

4.8 HAZARDS AND HAZARDOUS MATERIALS

4.8.1 Environmental Setting

The environmental setting characterizes the hazards and hazardous materials that are currently present in the project area and vicinity, and aspects of the existing environment that could potentially be affected by project-related hazards and hazardous materials.

Methods

An environmental database search was conducted for the proposed project within a 1-mile buffer of the project area. The search drew from more than 60 federal and state environmental data tracking sites that provide listings of sites with records of hazardous material handling or releases to the environment. The database search results provided by SDG&E were reviewed to determine whether there are known sites with past or ongoing hazardous materials releases that could affect or be affected by the proposed project. State and federal databases for hazardous materials sites within 0.25 mile of the project area also were reviewed.

Emergency planning and response documents, including fire hazard severity zone maps, for the City and the County were reviewed to determine if hazards could affect or be affected by the proposed project. The documents reviewed included the San Diego County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) and high fire hazard severity zone maps published by the California Department of Forestry and Fire Protection (CalFire). The City of Chula Vista General Plan and County of San Diego General Plan were reviewed for goals, objectives, and policies relevant to hazards and hazardous materials considerations for the proposed project.

The proposed transmission corridor includes buried 4-inch and 36-inch-diameter gas pipelines and two buried water pipelines. SDG&E technical reports were reviewed that assess the potential for the transmission lines to cause AC electrical interference with these buried metallic pipelines located in the shared corridor. A 1995 report (SES 1995) analyzed the effects of existing 69-kV and 230-kV transmission lines on the 4-inch and 36-inch-diameter gas pipelines in the transmission corridor. The report was reviewed by the CPUC to evaluate existing AC electrical interference in the transmission corridor.

Hazardous Materials

Hazardous materials are chemical and non-chemical substances that can pose a threat to the environment or human health if misused or released. Hazardous materials occur in various forms and can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazardous materials are used in industry, agriculture, medicine, research, and consumer goods. Hazardous materials can include explosives, flammable and combustible substances, poisons, radioactive materials, pesticides, petroleum products, and other materials defined as hazardous under the Resource Conservation and Recovery Act (RCRA) in 40 CFR 261. These substances are most often released as a result of motor vehicle or equipment accidents or because of chemical accidents during industrial use. Hazardous substances have the potential to leach into soils, surface water, and groundwater if they are not properly contained.

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Existing Hazardous Sites

A Phase I Environmental Site Assessment was conducted in 2011 prior to the purchase of the land for the proposed substation site (Eco & Associates 2011 as cited in SDG&E 2013). An updated hazardous materials database search was conducted in 2012 for the entire project area, including the substation site and the transmission corridor (EDR 2012). The database search involved review of applicable regulatory databases for documented release(s) or disposal of regulated chemicals or wastes in the areas surrounding the project area. The buffer zone outside the project boundaries targeted for the 2012 database search was 1 mile in accordance with the American Society for Testing and Materials (ASTM) Guideline for Phase I Environmental Site Assessments. The CPUC reviewed information contained in the database search (EDR 2012) and the Application for a PTC (SDG&E 2013a). The Phase I Environmental Site Assessment is no longer valid (report is older than one year) and was not reviewed. In 2014, the following state and federal databases for hazardous materials sites within the project footprint and a 0.25-mile buffer¹ were reviewed, as compiled under Government Code section 65962.5:

- U.S. EPA National Priorities List (NPL)
- California Department of Toxic Substances Control (DTSC) sites (EnviroStor database)
- Leaking Underground Storage Tank, Department of Defense, and Site Cleanup Program sites (GeoTracker database)
- Toxic Alert for California Superfund sites

Three sites were identified within 0.25 mile of the project area in the 2014 database search, all of which require no further action and are now closed. No open sites involving the release of hazardous materials were identified in the Environmental Data Resources, Inc. report (2012). Details for the three sites are summarized in Table 4.8-1.

The three sites were assessed for presence of lead in soil due to historical activities (i.e., agriculture) and do not require any further environmental action. There are no active hazardous materials sites documented within the project area. The only NPL listing in San Diego County is at the Camp Pendleton Marine Corps Base, approximately 43 miles north of the project (EPA 2013). The closest RWQCB case to the project is a leaking underground storage tank site, approximately 2 miles northwest of Miguel Substation. These two sites have not been considered in this analysis because of their distance from the project area.

¹ Analysis under CEQA requires assessment of whether a project would be located on a hazardous materials site, as defined under Gov. Code section 65962.5. A 0.25-mile buffer is a typical distance to use to identify the presence of contaminants in off-site groundwater that may have the potential to migrate to a given site. Off-site properties with groundwater contamination greater than 0.25 mile away are assessed to not have the potential to impact a given site. Off-site properties with soil contamination only generally are dismissed from further consideration because soil contamination remains in place.

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Table 4.8-1 Hazardous Sites within 0.25 Mile of Project

Site Name and Address	Approximate Distance and Direction from Project Site	Affected Medium	Chemical of Concern	Status
Middle School No. 12/High School No. 14, Eastlake Parkway and Hunte Parkway, Chula Vista, CA (proposed) ¹	Within Hunte Parkway staging yard site	Soil	Lead	No Further Action (closed)
San Miguel Elementary School Site, 2175 Proctor Valley Road, Chula Vista, CA ²	0.1 mile west of power line corridor	Soil	Lead	No Action Required (closed)
Otay Ranch Village 11; S-1 School Site, 1650 Exploration Falls Drive, Chula Vista CA ^{1,3}	0.2 mile north-northeast of Hunte Parkway staging yard	Soil	Lead	No Further Action (closed)

Notes:

- ¹ Site is included in September 11, 2012, EDR report.
- ² Has since been renamed Liberty Elementary School.
- ³ Corresponds to two separate cases in EnviroStor database: cases 60000102 and 60000797.

Source: DTSC 2013

Schools

There are six schools currently within 0.25 mile of the proposed project area, as listed in Table 4.8-2. The Hunte Parkway staging yard is proposed within a future school site. If construction of the school starts in advance of project construction, the Hunte Parkway staging yard would not be used for the project.

Airports and Air Strips

The closest airports are Brown Field, a public airport located approximately 3.6 miles to the south, and John Nichol's Field, a private airstrip servicing a skydiving operation located approximately 3.5 miles to the east, on the east side of Lower Otay Reservoir. A helipad is located approximately 3.6 miles west of the Hunte Parkway staging area, at Sharp Chula Vista Hospital.

Table 4.8-2 Schools within 0.25 Mile of Project Area

School Name	Location Relative to Project Area
Eastlake High School	Less than 300 feet northeast of power line corridor and Eastlake Parkway staging yard
Camarena Elementary School	Approximately 1,055 feet southwest of power line corridor
Olympic View Elementary School	Approximately 550 feet northeast of power line corridor
Marshall Elementary School	Approximately 1,200 feet east of power line corridor
Liberty Elementary School	Approximately 480 feet west of power line corridor
High Tech Schools complex	Approximately 700 feet southwest of substation site

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Emergency Services/Evacuation Plans

Two agencies are responsible for emergency services within the project area:

- San Diego Office of Emergency Services (OES)
- City of Chula Vista Fire Department (CVFD)

OES coordinates the overall County response to disasters. The agency is responsible for:

- Alerting and notifying appropriate agencies when disasters occur
- Coordinating responding agencies; ensuring resources are available and mobilized
- Developing plans and procedures for response to and recovery from disasters
- Developing and providing preparedness materials for the public (OES 2013)

OES staffs the Operational Area Emergency Operations Center (a central facility that provides regional coordinated emergency response) and also acts as staff to the Unified Disaster Council (UDC), a joint powers agreement among all 18 incorporated cities and the County of San Diego. The UDC provides for coordination of plans and programs countywide to ensure protection of life and property.

