sigma Engineering, Inc. was retained to perform an asbestos and lead-based paint survey of the existing abandoned concrete building located in the lower yard portion of the substation site. The results of this survey were used in determining potential impacts within this section of the PEA.

4.7.2.7 Emergency/Evacuation Plans and Local Municipality Planning Documents

Emergency response and evacuation plans from the cities of San Juan Capistrano and San Clemente were reviewed and analyzed for hazardous materials response procedures, evacuation routes, and policies that may be applicable to the Proposed Project. The scope of the Proposed Project was analyzed with respect to all existing emergency response and evacuation plans within the Proposed Project vicinity in order to identify any potential conflicts that may result from construction, operation, or maintenance of the Proposed Project.

General plans for the cities of San Clemente and San Juan Capistrano as well as for the County of Orange were reviewed for specific laws, regulations, standards or ordinances pertaining to hazardous materials or waste storage, handling, utilization or disposal. Any inconsistencies identified between the Proposed Project and said goals, objectives, and policies were analyzed with respect to the significance criteria (see Section 4.7.4.1) in order to determine the presence or absence of potential significant impacts.

4.7.3 Existing Conditions

4.7.3.1 Regulatory Setting

The following section provides an overview of pertinent federal, state and local hazardous materials and safety regulations applicable to the Proposed Project.

Federal

Resource Conservation and Recovery Act

The federal Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by the USEPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the "cradle to grave" system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by HSWA. Individual states may implement hazardous waste programs under RCRA with USEPA approval.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which is often commonly referred to as Superfund, is a federal statute that was enacted in 1980 to address abandoned sites with hazardous waste disposal and/or contamination (42 U.S. Code 9601, et seq.). CERCLA was amended in 1986 by the Superfund Amendments and Reauthorization Act (SARA) and by the Small Business Liability Relief and Brownfields Revitalization Act of 2002. CERCLA establishes prohibitions and requirements concerning closed and abandoned hazardous waste sites; establishes liability of persons responsible for releases of hazardous waste at these sites; and establishes a trust fund to provide for cleanup when no responsible party could be identified. The trust fund is funded largely by a tax on the chemical and petroleum industries. CERCLA also provides federal jurisdiction to respond directly to releases or impending releases of hazardous substances that may endanger public health or the environment.

Occupational Safety and Health Administration

The Occupational Safety and Administration regulations intended to create a safe workplace are found at 29 CFR, Part 1910, Subpart H, and include procedures and standards for safe handling, storage, operation, remediation, and emergency response activities involving hazardous materials and waste. Section 1910.120 (Hazardous Waste Operations and Emergency Response) contains requirements for worker training programs, medical surveillance for workers engaging in the handling of hazardous materials or wastes and hazardous material, and waste site emergency and remediation planning, for those who are engaged in one of the following operations as specified by Sections 1910.120(a)(1)(i-v) and 1926.65(a)(1)(i-v):

- Clean-up operations required by a governmental body, whether federal, state, local, or other, involving hazardous substances, that are conducted at uncontrolled hazardous waste sites;

- Corrective actions involving clean-up operations at sites covered by RCRA, as amended (42 U.S.C. 6901, *et seq.*);
- Voluntary clean-up operations at sites recognized by a federal, state, local, or other governmental body as uncontrolled hazardous waste sites;
- Operations involving hazardous wastes that are conducted at treatment, storage, and disposal facilities regulated by Title 40 CFR Parts 264 and 265 pursuant to RCRA, or by agencies authorized under agreement with USEPA to implement RCRA regulations; or
- Emergency response operations for releases of, or substantial threats of releases of, hazardous substances regardless of the location of the hazard.

The Occupational Safety and Health Act of 1970 (OSHA) contains specific regulations that ensure worker safety in the presence of certain hazardous substances, such as lead and asbestos. Exposure of construction workers to lead is controlled by the Lead Standard (established by OSHA and implemented by the California OSHA [CalOSHA] within the state of California) and the exposure of workers to asbestos containing materials is controlled by the Construction Standard (also implemented by CalOSHA). It is important to note that while CalOSHA has adopted the OSHA standards, the CalOSHA regulations are often more stringent than the OSHA standards, and this is true for lead and asbestos.

USEPA (Region IX) Regional Screening Levels

The USEPA (Region IX) has established regional Screening Levels (RSLs) in order to assist government agencies, risk assessors, and remedial project managers in conducting initial risk assessments relating to soil contamination at Superfund sites. The RSLs provide a conservative baseline initial quantification of soil contamination concentrations that may pose a risk to human health associated with residential and industrial land use types. While the RSLs do not provide regulatory limits for remediation or waste characterization, they are a very helpful tool in determining potential impacts to workers and/or the public involving existing soil contamination. The RSLs have replaced the USEPA's Preliminary Remediation Goals, or PRGs, which served the purpose and are still sometimes utilized during preliminary risk assessment and impact assessment.

National Emissions Standard for Hazardous Air Pollutants (Asbestos Regulations)

The asbestos National Emission Standard for Hazardous Air Pollutants (NESHAP) includes requirements for demolition activities involving asbestos containing materials, include a pre-demolition notification. The asbestos NESHAP also includes requirements for removal, abatement, and emissions control.

Oil Pollution Prevention

Regulations at 40 CFR 112 require the owner or operator of a facility with an aggregate aboveground oil storage capacity of greater than or equal to 1,320 gallons to prepare and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan. These regulations set forth specific requirements for prevention of, preparedness for, and response to, oil discharges at regulated facilities. Substations with oil-filled electrical equipment above the threshold quantity are subject to these requirements. Required procedures include periodic inspection of facilities

and maintenance as needed to ensure containment of petroleum products. In addition, stationary oil-filled equipment with a capacity of 55 gallons must have secondary containment as part of SPCC practices. The secondary containment ensures that even if oil is emitted from primary containment systems, it is prevented from impacting surface waters. The SPCC provisions of 40 CFR Part 112, include procedures for inspecting rainwater in secondary containment areas before it can be released to ensure that no oil is discharged.

State

CCR, Title 22, Chapter 11, Article 2, Section 66261

The CCR, Title 22, Chapter 11, Article 2, Section 66261 provides the following definition:

A hazardous material is a substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

According to CCR Title 22 (Chapter 11 Article 3), substances having a characteristic of toxicity, ignitability, corrosivity or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, contaminated or is being stored prior to proper disposal.