Emergency medical, fire protection, and hazardous materials services for the majority of the project area (i.e., the portion within the City) are provided by CVFD. CVFD employs an Emergency Services Coordinator who is responsible for updating the City's Emergency Operations Plan and preparing the Emergency Operations Center (EOC) to be used at any time. The coordinator also organizes training, assists the EOC Director in managing disasters, and coordinates with City of Chula Vista departments to secure and maintain contracts to provide food, communications, shelter, transportation, and other items necessary in large quantities during and after a disaster. CVFD also organizes Community Emergency Response Teams (CERTs), which are composed of volunteers who can assist community members following an event when professional responders are not immediately available to help.

The San Diego County MJHMP (County of San Diego 2010) provides information on natural and manmade hazards in the County, establishes a framework for managers and local leaders to address vulnerabilities to disasters, establishes policies for local jurisdictions to provide hazard mitigation capability, and coordinates inter-jurisdictional mitigation planning.

SR-125 runs north-south through the project region and is crossed by the transmission corridor at two locations. SR-125 could be used in the event of an emergency evacuation. Several four- and six-lane major roadways are present within the project region (e.g., Hunte Parkway, Eastlake Parkway, Olympic Parkway, and Mount Miguel Road; see Section 4.14: Transportation and Traffic for additional details). These roadways could also be used as evacuation routes. The closest interstate highway is I-805, which is located approximately 4.5 miles west of the Hunte Parkway staging yard and 5.3 miles west of Miguel Substation.

Fire Hazards

Wildfires are a public safety concern in San Diego County. Portions of the project corridor are located within the urban-wildland interface fire area, the area where houses intermingle with undeveloped wildland vegetation.

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CalFire protects the people of California from fires, responds to emergencies, and protects and enhances forest, range, and watershed values providing social, economic, and environmental benefits to rural and urban citizens. CalFire assesses areas within the state for fire hazard severity by examining the following:

- The history and intensity of wildfires in the area
- Size and type of vegetation in the area
- Proximity to fire extinguishing resources

CalFire evaluates fire threat based on the following levels of risk severity:

- Extreme
- Very High
- High
- Moderate
- Little or No Threat

CalFire has rated the portions of the project area within developed or urban areas (i.e., majority of the transmission corridor, Eastlake staging yard, and Hunte staging yard) as little or no threat or moderate fire risk and the undeveloped portions of the project area (i.e., areas in and around both substation sites and OTC staging yards) as high or very high fire risk (CalFire 2007). Fire hazard severity ratings are shown on Figure 4.8-1. No extreme fire hazard areas are located within the project area. The majority of the project area is located within the City of Chula Vista, a CalFire Local Responsibility Area (LRA). LRAs are areas where local government agencies have responsibility for wildland fire protection. The portion of the project located within unincorporated San Diego County is located in a CalFire State Responsibility Area (SRA). SRAs are areas where state government agencies have responsibility for wildland fire protection.

AC Electrical Interference Hazards

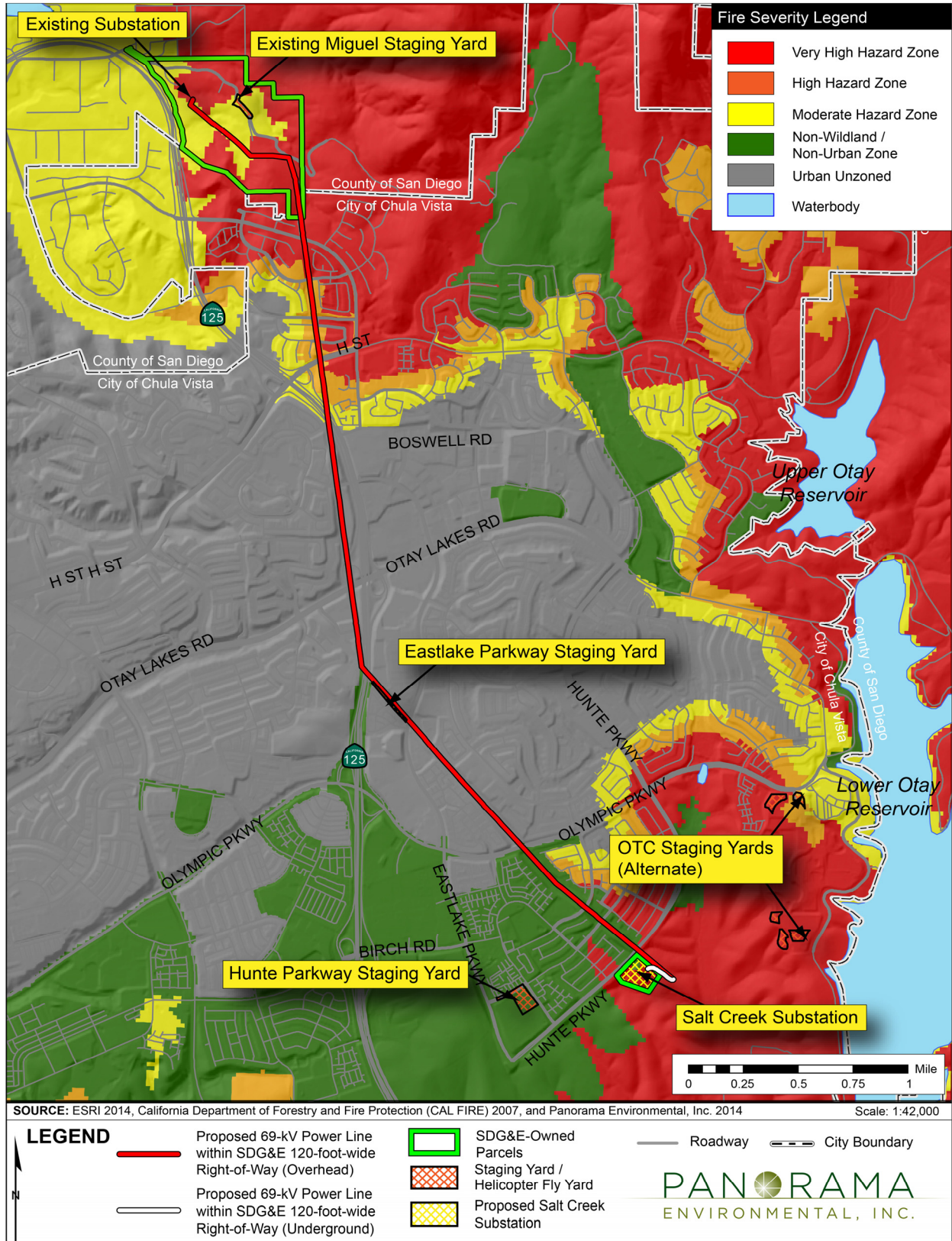
A 2.15-mile-long segment of the transmission corridor between the proposed substation and SR-125 includes two underground high-pressure gas pipelines located parallel to three aboveground SDG&E power and transmission lines (TL 6910 on a combination of wood and steel poles and TL 23041 and TL 23042 on a steel lattice tower). This segment of the transmission corridor also parallels the SDCWA ROW, which includes underground SDCWA water pipelines numbers 3 and 4. The presence of energized power lines in the same corridor as the metallic gas and water pipelines presents the potential for both inductive and conductive AC electrical interference. The following definitions illustrate the causes of AC electrical interference and explain other terms used in the electrical interference study conducted for the proposed project (results from the study are provided below).

Definitions

AC Electrical Interference. AC electrical interference is the unintended transfer of energy from an electrical source (e.g., an electrical power line) to a nearby metallic conductor. Capacitive coupling, inductive interference, and conductive coupling (defined below) can cause electrical interference.

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Figure 4.8-1 Fire Hazard Severity Ratings in the Project Area



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Capacitive Coupling. Capacitive coupling results from electric field transfer between energized power line conductors and the Earth. When the power line voltage is very high, a large electric field exists near the power line. Aboveground pipelines, vehicles with rubber tires, and equipment located near and parallel to the power line can accumulate a significant electric charge if adequate precautions are not taken to ground the pipelines. Buried pipelines are relatively immune to interference from capacitive coupling because the surrounding soil dissipates any charge that could accumulate from the power lines (ARK 2014a).

Inductive Interference. Inductive interference results from the magnetic field when an alternating current in a power line passes to a parallel pipeline. Induced currents act on the entire length of the pipeline near the power line. The amount of induced current depends on a number of factors that include the power line height, sag level, separation between the conductor phases, presence of ground wire, and soil resistivity.

Induction effects from power lines during normal operating conditions are small relative to induction effects during fault conditions. Inductive interference, particularly under fault conditions, can result in high induced voltages and currents along the length of the pipelines, which can result in impacts to personnel safety (e.g., electric shock up to a lethal level).

Conductive Interference. Conductive interference occurs when electric currents are discharged into the ground through the power line structure during fault conditions on a nearby pipeline. Unlike inductive interference, conductive interference only acts on the portion of the pipeline near where the current is being discharged into the ground. Conductive interference only affects pipelines that are parallel to the power line. Conductive interference can result in similar hazardous effects to those resulting from inductive interference.

Fault Conditions. A fault on a power line is any abnormal condition that can cause high electrical currents to flow (e.g., fallen tree on power line, metallic balloons connecting the conductors on a tower, bird or animal contact, and conductor clashing [conductors coming into contact with one another during high winds]). When fault conditions occur, the amount of current transmitted to the ground or a nearby conductor on the same tower may be 10 times or more than under normal conditions.

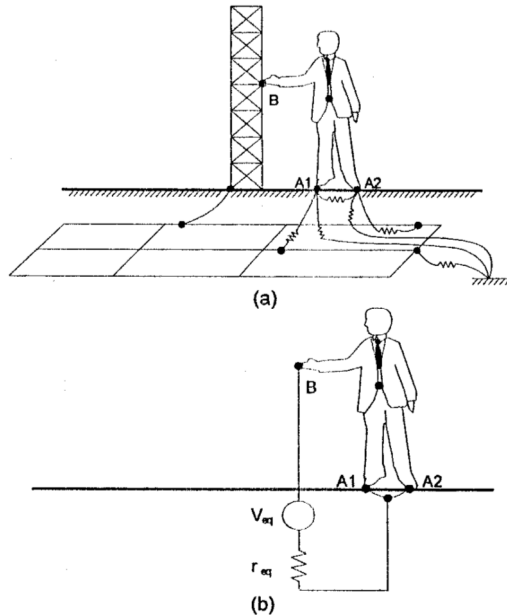
Steady-state Conditions. Steady-state conditions represent normal operating conditions of a power line where no unintended connections exist over the entire length of the power line itself or in nearby systems. Steady-state conditions are modeled and studied using maximum power line capacity (i.e., the maximum electrical load on the power lines that is anticipated for the future).

Electrical Potential. Electrical potential is the numerical estimate, in volts, of the amount of energy that could theoretically be generated by a power line.

Touch Voltage. Touch voltage is the voltage between an energized object (i.e., pipeline) and the feet of a person in contact with the object. Figure 4.8-2 illustrates the concept of touch potential.

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Figure 4.8-2 Touch Potential



Source: Lee and Meliopoulos 1999

The health and safety issues associated with touch potential are a function of soil resistivity and therefore vary from location to location along the length of the pipeline that parallels the power line. Additional factors include duration of touch and weight of the person, as shown in Table 4.8-3, where higher soil resistivities are associated with higher voltages (i.e., stronger shocks), and longer shock durations are associated with lower voltages (weaker shocks) for a given subject weighing 50 kilograms (110 pounds).

Coating Stress Voltage. Inductive and conductive effects often occur at the same time and reinforce each other. The combined inductive and conductive potential at the pipeline is measured as the coating stress voltage.

Existing Inductive and Conductive Interference in the Transmission Corridor

SDG&E conducted a study to evaluate the existing AC electrical interference of the 69-kV power line (TL 6910) and 230-kV power lines (TL 23041 and TL 23042) with the existing 4-inch gas pipeline and a 36-inch gas pipeline (SES 1995) (the 36-inch gas pipeline has since been installed and is part of the existing conditions). The 1995 study modeled electrical currents and voltages due to inductive and conductive coupling under steady-state and fault operating conditions, which were defined above. The modeled voltages provide an indication of the amount of electrical energy that could be generated due to interference between the existing 230-kV power line and the 36-inch gas pipeline.

The 36-inch gas pipeline in the transmission corridor is buried and therefore capacitive coupling is negligible. The maximum inductive and conductive voltages under fault conditions (i.e., abnormal conditions) were modeled in the 1995 study to determine the total current maximum interference levels at peak (maximum) voltages (SES 1995). The maximum inductive and

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Table 4.8-3 Permissible Touch Voltages per IEEE Standard 80¹

Shock Duration	Soil Resistivity ($\Omega\cdot m$)						
	10	50	100	200	500	1,000	3,000
0.05	526.9 V	559.2 V	599.7 V	680.6 V	923.4 V	1328.0 V	2946.6 V
0.10	372.5 V	395.4 V	424.0 V	481.3 V	652.9 V	939.1 V	2083.6 V
0.15	304.2 V	322.9 V	346.2 V	393.0 V	533.1 V	766.7 V	1701.2 V
0.20	263.4 V	279.6 V	299.8 V	340.3 V	461.7 V	664.0 V	1473.3 V
0.25	235.6 V	250.1 V	268.2 V	304.4 V	413.0 V	593.9 V	1317.8 V
0.30	215.1 V	228.3 V	244.8 V	277.9 V	377.0 V	542.2 V	1202.9 V
0.35	199.1 V	211.4 V	226.7 V	257.3 V	349.0 V	502.0 V	1113.7 V
0.40	186.3 V	197.7 V	212.0 V	240.6 V	326.5 V	469.5 V	1041.8 V
0.45	175.5 V	186.4 V	199.9 V	226.9 V	307.8 V	442.7 V	982.2 V
0.50	166.6 V	176.8 V	189.6 V	215.2 V	292.0 V	420.0 V	931.8 V

Notes:

¹ Voltages are from IEEE Standard 80, 1986 edition, for 50-kilogram person, with probability of ventricular fibrillation of 0.5 percent.