Soil that is excavated from a site containing hazardous materials would be a hazardous waste if it exceeded specific CCR Title 22 criteria. Remediation (cleanup and safe removal/disposal) of hazardous wastes found at a site is required if excavation of these materials is performed; it may also be required if certain other activities are proposed. If soil or groundwater at a contaminated site does not meet the regulated characteristics required to be defined as hazardous waste, remediation of the site may be required by regulatory agencies subject to jurisdictional authority. Cleanup requirements are determined on a case-by-case basis by the agency taking lead jurisdiction.

CCR, Title 22, Chapter 11, Article 3, Section 66261.24-1

CCR Title 22, Section 66261.24-1 (Table II) outlines the Soluble and Total Threshold Limit Concentration Values for key soil contaminants. The Soluble and Total Threshold Limit Concentration Values indicate the concentrations where contaminated soils must be considered a hazardous waste. Where solid concentrations exceed the Soluble or Total Threshold Limit Concentration Values, all excavated soils must be handled, transported, and disposed of pursuant to applicable state and federal hazardous waste laws.

California Land Environmental Restoration and Reuse Act of 2001

The California Land Environmental Restoration and Reuse Act of 2001 required the preparation of California Human Health Screening Levels (CHHSLs) for certain hazardous chemicals or elements that are commonly found within soil contamination. CHHSLs are utilized as an initial screening tool to identify where soil contamination may present a human health risk in relation to

the proposed use of the property in question. Specifically, CHHSLs were established to identify levels of contaminants that could have human health risks associated with direct physical contact with contaminated soil. Similar to the PRGs and RSLs established by the USEPA, the CHHSLs have contaminant concentrations for residential (and other sensitive land uses), and commercial/industrial soils. In general, where contaminant concentrations are below the CHHSL for residential soils, there is not a significant human health risk associated with the contamination if the property is used for residential or other sensitive land uses (such as schools, hospitals, etc.). Where contamination concentrations exceed the CHHSLs, additional evaluation is needed to assess the potential for risk to human beings. Exceedance of CHHSLs does not necessarily indicate that a human health risk is in fact present, only that there a potential risk is present.

California Hazardous Waste Control Law

The California Hazardous Waste Control Law (HWCL) is administered by the CalEPA to regulate hazardous wastes within the State of California. While the HWCL is generally more stringent than RCRA (for example, asbestos containing materials are considered to be hazardous under HWCL, but are not regulated un RCRA), both the state and federal laws apply in California. The Department of Toxic Substances Control (DTSC) is the primary agency in charge of enforcing both the federal and state hazardous materials laws. The DTSC regulates hazardous waste, oversees the cleanup of existing contamination, and pursues avenues of reducing the hazardous waste produced in California. The DTSC regulates hazardous waste in California under the authority of RCRA, the HWCL and the California Health and Safety Code.

The HWCL, under CCR Title 22, Chapter 11, Appendix X, lists 791 chemicals and about 300 common materials which may be hazardous; establishes criteria for identifying, packaging and labeling hazardous wastes; prescribes management controls; establishes permit requirements for treatment, storage, disposal and transportation; and identifies some wastes that cannot be disposed of in landfills.

California Occupational Safety and Health Administration

Cal/OSHA is the primary agency responsible for worker safety in the handling and use of chemicals in the workplace. Cal/OSHA standards are generally more stringent than federal regulations, although CalOSHA has adopted and implements all of the OSHA standards within the state of California. The employer is required to monitor worker exposure to listed hazardous substances and notify workers of exposure (8 CCR Sections 337-340). The regulations specify requirements for employee training, availability of safety equipment, accident-prevention programs, and hazardous substance exposure warnings. Similar to the federal OSHA, CalOSHA contains requirements to prevent worker exposure to certain types of hazardous substances in the work place, such as asbestos and lead. Specifically, exposure of construction workers to lead is controlled by the Lead Standard (established by OSHA and implemented by CalOSHA) and the exposure of workers to asbestos containing materials is controlled by the asbestos Construction Standard (also implemented by CalOSHA). It is important to note that while CalOSHA has adopted the OSHA standards, the CalOSHA regulations are often more stringent than the OSHA standards, and this is true for lead and asbestos.

Hazardous Materials Disclosure Programs

The Unified Program administered by the State of California consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities for the state's environmental and emergency management programs, which include Hazardous Materials Release Response Plans and Inventories (business plans), the California Accidental Release Prevention Program, and the Underground Storage Tank Program. The Unified Program is implemented at the local government level by Certified Unified Program Agencies (CUPAs).

California Public Utilities Commission

CPUC originally adopted G.O. 95 in 1941 (<http://162.15.7.24/PUBLISHED/Graphics/112890.PDF>). G.O. 95 governs the design, construction, and maintenance of overhead electrical lines. Rule 31.1 of G.O. 95 generally requires that overhead electrical lines be designed, constructed, and maintained in accordance with accepted good practices for the given conditions known at the time. Rule 35 of G.O. 95 establishes requirements for tree trimming.

On January 18, 2012, after a three year rulemaking to review measures to reduce fire hazards associated with overhead powerlines and communication facilities, the CPUC issued D.12-01-032 which adopted significant revisions to G.O. 95, G.O. 165, and G.O. 166, Inspection Requirements for Electric Distribution and Transmission Facilities. Phase I and Phase 2 revisions to the G.O.'s addressed vegetation management practices, inspection cycles, corrective maintenance timeframes and other fire reduction measures in fire threat zones.

Local

Orange County Hazardous Materials and Waste Regulations

The County of Orange Health Care Agency: Environmental Health Division (EHD) is the CUPA for the Proposed Project area. The CUPA further regulates hazardous materials and wastes, under the authority of CalEPA. The CUPA coordinates the following within Orange County:

- Hazardous waste;
- Underground storage tanks (USTs);
- Aboveground storage tanks (ASTs);
- Hazardous materials disclosure;
- Hazardous materials business plan; and
- California Accidental Release Program (CalARP).

The City of San Clemente Hazardous Materials and Waste Regulations

The city of San Clemente addresses hazardous materials and waste within the San Clemente General Plan - Hazardous Materials and Uses Element. The Hazardous Materials and Uses Element outlines the city's goals, objectives and policies concerning hazardous materials uses, hazardous waste transportation and disposal, public outreach and education, and emergency

response. The city of San Clemente has set forth specific goals, objectives, policies, and programs that aim to ensure the public health, safety, welfare and the environment are protected with respect to hazardous materials usage. Listed below are the relevant goals, objectives, and policies that are relevant to the Proposed Project.

- *Objective 15.2: Protect the public from the risk of hazardous uses/materials in transport, handling, storage and disposal.*
- *Policy 15.2.3: Continue all existing hazardous material and uses programs that are consistent with the goals, objectives, and policies of the Orange County Hazardous Waste Management Plan.*
- *Objective 15.3: Prevent loss of life, serious injuries and major economic disruption caused by hazardous uses/materials and relate accidents.*

The City of San Juan Capistrano Hazardous Materials and Waste Regulations

The city of San Juan Capistrano addresses hazardous materials and waste within the San Juan Capistrano General Plan – Safety Element. The city of San Juan Capistrano, as outlined in the Safety Element, works to minimize the accident and health risk from hazardous materials and wastes through utilization of the following approaches:

- Cooperation with federal, state and local agencies to effectively regulate the management of hazardous materials and hazardous waste;
- Cooperation with the County of Orange to implement applicable portions of the County Hazardous Waste Management Plan;
- Identification of roadway transportation routes for conveyance of hazardous materials; and
- Implementation of an emergency response plan for accidents involving hazardous materials.

SDG&E Standards

SDG&E’s Electric Standard Practice (ESP) 113.1 constitutes SDG&E’s wildland fire prevention and fire safety standard for construction. The purpose of ESP 113.1 is to formalize procedures and routine construction practices that will, among other things: improve SDG&E’s ability to prevent the start of any fire; set standards for tools and equipment to assist with rapid response to small fires; incorporate federal, state and local requirements into standard business practices; establish “Red Flag Warning” restrictions; set criteria for when a formal fire plan is required; and establish a template and requirements for formal fire plans.

4.7.3.2 Emergency Response and Evacuation Regulations and Adopted Plans

Within the Proposed Project area, emergency response is handled first and primarily by the individual municipal agency with jurisdictional authority. Mutual aid, response, and emergency management are available from the County and State Governments where appropriate or by direct request of the local agency. The standard emergency response procedures and for each of the relevant jurisdictions are outline within the following subsections.

The State of California

The State Emergency Plan outlines the emergency management system for use during all emergencies within the State of California. The State Emergency Plan is developed, maintained, and implemented by the California Office of Emergency Services (OES). The State Emergency Plan defines the “policies, concepts, and general protocols” for the proper implementation of the California Standardized Emergency Management System (SEMS). The SEMS is an emergency management protocol that agencies within the State of California must follow during multi-agency response efforts whenever state agencies are involved.

County of Orange

The Orange County Sheriff's Department Emergency Management Bureau has the responsibility for emergency management and response within the Orange County Operational Area. The Orange County Operational Area is comprised of 114 members including County agencies and other jurisdictional agencies (Cities) and special districts. The Emergency Management Bureau maintains a permanent Emergency Operations Center and conducts emergency management pursuant to the SEMS.

The City of San Clemente

The *City of San Clemente Emergency Plan* (Emergency Plan) is a SEMS compliant plan that was published in 2003 and was developed specifically to prepare for, respond to, and recover from any emergency or disaster that may affect the city of San Clemente. The Emergency Plan outlines specific steps for the city's response to a number of different emergencies. The Emergency Plan's main focus is a potential event at the San Onofre Nuclear Generating Station. The Emergency Plan also has a specific section for hazardous materials emergencies (City of San Clemente Multi-Hazard Plan Part Two – Annex C). The hazardous materials emergencies section states that in the case of an emergency where evacuation is required, evacuation routes would be determined based upon the location and nature of the emergency.

The city of San Clemente contracts with the County for Law and Fire Protection services. Therefore, the Orange County Fire Authority and Sheriff's Department would represent first responders within the city of San Clemente and would provide mutual aid response within the Orange County Operational Area.

The City of San Juan Capistrano

The *City of San Juan Capistrano Emergency Operations Plan* (Emergency Operations Plan) is a SEMS compliant plan that establishes emergency response protocols for preparation for, response to, assessment of, and recovery from major disaster/emergency events that may affect the city of San Juan Capistrano. The Emergency Operations Plan's main focus is a potential San Onofre Nuclear Generating Station emergency event. The Emergency Operations Plan outlines specific threats to the city as well as detailed response sequences tailored to each threat. Threat Assessment -4 details the City's response to a hazardous materials incident. The Orange County Fire Authority represents the primary response agency within the city of San Juan Capistrano in the case of a hazardous materials incident. The City Manager acts as the Director of Emergency Services and Emergency Operations Center Director during declared emergencies within the city of San Juan Capistrano. All SEMS staffing needs for the City (Local) Emergency Operations

Center are provided by City and other contracted staff (Orange County Fire authority and Sheriffs' Department). The city of San Juan Capistrano contracts with the County for Law and Fire Protection services. Therefore, the Orange County Fire Authority and Sheriffs' Department would represent first responders within the city of San Juan Capistrano and could provide mutual aid response within the Orange County Operational Area.

Emergency evacuation routes are determined based upon the location and nature of the emergency. Various threat assessments outlined with the Emergency Operations Plan dictate desperate evacuation protocols, identifying specific evacuation pathways where appropriate. Using a potential San Onofre Nuclear Generating Station event as an example, primary evacuation routes are any direct arterials that connect to I-5, followed by I-5 north away from the San Onofre Nuclear Generating Station facility. During a flood event within the city of San Juan Capistrano, evacuees may utilize any major roadway in the vicinity to access I-5 as most major roadways within the City are constructed above the 100-year flood elevation.

4.7.3.3 Hazardous Materials Setting

Hazardous materials would be used and stored during construction, operation, and maintenance of the Proposed Project. In addition, past and existing electrical equipment located at the Capistrano Substation contain hazardous materials that have led to potential soil contamination onsite. The following subsections describe the types and amounts of hazardous materials present, or potentially present, at the Capistrano Substation, Talega Substation or within or directly adjacent to the transmission line ROW. In addition; schools and hospitals within 0.25 mile of the Proposed Project are identified and analyzed as potential sensitive receptors.

San Juan Capistrano Substation Overview

Table 4.7-2, Hazardous Materials Sites Adjacent to the Capistrano Substation, lists all hazardous materials sites on the Capistrano Substation that have a low, medium or high potential to impact the Proposed Project, public, or the environment. Sites adjacent to the substation site are listed only if they have a medium or high potential for impact.