IEEE = Institute of Electrical and Electronics Engineers

$\Omega\cdot m$ = Ohm-meter

V = volt

Source: IEEE 1986

conductive potentials reflected unacceptable touch voltages under fault conditions. SDG&E therefore integrated the following design features into the 36-inch gas pipeline design to reduce the potential for electrical shock to personnel:

- Installation of permanent grounding grids at exposed pipeline appurtenances where the modeled touch voltage exceeds the 15-volt design limit
- Valve relocation
- Installation of Dairyland Polarization Cell Replacement to ensure AC continuity across the flange while maintaining DC isolation
- Relocation of transmission tower counterpoise conductors (ground system consisting of network of suspended wires or cables) and ground rod away from the pipeline
- Use of temporary ground mats during construction
- Use of grounds on construction equipment and vehicles
- Installation of insulating material to isolate the pipeline

These design features were implemented when SDG&E installed the gas pipeline to reduce touch voltages, pipeline potentials, coating stress voltages, and isolating flange stress voltages to acceptable voltage levels. Implementation of these design features mitigated existing inductive and conductive interference with the gas pipeline to acceptable levels.

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4.8.2 Regulatory Setting

Federal

United States Pipeline Safety Standards

Federal pipeline safety standards for gas pipelines at CFR §192.467(f), External Corrosion Control: Electrical Isolation, states: “Where a pipeline is located in close proximity to electrical transmission tower footings, ground cables or counterpoise, or in other areas where fault currents or unusual risk of lightning may be anticipated, it must be provided with protection against damage due to fault currents or lightning, and protective measures must also be taken at insulating devices.”

United States Environmental Protection Agency

EPA was established in 1970 in response to the growing public demand for cleaner water, air, and land. EPA works to develop and enforce regulations that implement environmental laws enacted by Congress.

The Federal Toxic Substances Control Act (1976) and the RCRA of 1976 established a program administered by EPA 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.

Congress enacted the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, on December 11, 1980. This law (42 USC Chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites; provides for 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. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (40 CFR Part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established NPL. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

As part of the CWA, EPA oversees and enforces the Oil Pollution Prevention regulation contained in Title 40 of CFR, Part 112 which is often referred to as the “SPCC rule” because the regulations describe the requirements for facilities to prepare, amend, and implement SPCC Plans. A facility is subject to SPCC regulations if a single oil storage tank has a capacity greater than 660 gallons, the total aboveground oil storage capacity exceeds 1,320 gallons, or the underground oil storage capacity exceeds 42,000 gallons, and if, due to its location, the facility could reasonably be expected to discharge oil into or upon the “Navigable Waters” of the United States. Other federal regulations overseen by EPA relevant to hazardous materials and environmental contamination include CFR Title 40, Chapter I, Subchapter D – Water Programs,

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and Subchapter I – Solid Wastes. CFR Title 40, Chapter I, Subchapter D Parts 116 and 117 designate hazardous substances under the Federal Water Pollution Control Act and set forth a determination of the reportable quantity for each substance that is designated as hazardous in CFR Title 40, Part 116. CFR Title 40, Part 117 applies to quantities of designated substances equal to or greater than the reportable quantities that may be discharged into waters of the United States.

Occupational Safety and Health Administration

The OSHA regulations contained in Title 29 CFR and the California Occupational Safety and Health Administration (Cal/OSHA) regulations codified in Title 8 contain employee safety provisions that are designed to minimize the hazards for employees who may encounter hazardous materials in the workplace. The regulations require training, operating procedures, and protective equipment to be used at work sites where hazardous materials could be encountered. The purpose of CFR Title 29, Part 1910, Hazard Communication Standard, is to ensure that the hazards of all chemicals produced or imported are evaluated, and that information concerning their hazards is transmitted to employers and employees. Information is to be communicated through comprehensive hazard communication programs, which are required to include container labeling and other forms of warning, Material Safety Data Sheets, and employee training.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), amended in 1996, authorizes EPA to register or license pesticides (including herbicides) for use in the United States. Pesticides must be registered with EPA and the state before distribution. Pesticides used in the project area must comply with applicable federal requirements.

Under FIFRA, the California Department of Pesticide Regulation (CDPR) is vested with primary responsibility to enforce pesticide laws and regulations in California. Pesticide rules are found in different sections of California codes and regulations, including the Food and Agriculture Code, Business and Professions Code, Health and Safety Code, and the Labor Code.

In general, CDPR regulates pesticide sales and use statewide, whereas local use is enforced through the County Agricultural Commissioners. Many agricultural pesticides require a permit from the County Agricultural Commissioner before they may be purchased or used. The Agricultural Commissioner also enforces regulations to protect groundwater and surface water from pesticide contamination. The County of San Diego Department of Agriculture, Weights, and Measures monitors pesticide applications to ensure they are performed in a safe and effective manner and that worker safety requirements are followed; inspects application equipment, pesticide storage sites, employee training documents, and business pesticide use records; and investigates complaints and pesticide-related illnesses.

Spill Prevention, Control, and Countermeasure Plans

CFR Title 40 Part 112, Oil Pollution Prevention, establishes requirements for the preparation and implementation of SPCC Plans. SPCC Plans are designed to complement existing laws, regulations, rules, standards, policies, and procedures pertaining to safety standards, fire

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prevention, and pollution prevention rules. The purpose of an SPCC Plan is to have a comprehensive spill prevention program that minimizes the potential for discharges from specific sources, such as oil-containing transformers. The SPCC Plan must address all relevant spill prevention, control, and countermeasures required to be implemented at the facility.

State

California Environmental Protection Agency

Cal-EPA was created in 1991. It centralized California's environmental authority, consolidating CARB, SWRCB, Integrated Waste Management Board (IWMB), DTSC, Office of Environmental Health Hazard Assessment, and CDPR under one agency. These agencies were placed within Cal-EPA to create a cabinet-level advocate for the protection of human health and the environment and to ensure the coordinated deployment of state resources. CDPR, DTSC, IWMB, and SWRCB regulate hazardous materials and hazardous waste that have the potential to cause soil, water, and groundwater contamination.

Hazardous Materials Transportation

California has adopted U.S. Department of Transportation regulations for the intrastate movement of hazardous materials and regulates the transportation of hazardous waste originating in the state and passing through the state; the regulations are contained in 26 CCR. The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and Caltrans. CHP enforces hazardous material and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill.

California Occupational Safety and Health Administration

In California, the Cal/OSHA regulates worker safety similar to OSHA. Cal/OSHA assumes primary responsibility for developing and enforcing state regulations related to workplace safety. Because California has a federal OSHA program, it is required to adopt regulations that are at least as stringent as those found in CFR Title 29. Cal/OSHA standards are generally more stringent than federal regulations.