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Table 4.7-2: Hazardous Materials Sites Adjacent to the Capistrano Substation

Site Name and Address	List ¹	Potential to Impact Proposed Project	Contamination Profile
SDG&E, Capistrano Substation Site 31050 Camino Capistrano San Juan Capistrano, CA	None	High – documented hazardous materials and soil contamination onsite	<ul style="list-style-type: none"> • Low levels of lead and chromium in onsite soils. • Existing asbestos and Lead-based paint contamination within specific material components of old substation structure. • Low levels of petroleum hydrocarbons in onsite soils.
Lawson’s Landscaping 31050 Camino Capistrano San Juan Capistrano, CA	HAZNET	Low – no documented contamination and low likelihood for contamination	No known spills, leaks or contamination. Storage and offsite disposal of waste oils and inorganic solid waste.
<p><i>Notes:</i> ¹ <i>Regulatory Agency Listing: see Table 4.7-1 for a definition of each database.</i> <i>Source: EDR, 2012</i></p>			

Asbestos Containing Materials

The 2002 asbestos survey conducted by Sigma Engineering, Inc. did not locate any asbestos containing materials. The 2008 Advanced Environmental Group, Inc. asbestos survey did identify asbestos containing materials within certain building materials found within the abandoned concrete building located on the lower yard portion of the Existing Capistrano Substation site. Table 4.7-3, Asbestos Containing Materials Survey Results (2008), details the findings of the Advanced Environmental Group, Inc. asbestos survey.

Table 4.7-3: Asbestos Containing Materials Survey Results (2008)

Location and Type of Material	Type and Concentration of Asbestos	Approximate Amount of Asbestos Containing Material	Condition of Asbestos Containing Material ¹
Roof (gray mastic)	Chrystoline (7%)	10 square feet	Fair
Roof (felts)	Chrystoline (65%)	5,680 square feet	Fair
2 nd Floor (Electric Conduit/ Transite)	Presumed (not samples taken)	2 linear feet	Good
<p><i>Notes:</i> ¹<i>The relative hazard potential from asbestos containing materials is a function of the condition of the material containing the asbestos. The worse the condition of the material, the higher the hazard potential.</i> <i>Source: AEG, 2008</i></p>			

In addition to the above outlined asbestos containing materials, the 2008 Advanced Environmental Group, Inc. report also identified mold present within the abandoned concrete building which would present a health risk to persons inhabiting the building.

Lead Based Paint

The 2002 lead-based paint survey conducted by Sigma Environmental, Inc. identified lead-based paint within certain building materials found within the abandoned concrete building located on the lower yard portion of the existing Capistrano Substation site. Table 4.7-4, Lead-Based Paint Survey Results (2002), details the finding of the Sigma Environmental, Inc. survey.

Table 4.7-4: Lead-Based Paint Survey Results (2002)

Location and Type of Material	Concentration of Lead (milligrams per kilogram [mg/kg])	Condition of Asbestos Containing Material¹
Interior Windows (window putty)	5,323 – 11,280	Poor
Exterior door and window frames (green paint)	13,920 – 59,600	Poor
Exterior stucco (beige paint)	8,468 – 43,050	Fair to good
<p><i>Notes:</i> ¹The relative hazard potential from lead-based paint is a function of the condition of the material containing the lead. The worse the condition of the material, the higher the hazard potential. Source: Sigma Environmental, Inc., 2002.</p>		

Soil Contamination

The 2009 Phase II Environmental Assessment soil sampling identified one sample with elevated levels of petroleum hydrocarbons, one sample with a moderately elevated level of lead, and one sample with an elevated level of chromium. Table 4.7-5, Soil Sampling Results (2009), details the results of the soil sampling at the existing Capistrano Substation site.

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Table 4.7-5: Soil Sampling Results (2009)

Sample Location and Depth	Contaminant	Concentration	Waste Classification and Other Restrictions
Former transformer area (lower yard) at 0.5 feet below surface (fbs)	Total recoverable petroleum hydrocarbons	3,700 milligrams per kilogram (mg/kg)	Contamination most likely from heavy oil (no additives) and therefore a low threat to human health.
Former transformer area (lower yard) at 0.5 fbs	Total lead / soluble lead (Soluble Threshold Limit Concentration [STLC])	200 mg/kg total lead / 33 mg per liter (mg/l) soluble lead (STLC)	Potential CA Hazardous Waste (Lead STLC above limit (5 mg/l). Low threat to human health, concentrations are below the USEPA Region IX RSLs, PRGs and the CHHLs for lead content within commercial and industrial soils.
Existing substation perimeter (upper yard) at 8 fbs	Total Chromium / Chromium IV	450 mg/kg total chromium / Chromium IV was below detection limit (1 mg/kg)	Concentrations are below the RSLs and the CHHLs for Chromium III ¹ in commercial and industrial soils.
<p><i>Notes:</i> ¹Total Chromium detection (450 mg/kg) is assumed to be Chromium III because follow-up tests for the more toxic Chromium IV were below the detection limit of 1 mg/kg. Therefore, the screening levels for Chromium were used to assess potential risk. Source: TRC, 2009.</p>			

Talega Substation

No hazardous materials sites within or adjacent to the Talega Substation were identified within the EDR Corridor Study report. Furthermore, no other known or potential sources of hazardous materials, waste, contamination, or building materials were identified that could potentially affect the Proposed Project.

Transmission Line Right-of-Way

Table 4.7-6, Hazardous Materials Sites Adjacent to the Transmission Line ROW, lists all hazardous materials sites on, or within the immediate vicinity of, the transmission line ROW that have a medium or high potential to impact the Proposed Project, public, or the environment.

Table 4.7-6: Hazardous Materials Sites Adjacent to the Transmission Line ROW

Site Name, Address, and Closest Proposed Project Structure	List¹	Potential to Impact Proposed Project	Contamination Profile
Plant Depot School Site 31251 Avenida Los Cerritos San Juan Capistrano, CA Pole No. 6	UST, SCH, ENVIROSTOR	Low – no documented contamination and the site is now developed	Potential arsenic and nitrate contamination from past agricultural operations.
Intown Properties (HUD) 31098 Call San Diego San Juan Capistrano, CA Pole Nos. 1a and 2a	HAZNET	Low – no documented contamination and low likelihood of contamination	Household waste
Marbella Golf Course 30650 Golf Club Drive San Juan Capistrano, CA Pole No. 5	LUST, SWEEPS UST, CA FID UST, HAZNET	Low – low likelihood of project interaction with existing contamination	Gasoline
Pollo Cleaners 31105 Rancho Viejo Road San Juan Capistrano, CA Pole No. 6	RCRA-SQG, FINDS, HAZNET	Low – not immediately adjacent to ROW, no documented contamination and low likelihood of contamination	Small quantity generator of hazardous waste, no violations
Impact Bearing 1291 Puerto Del Sol San Clemente, CA Pole Nos. 38 and 39	RCRA-SQG, HAZNET	Low - not immediately adjacent to ROW, no documented contamination	Small quantity generator of hazardous waste, no violations
Flavor Infusion, LLC 1324 Calle Avanzado San Clemente, CA Pole Nos. 39 and 40	RCRA-LQG, HAZNET	Low - not immediately adjacent to ROW, no documented contamination	Large quantity generator of hazardous waste, no violations
<i>Notes:</i> ¹ <i>Regulatory Agency Listing: see Table 4.7-1 for a description of each database.</i> <i>Source: EDR, 2012.</i>			

4.7.3.4 Hazards Setting

Existing Electric Substations and Transmission Facilities

The Proposed Project includes the replacement and upgrading of existing electric transmission, distribution and substation facilities. It is located entirely within or adjacent to existing electric transmission facilities and substations and does not include the installation of new electric transmission facilities in areas where similar facilities do not already exist. These existing facilities constitute the baseline from which potential hazard and hazardous materials impacts were evaluated.

Fire Hazards

Due to the arid environment of Southern California, wildland fires are constant threat during the dry season. Wildland fires can be ignited by natural or anthropogenic sources and can become very difficult to control once started. Recent history has shown Southern California counties suffer losses to the environment, property, and life due to wild land fires. Much of the Proposed Project alignment is located within and is surrounded by undeveloped land that is subject to the potential of wildland fires. SDG&E has designated areas within their service territory as a Fire Threat Zone (FTZ) based on Cal Fires Wildland Fire Threat mapping assessment (FRAP). These areas are designated as such due to the wildland fire threat relative to the fuel, weather, and topography of the area with ratings of moderate, high, very high and extreme. Within the Proposed Project area, SDG&E has designated all areas east of the I-5 as being in the Fire Threat Zone with ratings of moderate to very high. SDG&E has developed operating protocols and safety standards that minimize the risk of wildland fires during SDG&E construction activities. Specifically, wildland fire prevention during construction is governed internally within SDG&E through implementation of ESP No. 113.1 (Wildland Fire Prevention and Fire Safety).

4.7.3.5 Schools

Table 4.7-7, Schools within 0.25 Mile of the Proposed Project, lists all schools located within 0.25 mile of the Proposed Project. These schools are depicted on Figure 4.9-1 within Section 4.9, Land Use and Planning.

Table 4.7-7: Schools within 0.25 Mile of the Proposed Project

School Name	School Location in Relation to the Proposed Project
Saddleback Valley Christian	Approximately 0.2 mile northwest of the Capistrano Substation Site
JSerra Catholic High School	Approximately 0.2 mile north of the Capistrano Substation site
Marbella Montessori School	Approximately 0.2 mile southwest of Pole No. 4
St. Margaret's Episcopal School	Approximately 0.25 mile southwest of Pole No. 6
Harold Ambuehl Elementary School	Approximately 0.17 mile west of Pole No. 7
San Juan Hills High School	Adjacent to Rancho San Juan section of transmission line ROW and Pole Nos. 15-18 and 8a
Vista Del Mar Middle School	Approximately 0.20 mile east of Pole No. 28
Talega Preparatory Academy	Approximately 0.15 mile northeast of Pole No. 38
Capistrano Connections Academy (Charter School)	Approximately 0.16 mile north of Pole No. 35

4.7.3.6 Hospitals

There are no hospitals within 0.25 mile of the Proposed Project.

4.7.3.7 Airports

There are no airports, public or private, located within two miles of the Proposed Project. The closest airport to the Proposed Project is John Wayne Airport, which is located approximately 15 miles north of the existing Capistrano Substation site.

4.7.4 Potential Impacts

4.7.4.1 Significance Criteria

Standards of impact significance were derived from Appendix G of the *CEQA Guidelines*. Under these guidelines, the Proposed Project could have a potentially significant impact regarding hazards and hazardous materials if it would:

- a) Create a significant hazard to public health 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 release of 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; 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.

4.7.4.2 Question 7a - Create a significant hazard to public health or the environment through the routine transport, use, or disposal of hazardous materials?

Construction – Less than Significant Impacts with Incorporation of APMs

Impacts from Existing Contamination or Hazardous Waste/ Building Materials

Existing Capistrano Substation Site

The principal exposure pathways related to existing contamination for the Proposed Project would involve the excavation and handling of contaminated soil and hazardous building

materials resulting in exposure of workers and/or the general public. For example, construction workers may come into contact with contaminated soil if excavation activities occur within an area of existing soil contaminated. With respect to the Proposed Project, a number of existing contaminants have been identified at the Capistrano Substation site, including soil contaminated with petroleum hydrocarbons, lead, and chromium and asbestos containing materials and lead-based paint containing materials within one existing structure. In addition, further additional soil contamination is possible within the active portion of the existing 12/138kV substation located on the upper yard portion of the existing Capistrano Substation site. Soil sampling would be conducted within this portion of the substation site once the new 12/138kV substations have been constructed on the lower yard (refer to Section 3.5.3).

Hazardous materials in the construction area would require special handling as hazardous waste and could create a potential exposure risk to workers and the general public during excavation and transport if proper handling procedures are not followed. Contaminated soil exceeding regulatory limits for trench backfilling would require transportation to off-site processing facilities. Contaminated soil removed from the construction area must be transported according to state and federal regulations and any required backfill material must be imported. Protection for workers who handle hazardous substances is regulated by multiple state and federal regulations and agencies, including OSHA, CalOSHA, DTSC, USEPA, the asbestos NESHAP, RCRA, and the HWCL.

Exposure of contaminated soil to construction workers occurs when workers come into direct contact or are located within the immediate vicinity of contaminated soils. Contaminated soil, when handled, transported, and disposed of properly (pursuant to existing laws and regulations) does not represent a significant health risk to workers or the public. Standard construction crews would not be present during removal of any contaminated soil and hazardous building materials present at the Capistrano Substation site (refer to Section 4.7.3.3). Specialized crews would be utilized to conduct any remediation (safe removal of contaminants) at the Capistrano Substation site prior to actual construction of the Proposed Project commencing. Proper personal protection equipment (PPE) would be utilized by all remediation workers that may come into contact with known contaminated soil or hazardous building materials. PPE would be determined based upon the nature of the contamination present at any given portion of the substation site and would comply with all applicable CalOSHA standards.