California Water Code

The California Water Code (CWC) includes provisions of the federal CWA and water quality programs specific to California. The California Water Code requires reporting, investigation, and cleanup of hazardous materials releases that could affect waters of the state, including stormwater.

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California Fire Safety Regulations

The California PRC includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors² on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on site for various types of work in fire-prone areas. These regulations include the following:

- Earth-moving and portable equipment with internal combustion engines shall be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC §4442)
- Appropriate fire suppression equipment shall be maintained during the highest fire danger period from April 1 to December 1 (PRC §4428)
- On days when a burning permit is required, flammable materials shall be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor shall maintain the appropriate fire suppression equipment (PRC §4427)
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines shall not be used within 25 feet of any flammable materials (PRC §4431)

Local

County of San Diego General Plan

The San Diego County General Plan (2011) establishes goals and objectives to provide guidance in the growth of the County. The following hazards and hazardous materials objectives were identified in the Land Use Element and Safety Element Chapters in the San Diego County General Plan (2011):

- LU-6.10 Protection from Hazards. Require that development be located and designed to protect property and residents from the risks of natural and man-induced hazards.
- LU-6.11 Protection from Wildfires and Unmitigable Hazards. Assign land uses and densities in a manner that minimizes development in extreme, very high and high fire threat areas or other unmitigable hazardous areas.
- LU-6.12 Flooding. Document and annually review areas within floodways and 100- and 200-year floodplains to ensure areas subject to flooding are accurately mapped in accordance with Assembly Bill 162 (enacted January 1, 2008). (See also Policy S-8.1.)

² A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

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- S-1.1 Minimize Exposure to Hazards. Minimize the population exposed to hazards by assigning land use designations and density allowances that reflect site specific constraints and hazards.
- S-1.3 Risk Reduction Programs. Support efforts and programs that reduce the risk of natural and manmade hazards and that reduce the time for responding to these hazards.
- S-3.1 Defensible Development. Require development to be located, designed, and constructed to provide adequate defensibility and minimize the risk of structural loss and life safety resulting from wildland fires.
- S-3.2 Development in Hillsides and Canyons. Require development located near ridgelines, top of slopes, saddles, or other areas where the terrain or topography affect its susceptibility to wildfires to be located and designed to account for topography and reduce the increased risk from fires.
- S-3.3 Minimize Flammable Vegetation. Site and design development to minimize the likelihood of a wildfire spreading to structures by minimizing pockets or peninsulas, or islands of flammable vegetation within a development.
- S-3.6 Fire Protection Measures. Ensure that development located within fire threat areas implement measures that reduce the risk of structural and human loss due to wildfire.
- S-3.7 Fire Resistant Construction. Require all new, remodeled, or rebuilt structures to meet current ignition resistance construction codes and establish and enforce reasonable and prudent standards that support retrofitting of existing structures in high fire threat areas.
- S-4.1 Fuel Management Programs. Support programs consistent with state law that require fuel management/modification within established defensible space boundaries and when strategic fuel modification is necessary outside of defensible space, balance fuel management needs to protect structures with the preservation of native vegetation and sensitive habitats.
- S-6.4 Fire Protection Services for Development. Require that new development demonstrate that fire services can be provided that meets the minimum travel times identified in Table S-1 (Travel Time Standards from Closest Fire Station).
- S-11.1 Land Use Location. Require that land uses involving the storage, transfer, or processing of hazardous materials be located and designed to minimize risk and comply with all applicable hazardous materials regulations.
- S-11.3 Hazards-Sensitive Uses. Require that land uses using hazardous materials be located and designed to ensure sensitive uses, such as schools, hospitals, day care

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centers, and residential neighborhoods, are protected. Similarly, avoid locating sensitive uses near established hazardous materials users or High Impact Industrial areas where incompatibilities would result.

City of Chula Vista General Plan

The City of Chula Vista General Plan (2005) establishes goals and objectives to provide guidance in the growth of the City. The following hazards and hazardous materials objectives were identified in the Land Use and Transportation Element and Environmental Element Chapters in City of Chula Vista General Plan (2005):

- LUT 6.8 Require that any land use that handles, generates, and/or transports hazardous substances will not negatively impact existing or future sensitive receptors/land uses, as defined by state and federal regulations.

- E 16.1 Implement brush management programs that are consistent with the Chula Vista MSCP Subarea Plan and the City’s Urban-Wildland Interface Code, within urban development and open space interface areas in order to reduce potential wildland fire hazards. Brush management guidelines within the MSCP Subarea Plan and the Urban-Wildland Interface Code shall include limits and measures to prevent increased risk of erosion.

4.8.3 Applicant Proposed Measures

SDG&E proposes to implement measures that would reduce environmental impacts. The following relevant APMs are considered part of the proposed project (Table 4.8-4). The significance of the impact, however, is first considered prior to application of the APM and a significance determination is made. The implementation of the APM is then considered as part of the project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC approval of the project, and SDG&E would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the project (refer to Section 9: Mitigation Monitoring and Reporting Plan of this Draft EIR), and the implementation of the measures would be monitored and documented in the same manner as mitigation measures.

Table 4.8-4 Applicant Proposed Measures for Hazards and Hazardous Materials Impacts

APM Number	Requirements
APM HAZ-1: Spill Prevention, Control, and Countermeasure Plan	A Spill Prevention, Control, and Countermeasure (SPCC) Plan will be prepared prior to project construction and that addresses response procedures in the event of any release or spill of hazardous materials during construction. The SPCC plan will establish procedures, methods, equipment requirements, and worker training to prevent spills or leaks from reaching waterways and leaving the site.
APM HAZ-2: Hazardous Materials Management	SDG&E will prepare and implement a Hazardous Materials Business Plans required by Chapter 6.95 of the State of California Health and Safety Code if the project exceeds the threshold quantities of hazardous materials and/or waste.

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APM Number	Requirements
APM HAZ-3: Wildland Fire Prevention and Fire Safety Practices	<p>Construction within "High" and "Very High" Fire Threat Zones (identified by the Fire and Resource Assessment Program (FRAP) maintained by CalFire) will be consistent with SDG&E's current design standards to improve service reliability in fire-prone areas during extreme weather conditions. SDG&E's current design standards include increasing conductor spacing to improve line clearances; installing steel poles to withstand extreme winds; installing self-supporting angle structures, which eliminate guying; and installing longer polymer insulators to minimize the potential of electrical faults caused by contamination, which will improve system reliability.</p> <p>SDG&E will adhere to its current operating protocol, Electric Standard Practice (ESP) 113.1, Wildland Fire Prevention and Fire Safety Standard Practice, which includes requirements for carrying emergency fire suppression equipment; conducting "tailgate meetings" that cover fire safety discussions, restricting smoking, and idling vehicles; and restricting construction during red flag warnings. The project will also comply with SDG&E's project-specific Construction Fire Plan. The Construction Fire Plan addresses the following fire risk reduction measures:</p> <ul style="list-style-type: none">• Training and briefing all personnel working on the project in fire prevention and suppression methods;• Conducting a fire prevention discussion at each morning's safety meeting;• Storage of prescribed fire tools and backpack pumps with water within 50 feet of work activities; and• Assigning personnel to conduct a "fire watch" or "fire patrol" to ensure that risk mitigation and fire preparedness measures are implemented, immediate detection of a fire, and to coordinate with emergency response personnel in the event of a fire. <p>Weather and fire danger will be monitored daily by company meteorologists and wildland fire specialists to provide timely and immediate communication of significant changes that could impact the project. No work will occur during times of high fire threat, and if conditions change after commencing construction, work will cease in periods of extreme fire danger, such as red flag warnings issued by the National Weather Service or other severe fire weather conditions as identified by SDG&E.</p>