Exposure of the general public to contaminated soils and hazardous building materials can be almost entirely eliminated by proper construction site security (the remainder of the risk to the public is controlled through proper transportation of the waste to a licensed facility). During normal construction activities, the general public should not, under any circumstances, be allowed access to a construction site. Without direct access to contaminated soil, the risk of harmful exposure is very low; assuming proper excavation, handling, and disposal of the contaminated soil and hazardous building materials. Any contaminated soil that is removed from the Capistrano Substation site would be excavated, handled, and disposed following all applicable laws, ordinances and safety standards.

Of the eight identified potential existing contamination/hazardous materials sites (refer to Tables 4.7-2 and 4.7-6), only the Capistrano Substation site poses a high risk of impacting the Proposed Project, as outlined above. The remaining seven sites identified (refer to Tables 4.7-2 and 4.7-6)

would not pose a potential risk to Proposed Project workers, or to the public or environment as a result of the construction of the Proposed Project for the following reasons:

1. Only one site (Marbella Golf Course) has documented contamination and it is not likely to extend to where construction of the Proposed Project would occur (Pole No. 6),
2. None of the sites are located immediately adjacent to the Proposed Project, where Proposed Project workers could come into contact with hazardous materials or wastes.

In order to ensure that potential impacts relating to the handling and disposal of contaminated soil and hazardous building materials during construction of the proposed San Juan Capistrano Substation are less than significant, SDG&E is proposing APM HAZ-1. Worker and public safety is also regulated by adherence to existing requirements under the following agencies and regulations:

- OSHA (specifically Section 1910.120 [Hazardous Waste Operations and Emergency Response]),
- CalOSHA (OSHA regulations, Lead Standard, asbestos Construction Standard),
- USEPA (Asbestos NESHAP), and
- DTSC (RCRA and HWCL).

In addition, the following SDG&E Environmental Standards would be employed to further ensure that no adverse effects to worker and public safety result from construction of the Proposed Project:

- Asbestos Management,
- Hazardous Materials Transportation Security Plans,
- Hazardous Materials and Waste Management,
- Hazardous Material and Waste Shipping,
- Hazardous Waste Minimization Plans, and
- Field Guidelines for Emergency Incidents.

The construction contractor would also implement (in addition to regulatory and SDG&E requirements) their own compliance management programs to ensure that regulatory requirements are adhered to and that worker and public safety are secured.

Implementation of APM HAZ-1 (which requires additional soil testing in the active substation area [upper yard]), along with adherence to requirements and SDG&E Environmental Standards outlined above, would ensure that all hazardous building materials are abated, removed, and transported by licensed professionals and that the active substation area is tested for potential soil contamination. Impacts would therefore be less than significant.

Hazardous Materials Utilized During Construction Activities

Vehicles and equipment used for construction could contain or require the temporary, short-term use of potentially hazardous substances, such as fuels, lubricating oils, and hydraulic fluid. The potential exists for an accidental release of hazardous materials during construction and refueling activities. The release of these materials has the potential to impact construction workers, the public and the environment if they are not properly contained and removed. Potential impacts from the release of these materials would be mitigated by the implementation of construction BMPs. These BMPs could include, but would not be limited to, construction practices such as the use of absorbent pads for spill containment, specified locations for construction vehicle refueling, and a daily vehicle inspection schedule designed to identify leaking fuels and/or oils as early as possible.

Operation & Maintenance – No Impact

The Proposed Project includes the replacement and upgrading of existing electric transmission, distribution and substation facilities. It is located entirely within or adjacent to existing electric transmission facilities and substations and does not include the installation of new electric facilities in areas where similar facilities do not already exist. These existing facilities constitute the baseline from which potential hazard and hazardous materials impacts were evaluated.

The only potentially material difference between the existing facilities and the Proposed Project is the introduction of gas insulated design at the proposed new San Juan Capistrano Substation. As discussed below, the gas insulated design would not result in any hazard or hazardous materials impact.

Gas Insulated Substations

Operation of the new 230kV and 138kV gas insulated substations at the San Juan Capistrano Substation site would involve the utilization of sulfur hexafluoride gas. The chemical equation for sulfur hexafluoride is SF₆. Table 4.7-8, Physical and Chemical Properties of Sulfur Hexafluoride, summarizes the physical and chemical properties of sulfur hexafluoride.

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Table 4.7-8: Physical and Chemical Properties of Sulfur Hexafluoride

Physical/Chemical Property	Sulfur Hexafluoride Value
Physical State at standard temperature and pressure	Gas
Reactive	No
Flammable	No
Explosive	No
Corrosive	No
Toxic	No
Carcinogenic	No ¹
Odor	None
Boiling point (sublimation)	-64 °C
Potential Health Threats	Simple asphyxiate
Source: Sulfur Hexafluoride MSDS	

Sulfur hexafluoride is an inert gas at standard temperature and pressure and is not listed as a hazardous material within the Chapter 11, Appendix X of the HWCL (CCR Title 22). A sample material safety data sheet (MSDS) for sulfur hexafluoride is provided as Appendix 4.7-C. With respect to the Proposed Project, the utilization of sulfur hexafluoride does not represent any reasonably foreseeable threat to human health or the environment. Therefore, no impacts are anticipated from the utilization of sulfur hexafluoride.

Transformer Oil and other Materials

Mineral insulating oil would be present in sealed electrical equipment (such as transformers) at the Proposed Project substations. Transformer oil is present at both existing substations and this would be the same after the substations are rebuilt and/or modified. The amount of transformer oil at the San Juan Capistrano Substation would be substantially more than is present at the existing Capistrano Substation. However, as with current conditions, due to the fact that insulating oils are contained in equipment with secondary containment surrounding them at the substation sites, and that the substation sites are secured from public access, there is very little risk to the public from exposure to such materials and the increased volumes would not cause any substantial change as compared to current conditions. The workers who handle the oil and maintain the substation are trained to handle such materials and respond to accident conditions. Additionally, the containment of transformer oil at the substation site, as is currently the case, would be controlled through the preparation and adherence to an SPCC plan and SDG&E Environmental Standards. Therefore, there would be no impacts from the routine use of hazardous materials during operation and maintenance of the Proposed Project.

All herbicides utilized during maintenance around transmission line poles would follow SDG&E’s Approved Herbicides and Application Procedure and would not be substantially different from current herbicide utilization within the Proposed Project area. Therefore, there would be no impacts.

¹ Sulfur hexafluoride is not listed as a potential carcinogen by the National Toxicology Program, OSHA, or International Agency for Research on Cancer.

4.7.4.3 Question 7b - 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?

Construction – Less than Significant Impact with Incorporation of APMs

As discussed under Section 4.7.4.2, construction at the Capistrano Substation site would involve the handling of contaminated soils and hazardous building materials. These hazardous substances would be remediated (safely removed from their current place) and transported to a licensed facility pursuant to applicable state and federal regulations. While the potential for upset conditions to cause a release of these materials during transport does exist, the chances of this occurring are considered to be low, and therefore the risk of upset or accident conditions leading to a significant hazard from the transport of hazardous waste is also considered to be low. In addition, implementation of APM HAZ-1 and SDG&E Environmental Standards (refer to Section 4.7.4.2) would further reduce the potential risk of upset and/or accidental release of hazardous substances creating a significant adverse environmental effect. Therefore, impacts are anticipated to be less than significant.

Operation & Maintenance – No Impact

As discussed under Section 4.7.4.2, operation and maintenance of the Proposed Project at substation facilities would be substantially similar to operation and maintenance at the existing Capistrano Substation, with the exception of the gas insulated design. The gas insulated design involves the use of sulfur hexafluoride. There is a low risk of accidental release and the substation site would be secured from public access and the risk to public is therefore very low. No impacts are anticipated to occur.

4.7.4.4 Question 7c - Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction – Less than Significant Impact

As discussed in Section 4.7.4.2, construction at the existing Capistrano Substation site would involve the handling of contaminated soils and hazardous building materials. There are two schools located within 0.25 mile of the Capistrano Substation site: JSerra Catholic High School and the Saddleback Valley Christian School. However, the Proposed Project would not emit any hazardous substances during construction. Adherence with existing state and federal regulations pertaining to the transportation of hazardous materials would ensure that the existing hazardous substances at the existing Capistrano Substation site are removed and properly disposed within significant risk to nearby schools.

Operation & Maintenance – No Impact

Within 0.25 miles of any schools, operation and maintenance of the Proposed Project would not differ substantially from that of operation and maintenance activities associated with existing facilities. Therefore, no impact would occur.

4.7.4.5 Question 7d - 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?

Construction – No Impact

Construction of the Proposed Project would not occur on a site listed under Government Code Section 65962.8 (Cortese list). There are two sites that are on the Cortese list adjacent to the transmission line ROW; however, the presence of these sites in the vicinity of the transmission line ROW would not create a significant hazard to the public or the environment. While the existing Capistrano Substation site is not on the Cortese list or any similar listing of known or suspected hazardous materials sites, there are known hazardous substances at the substation site. Potential impacts relating to the known hazardous substances are discussed under Section 4.7.4.2.

Operation & Maintenance – No Impact

Operation and maintenance of the Proposed Project would not differ substantially from that of the existing facilities and would not occur on any sites listed under Government Code Section 65962.5. Therefore, operation and maintenance activities would not result in any significant hazard to the public or the environment relating to Government Code Section 65962.5.

4.7.4.6 Question 7e - 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?

Construction and Operation & Maintenance – No Impact

The Proposed Project is not located within an airport land use plan, nor is the Proposed Project located within two miles of an airport. Therefore, no impacts would occur.

4.7.4.7 Question 7f - 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?

Construction and Operation & Maintenance – No Impact

The Proposed Project is not located within the vicinity of a private airstrip. Therefore, there would be no impacts.

4.7.4.8 Question 7g - Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction – Less than Significant Impact

Proposed Project construction would not restrict would not interfere with the *City of San Clemente Emergency Plan*, the *City of San Juan Capistrano Emergency Operations Plan*, or

emergency response at the State and Operational Area levels under the State Emergency Plan and the SEMS.

Construction of the Proposed Project would involve partial closure of certain streets during construction of underground transmission lines. However, through access would be maintained during construction (as discussed in Section 4.14, Traffic and Transportation) and therefore impacts would be less than significant.

Operation & Maintenance – No Impact

Operation and maintenance of the Proposed Project would not differ substantially from that of the existing facilities, therefore the Proposed Project would not restrict traffic flow at any locations or otherwise interfere with the *City of San Clemente Emergency Plan*, the *City of San Juan Capistrano Emergency Operations Plan*, or emergency response at the State and Operational Area levels under the State Emergency Plan and the SEMS. No impacts to any existing emergency or evacuation plans are anticipated.

4.7.4.9 Question 7h - 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?

Construction – Less than Significant Impact

As previously described in Section 4.7.3, portions of the transmission lines associated with the Proposed Project are located within a SDG&E designated FTZ. While construction of the Proposed Project would place construction workers temporarily within the designated FTZ, construction work would be temporary and workers would only be within each distinct construction area for a relatively short amount of time. In addition, the majority of this area has already developed with the city of San Juan Capistrano and the Talega community (city of San Clemente) and the amount of open, vegetated area has been reduced over the past 10 to 15 years as Talega development has matured, thereby reducing the risk of wildfire within this area.

Construction activities do have the potential to start a fire due to the increased presence of vehicles, equipment, and human activity in areas of elevated fire hazard severity. In particular, heat or sparks from construction vehicles or equipment have the potential to ignite dry vegetation. Consistent with current SDG&E standard practices, SDG&E would implement its existing Wildland Fire Prevention and Fire Safety (ESP No. 113.1), which includes requirements for carrying emergency fire suppression equipment, conducting “tailgate meetings” that cover fire safety discussions, restrictions on smoking and idling vehicles, and construction restrictions during red flag warnings. As part of the Proposed Project and consistent with ESP 113.1, SDG&E would also implement a project-specific fire plan to assist in safe practices to prevent fires with the Proposed Project area. This plan would include equipping diesel and gasoline-operated engines with spark arrestors, carrying emergency fire suppression equipment, furnishing a water truck on or immediately adjacent to the Proposed Project work area, and ceasing construction during a red flag warning, as specified in the project-specific fire plan.

Consistent with ESP 113.1 and the project-specific fire plan, prior to starting construction activities, SDG&E would clear dead and decaying vegetation from Proposed Project work areas where personnel are active or where equipment is in use or being stored within ROWs, staging

areas, stringing sites, and access roads. Cleared dead and decaying vegetation would either be removed or chipped and spread on site.

During construction activities within the FTZ, workers would follow ESP 113.1 and the project-specific fire plan, which will incorporate existing SDG&E fire standards and safety practices while adding in project-specific conditions and practices to further ensure that the risk of a fire event during construction of the Proposed Project is minimized. This project-specific fire plan is incorporated into the Proposed Project, and will be used to ensure that potential impacts relating to wildland fires remain less than significant. Therefore, any potential impacts from wildland fires would be less than significant.