4.8.4 Significance Criteria

The significance criteria are based on the CEQA checklist in Appendix G of the CEQA Guidelines (14 CCR 15000 *et seq.*) and include potential hazards associated with AC interference. Consistent with Appendix G of the CEQA Guidelines, hazards and hazardous materials impacts would be significant if the project would:

- a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through accidental release of a hazardous material through upset or accident conditions
- b. Create a significant hazard to workers or the public by causing excessive shock from AC interference with adjacent metallic pipelines
- c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school
- d. Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment

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- e. For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, or located within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project corridor
- f. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan
- g. 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

4.8.5 Environmental Impacts and Mitigation Measures

Approach to Impact Assessment

The impact analysis considers the potential effects to hazards and hazardous materials from activities associated with the construction, operation, and maintenance of the proposed project.

Hazard Identification

The PEA prepared by SDG&E, as well as relevant data responses, were reviewed to identify hazards that could potentially be created as a result of the project. This review included the hazardous materials that are proposed to be used for project construction and operation, and the location of project components with respect to existing hazardous materials sites, airports and airstrips, and fire hazard zones. Environmental database search results were reviewed to identify sites close to the project area that may be affected by hazardous materials releases.

AC Interference Modeling

SDG&E conducted a study to evaluate the AC electrical interference of the proposed 69-kV power line (TL 6965) with the 4-inch and 36-inch gas pipelines and the two SDCWA water pipelines which run parallel with the proposed power line along 2.15 miles of the transmission corridor (ARK 2014a, 2014b). The study modeled AC interference, electrical potentials, and touch voltages due to inductive and conductive coupling under steady-state, projected maximum peak load conditions, as well as under fault conditions. The CPUC evaluated the adequacy of the analysis and recommended design features included in the SDG&E study to ensure that the design features were comprehensive based on defensible data, and conformed to acceptable industry practices. The CPUC's review of the AC interference modeling focused on the following areas:

- General approach
- Use of appropriate industry standards
- Interferences analysis
- Impacts analysis
- Power grid operating scenarios analysis
- Analytical modeling
- Input parameters and calculations
- Recommended design features

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Impact Assessment

Table 4.8-5 provides a summary of the significance of potential hazards and hazardous materials impacts prior to application of APMs, after application of APMs and before implementation of mitigation measures, and after the implementation of mitigation measures.

Table 4.8-5 Summary of Potential Hazards and Hazardous Materials Impacts

Significance Criteria	Project Phase	Significance Prior to APMS	Significance After APMs and Before Mitigation	Significance After Mitigation
Impact Hazards-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through accidental release of a hazardous material through upset or accident conditions	Construction	Significant	Significant APM HAZ-1, APM HAZ-2, APM HYDRO-1, APM UTIL-1	Less than significant MM Hazards-1, MM Utilities-1
	Operation and Maintenance	Significant	Significant APM HAZ-2	Less than significant MM Biology-9
Impact Hazards-2: Potential to expose workers or the public to excessive shock from AC interference on adjacent metallic pipelines	Construction	No impact	No impact	No impact
	Operation and Maintenance	Less than significant	Less than significant	Less than significant
Impact Hazards-3: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	Construction	Significant	Less than significant APM AIR-3, APM HAZ-1, APM HAZ-2, APM HYDRO-1	Less than significant
	Operation and Maintenance	Significant	Significant APM HAZ-2	Less than significant MM Biology-9
Impact Hazards-4: Located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment	Construction	No impact	No impact	No impact
	Operation and Maintenance	No impact	No impact	No impact
Impact Hazards-5: Located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, or be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project corridor	Construction	Less than significant	Less than significant	Less than significant
	Operation and Maintenance	Less than significant	Less than significant	Less than significant

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Significance Criteria	Project Phase	Significance Prior to APMS	Significance After APMS and Before Mitigation	Significance After Mitigation
Impact Hazards-6: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Construction	Significant	Significant	Less than significant MM Traffic-1, MM Traffic-4
	Operation and Maintenance	Less than significant	Less than significant	Less than significant
Impact Hazards-7: Potential to 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	Significant	Significant APM HAZ-3	Less than significant MM Hazards-2
	Operation and Maintenance	Less than significant	Less than significant	Less than significant

Impact Hazards-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through accidental release of a hazardous material through upset or accident conditions (*Less than significant with mitigation*)

Construction

Project construction requires the use of hazardous materials including gasoline, diesel, hydraulic oils, lubricants, equipment coolants, and generated wastes that may include these materials. A list of hazardous materials that would be used during construction is presented in Table 4.8-6. These materials are considered hazardous because they are flammable and/or contain toxic compounds, such as volatile organic compounds (VOCs) and heavy metals. Construction vehicles and equipment contain materials such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous to humans and the environment.

The quantities of hazardous materials that would be used for standard vehicle and equipment operation would be small and the area affected by a release from the equipment would be limited in size. The fuel truck required for helicopter refueling and the trucks transporting transformer oil to the site would transport larger quantities of hazardous materials. The fuel truck for the helicopter and the mineral oil trucks for the transformers would be used for limited periods of time during the construction period (i.e., about 5 hours per day over a 4-day period for helicopters, and 24 hours per day over a 6- to 10-day period for transformer filling). A release, if it were to occur, would most likely result from an accidental spill or other unauthorized release during substation site grading, pole installation, transformer filling, or during conductor pulling, splicing, and tensioning. A hazardous materials release could also occur during equipment and vehicle servicing and refueling. Spilled or leaking hazardous materials would create a significant hazard to the public or the environment and would be a significant impact.

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Table 4.8-6 Hazardous Materials Typically Used for Construction

Hazardous Material	Hazardous Material
ABC fire extinguisher	Gasoline treatment
Acetylene gas	Hot stick cleaner (cloth treated with polydimethylsiloxane)
Air tool oil	Hydraulic fluid
Ammonium hydroxide	Insect killer
Antifreeze (ethylene glycol)	Insulating oil (inhibited, non-polychlorinated biphenyl [PCB])
Automatic transmission fluid	Lubricating grease
Battery acid (in vehicles and substation control shelter)	Mastic coating
Bottled oxygen	Methyl alcohol
Brake fluid	Motor oil
Canned spray paint	Paint thinner
Chain lubricant (contains methylene chloride)	Propane
Connector grease (penotax)	Puncture seal tire inflator
Contact cleaner 2000	Starter fluid
Diesel de-icer	Sulfur hexafluoride (within the circuit breakers in the substation)
Diesel fuel	Two-cycle oil (contains distillates and hydro-treated heavy paraffin)
Diesel fuel additive	Wasp and hornet spray (1,1,1-trichloroethene)
Eyeglass cleaner (contains methylene chloride)	WD-40
Gasoline	ZEP (safety solvent)

Source: SDG&E 2013b

SDG&E would implement APMs HAZ-1, HAZ-2, and HYDRO-1 to reduce the impact from spills or leaks of hazardous materials. APM HAZ-1 requires preparation and implementation of an SPCC Plan, the provisions of which require that all on-site personnel receive training to prevent spills or leaks from reaching waterways and leaving the site. APM HAZ-2 requires adherence to SDG&E's Management of Contaminated Equipment and Materials, Hazardous Materials Business Plan, and addresses hazardous materials use and hazardous waste generation. APM HYDRO-1 requires implementation of BMPs to ensure that hazardous materials are properly stored on site and that any accidental releases of hazardous materials would be properly controlled and quickly cleaned up. APMs HAZ-1, HAZ-2, and HYDRO-1 would reduce impacts from routine use, transport, and disposal of hazardous materials. Impacts would be less than significant and no mitigation is required.