Operation & Maintenance – No Impact

Operation and maintenance of the Proposed Project would not differ substantially from that of the existing facilities, except that potential fire hazards would be reduced following construction of the Proposed Project due to the fact that many of the transmission line poles that are being replaced are made of wood and the new transmission poles would be made of steel and have greater clearance above the ground and existing vegetation as outlined below.

In general, the replacement of wood poles with steel poles is often undertaken specifically to minimize the risk of wildfires that exists when certain atmospheric conditions occur within geographic areas designated as fire threat areas. The Proposed Project, while not being conducted for the purpose of reducing fire risk, would involve the removal of many wood poles and is therefore consistent with SDG&E's long-term plan to improve service reliability in fire-prone areas through system hardening or other enhancements. The Proposed Project would replace existing wood pole structures with new steel pole structures, string new wire (thereby removing weak spliced locations), install only steel poles that would withstand 85 mph winds, and install longer polymer insulators to minimize contamination which would improve system reliability during extreme weather conditions. With these design features, there would be reduced exposure of people or structures to loss, injury, or death involving wildland fires as compared to existing conditions. Thus, the Proposed Project would result in an overall beneficial long-term effect in this regard.

In addition, operation and maintenance of the Proposed Project would not require any additional workers than are currently required for operation and maintenance of the Talega to Capistrano transmission corridor, and the Proposed Project would therefore not increase the number of people exposed to potential wildland fires within the Proposed Project vicinity.

4.7.5 Applicant Proposed Measures

To avoid and minimize potential significant impacts associated with hazards or hazardous materials for the Proposed Project, SDG&E proposes to incorporate the following APM during the construction of the Proposed Project (it is important to note that impacts relating to the handling, abatement, and transportation of hazardous materials are controlled through adherence to existing state and federal regulations):

HAZ-1 Prior to the start of earth disturbance activities at the upper yard portion of the existing Capistrano Substation site, a Phase II Environmental Site Assessment (soil sampling) would be performed and, if any contaminated soil is found to be present,

contaminated soils would be managed, removed, transported, and disposed of in accordance with all applicable laws, ordinances and safety standards.

4.7.6 References

Advanced Environmental Group, Inc. February 2008. *Asbestos Inspection Report San Diego Gas & Electric Capistrano Substation*.

California Code of Regulations. 12-29-2006. Title 22, Chapter 11, Appendix X, List of Chemical Names and Common Names for Hazardous Wastes and Hazardous Materials.

California Code of Regulations. 12-29-2006. Title 22, Chapter 11, Article 3, Section 66261.24-1. Table II – List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration.

California Environmental Protection Agency. 2005. *Use of California Human Health Screening Levels in Evaluation of Contaminated Properties*.

California Integrated Waste Management Board. Solid Waste Information System Database. Site Summary Details for the Prima Deshecha Land Fill. Online: <http://www.ciwmb.ca.gov/SWIS/30-AB-0019/Detail/>. Site accessed on February 23, 2012.

California Public Utilities Commission. January 2006. *Rules for Overhead Electric Line Construction - General Order No. 95*.

City of San Clemente. 2003. *City of San Clemente Emergency Plan*.

City of San Clemente. 1993. *General Plan*.

City of San Juan Capistrano. January 2007. *City of San Juan Capistrano Emergency Operations Plan*.

City of San Juan Capistrano. 2002. *General Plan*.

City of San Juan Capistrano. 2012. *Ordinance 991 (Designation of Very High Fire Hazard Severity Zones)*.

County of Orange. 2005. *General Plan*.

County of Orange. Certified Unified Program Agency. Online: <http://www.occupainfo.com/>. Site accessed on August 14, 2008.

County of Orange Sheriff's Department. Emergency Management Bureau. Online: <http://www.ocgov.com/ocgov/Info%20OC/Departments%20&%20Agencies/Emergency%20Operations%20Center%20-%20Orange%20County%20Disaster%20Preparedness/Emergency%20Management/Emergency%20Management%20Bureau>. Site Visited February 23, 2012.

Department of Toxic Substances Control. March 12, 2003. *Environmental Oversight Agreement for Docket # HAS-A 02/03-131*.

Department of Toxic Substances Control. ENVIROSTOR Database. Online: <http://www.envirostor.dtsc.ca.gov/public/>. Accessed August 14, 2008 and February 23, 2012.

Environmental Data Resources (EDR). February 28, 2008. *Corridor Study for Inquiry Number 2152734.Is*.

Environmental Data Resources (EDR). February 29, 2008. *Aerial Photo Decade Package for Inquiry Number 2154760.1*.

Environmental Data Resources (EDR). January 6, 2012. *Corridor Study for Inquiry Number 3233412.Is*.

Haley & Aldrich, Inc. 2002. *Report on ASTM Phase I Environmental Site Assessment and Lead/Asbestos Survey – SDG&E San Juan Capistrano Substation*.

Occupational Safety and Health Act, Part 1910 – Occupational Health and Safety Standards. Accessed at: http://www.osha.gov/pls/oshaweb/owasrch.search_form?p_doc_type=STANDARDS&p_toc_level=1&p_keyvalue=1910

Occupational Safety and Health Act, Part 1904.29 – Recording and Reporting Occupational Injuries and Illness. Accessed at: http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=12805

Praxair, Inc. October 1997. *Material Safety Data Sheet for Sulfur Hexafluoride*.

San Diego Gas & Electric Company. 1964. *Drawing # BG-565 - Revised Southern California Edison Company Plot Plan for Substation Station Operator's Quarters*. Originally dated September 21, 1917.

San Diego Gas & Electric Company. March 23, 1933. *Drawing # SK 839 – Capistrano Substation Property Plan*.

San Diego Gas & Electric Company. July, 2009. *Electric Standard Practice No. 113.1 – Wildland Fire Prevention and Fire Safety*.

State of California Office of Emergency Services. September 2009. *State of California Emergency Plan*.

TRC Companies, Inc. 2009. *Phase 2 Environmental Site Investigation – Stage 1 Capistrano Substation Rebuild*.

TRC Companies, Inc. July 14, 2008. *Proposal for Phase 2 Environmental Site Investigation – Stage 2 Capistrano Substation Rebuild*.

US Environmental Protection Agency. November 2011. Regional Screening Levels Summary Table.

US Environmental Protection Agency. October 2004. Region 9 PRG Table.

US Environmental Protection Agency. *Users Guide and Background Technical Document for USEPA Region 9's Preliminary Remediation Goals (PRG) Table.*

US Environmental Protection Agency. 2011. Comprehensive Environmental Response, Compensation and Liability Act. Accessed at: <http://www.epa.gov/superfund/policy/cercla.htm>