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Gas pipelines are located within the transmission corridor. Gas pipeline damage or rupture could be caused by heavy equipment or vehicles traveling over the line or by ground-disturbing activities (e.g., grading, trenching, or augering foundation holes) that would occur during construction, which could result in the uncontrolled release of natural gas from a pipeline and/or cause a fire or explosion. Damage to pipelines, if it occurred, would be a significant impact. SDG&E would implement APM UTIL-1 to avoid damaging subsurface utilities and pipelines during construction (e.g., contact Underground Service Alert at least 48 hours prior to augering, digging, grading, or drilling). The APM UTIL-1 does not require investigation of underground utilities prior to augering or other below-grade construction. The 36-inch gas pipeline is located as close as 3.5 feet from the edge of the foundation of proposed new TSPs within the transmission corridor. Below-grade activities could cause damage or rupture to buried utilities resulting in a significant impact, even with the implementation of APM UTIL-1. Mitigation Measure Utilities-1 requires SDG&E to notify the appropriate utility companies of construction activities at least 30 days prior to construction. It also requires the project work area to be adjusted to avoid buried pipelines, if necessary. The proximity of the 36-inch gas pipeline presents a risk of damage to the pipeline if the gas pipeline company does not mark the pipeline location accurately. Mitigation Measure Hazards-1 requires SDG&E to uncover the pipeline in proximity to proposed TSP foundations to ensure that no foundation excavation work damages the pipeline. Mitigation Measures Utilities-1 and Hazards-1 would reduce impacts associated with damage or rupture to buried utilities. Impacts from a release of hazardous materials would be less than significant and no mitigation is required.

Operation and Maintenance

Proposed Substation

The substation would be unattended and operated remotely during the operational phase of the project. Routine maintenance at the substation would occur during six trips per year, and there would be a 1-week-long major maintenance inspection occurring annually. Emergency maintenance would occur on an as-needed basis.

Operation and maintenance activities generally would require use of similar hazardous materials as those used during construction (Table 4.8-6); however, the volume used would generally be much less. All hazardous materials used for operation and maintenance would be contained within the substation pad. The substation pad includes a concrete containment basin with a capacity of 11,000 gallons, which is greater than the volume of hazardous materials that could be potentially used during maintenance activities. Any leaked or spilled hazardous materials would be contained within the substation facility and would not impact the public or the environment. Spills during operation would be of very small volume and would not emit fumes that would be detectable outside of immediate area. Impacts from use, transport, and disposal of hazardous materials during facility operation and maintenance would be less than significant and no mitigation would be required.

Herbicides may be used during operation to control invasive weeds within the landscaped area around the substation pad. Herbicide drift (off-target contamination due to spray drift or runoff from plants or soil) would expose the public or environment to hazardous materials and result

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in a significant impact. Mitigation Measure Biology-9 specifies qualifications for herbicide application and restricts the timing of herbicide application to reduce herbicide drift. Impacts from herbicide use would be less than significant with mitigation.

Each of the two transformers would require a maximum of 5,500 gallons of oil. Concrete containment basins would provide oil containment for the entire substation facility and around each transformer, which would provide sufficient containment if an oil-containing structure were to rupture and release oil. Impacts would be less than significant due to on-site containment of hazardous materials within the oil containment basin. Impacts from a release of hazardous materials would be less than significant and no mitigation is required.

TL 6965

Aerial and ground inspections of TL 6965 would be performed in conjunction with inspections of existing lines within the transmission corridor. Operation and maintenance activities for the new power line would be similar in scope to current operation and maintenance activities for the existing power and transmission lines in the SDG&E ROW. The largest volume of hazardous materials that would be used during operation and maintenance of TL 6965 would consist of the fuel contained within vehicles that would be accessing the transmission corridor during inspections and maintenance activities. Maintenance activities may involve use of the hazardous materials identified in Table 4.8-6 during replacement or repair of parts on transmission line poles. Maintenance of the new power line could result in a spill of hazardous materials, resulting in a significant impact. APM HAZ-2 requires SDG&E to implement its Hazardous Materials Business Plan, which would include requirements for containment and management of hazardous materials and wastes. Impacts associated with maintenance would be reduced with implementation of APM HAZ-2. Impacts from leaks or spills of hazardous materials during power line inspections and maintenance activities would be less than significant. No mitigation would be required.

Herbicides may be used to prevent vegetation from re-establishing during the project operational period and to control invasive weeds in the transmission corridor. Herbicide drift would expose the public or environment to hazardous materials and result in a significant impact. Mitigation Measure Biology-9 specifies qualifications for herbicide applicators and restricts the timing of herbicide application to reduce herbicide drift. Impacts from herbicide use would be less than significant with mitigation.

AC interference effects, as discussed under Impact Hazards-2, can include accelerated pipeline corrosion, which in turn could result in loss of pipeline integrity and release of hazardous materials (i.e., natural gas) from adjacent buried gas pipelines. The AC design features proposed by SDG&E for the 4-inch and 36-inch gas pipelines would reduce the voltage densities on these pipelines. Voltage densities would be less than the design criteria for all pipelines in the corridor with use of the proposed AC design features. The power line would not cause corrosion of the adjacent buried gas pipelines with SDG&E's proposed design features. Impacts would be less than significant, and no mitigation is required.

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Mitigation Measures: Hazards-1, Utilities-1, and Biology-9

Mitigation Measure Hazards-1: SDG&E shall excavate (“pothole”) to the top of any buried utilities, including pipelines, that are located within 10 feet of a proposed excavation (i.e., pole foundation) to verify the location of the utility prior to initiating excavation work. Potholing work shall be performed using a non-destructive method (e.g., air vacuum extraction) that will not damage the pipeline once it is encountered. Potholing work shall be conducted under the oversight of a representative of the utility company. Potholing shall reveal the top of the pipeline only and shall not go any deeper than the top of the pipe, and shall not damage the pipe in any way. Two potholes shall be excavated at each associated foundation location so that the orientation of the pipeline can be verified. Potholes shall be backfilled with stockpiled soil once the location and orientation of the pipeline has been verified and marked. The utility company representative shall verify and approve that backfill and compaction of the potholes has been performed adequately. If the pipeline is located within the footprint of the proposed pole foundation, no pole foundation excavation work shall commence until SDG&E and CPUC have been notified and the pole location has been relocated sufficiently far away from the buried pipeline to avoid any impacts to the buried pipeline.

Significance after Mitigation: Less than significant.

Impact Hazards-2: Potential to expose workers or the public to excessive shock from AC interference on adjacent metallic pipelines (*Less than significant; no mitigation required*)

Construction

The proposed power line would not be electrified during project construction and would therefore pose no impact to workers or the public from AC interference. The existing design features that were integrated into the 36-inch gas pipeline design (SES 1995) currently reduce touch voltages, pipeline potentials, coating stress voltages, and isolating flange stress voltages to acceptable voltage levels. No impact from AC interference would occur.

Operation and Maintenance

The proposed TL 6965 power line would conduct power between Miguel Substation and Salt Creek Substation during project operation. There is the potential for inductive and conductive interference between TL 6965 and the existing 4-inch and 36-inch gas pipelines and the two SDCWA water pipelines located within the utility corridor between the proposed substation and SR-125.

The inductive and conductive interference of proposed TL 6965 on the 4-inch and 36-inch gas pipelines and SDCWA water pipelines were modeled using the maximum anticipated voltage for the proposed 69-kV line of 1,079 amps. Table 4.8-7 presents a summary of the maximum modeled steady-state voltage for each line in the transmission corridor. The steady-state touch

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Table 4.8-7 Induced Current Touch Voltages Under Steady-state Conditions

Pipeline	Steady-state Touch Voltage No Mitigation (volts)	Steady-state Touch Voltage with AC Design Features (volts)	Touch Voltage Design Limit (volts)
4-inch gas pipeline	<7	<3	15
36-inch gas pipeline	<12	<3	15
69-inch water pipeline	<1	–	15
72-inch water pipeline	<0.25	–	15

ARK 2014b

threshold is 15 volts.³ The results indicate that the potential interference in all pipelines would be less than the threshold under steady-state conditions. Impacts to workers and the public would be less than significant and no mitigation is required.

The maximum touch voltage was modeled at 25 aboveground pipeline appurtenances and 25 test locations under fault conditions, due to the proximity of these locations to the proposed power line alignment (ARK 2014a; ARK 2014b). Table 4.8-8 presents a summary of the maximum modeled touch voltage for each line in the transmission corridor under fault conditions. Modeled voltages under fault conditions are shown in Table 4.8-8. The table shows the voltages that would result without and with the AC design features (refer to Section 2.6.2) that SDG&E has proposed as part of the project.

The modeled touch voltage without AC design features exceeded the IEEE safety design limits at three test locations on the 36-inch gas pipeline, three test locations on the 4-inch gas pipeline, and at one structure (4-inch plug valve 3 location) on the 4-inch gas pipeline (ARK 2014a).

The touch voltage would not exceed safety standards at any location with implementation of the proposed AC features described in Section 2.6.2 (ground mats and gradient control wires). No mitigation would be required for the water pipelines because the maximum touch voltages would be less than the respective safety limits. The results indicate that the potential interference in all pipelines would be less than the threshold under fault conditions with use of the AC design features proposed as part of the project (gas pipelines only). The proposed project would therefore not expose workers or the public to excessive shock hazards. The impact would be less than significant, and no mitigation is required.

Mitigation Measures: None required.

³ The maximum acceptable touch voltage is 15 volts, according to a Canadian standard. There is no equivalent standard in the United States; however, the 15-volt standard is generally accepted throughout North America for structures that may be inadvertently touched by unprotected workers and the general public (SES 1995).

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Table 4.8-8 Induced Current Touch Voltages under Fault Conditions

Pipeline	Maximum Touch Voltage without AC Design Features (volts)	Maximum Touch Voltage with AC Design Features (volts)	IEEE Standard 80 Safety Limit ¹ (volts)
4-inch gas pipeline	1,542.43	476.55	662.10
36-inch gas pipeline	525.09	181.50	303.80
69-inch water pipeline	260.28	N/A	341.90
72-inch water pipeline	220.30	N/A	313.80

Note:

¹ ANSI/IEEE Standard 80 specifies safety criteria for determining maximum acceptable touch and step voltages during fault conditions. Special precautions must be taken by maintenance personnel when excavating inaccessible portions of the pipeline to ensure safety in case of a fault condition. The standards vary depending on soil resistivity along the length of the pipeline (see Table 4.8-2).

N/A: Not applicable; indicates no design features were proposed because the touch voltages are below the thresholds

ARK 2014a

Impact Hazards-3: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school (Less than significant with mitigation)

Construction

Emissions

Six schools are located within 0.25 mile of the project (see Table 4.8-1). The closest school is Eastlake High School, which is located less than 300 feet northeast of the power line corridor and Eastlake Parkway staging yard. Four of these schools are located within 0.25 mile of the transmission corridor. The High Tech Schools complex is located within 0.25 mile of the proposed substation.

Project construction equipment emissions would include diesel particulate matter (PM_{2.5}), a toxic air contaminant (TAC) that would be emitted within 0.25 mile of the schools. Construction could involve the use of coatings that contain VOCs, another TAC. The emission of VOCs or PM_{2.5} at concentrations that exceed air quality standards would be a significant impact. Emissions of VOCs and PM_{2.5} would exceed these standards and result in a significant impact (refer to Section 4.3: Air Quality).

PM_{2.5} emissions would originate primarily at the substation parcel. At a distance of 700 feet, the High Tech Schools complex is within 0.25 mile of the substation site, but emissions would dissipate prior to reaching the school. Eastlake High School and the other schools are located within 0.25 mile of the power line alignment, but work would occur for only a few days at each pole site within the alignment, substantially limiting the emissions exposure to these schools. These schools would not be exposed to substantial pollutant concentrations during the limited work periods at any one location because of this short duration of construction. A VOC control measure would be required under the RAQS, as discussed in Section 4.3: Air Quality. Non-

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adherence to the VOC control measure would be a significant impact. SDG&E proposes to implement APM AIR-3, which requires adherence to the architectural coating standard in the RAQS and would further reduce VOC emissions. Project construction would therefore not conflict with the RAQS and would have no impact after implementation of APM AIR-3. Impacts would be less than significant and no mitigation is required.

Materials

Project construction would require the use of motorized heavy equipment, including vehicles that use gasoline, diesel, antifreeze, and lubricants. The materials listed in Table 4.8-6 would be used throughout the project area and would be temporarily stored during construction at the proposed substation site and at the various project staging yards. The helicopter landing zone at the Hunte Parkway staging yard, where refueling would also occur, would be within 0.25 mile of the High Tech Schools complex. Transformer filling with mineral oil, a hazardous material, would occur at the substation site, which is also within 0.25 mile of the High Tech Schools complex.

With the exception of helicopter fuel, which would be transferred to the helicopter by a large-capacity fuel truck, and the transformer mineral oil, which would total up to 5,500 gallons of oil per transformer (two total), the quantities of hazardous materials that could be spilled would be small, which would limit the potential for the material to be transported to a school site because small quantities would be quickly absorbed into soil and would cease to have an effect. However, large-quantity hazardous materials spills (i.e., helicopter fuel and mineral oil) and subsequent transport of spilled materials by wind or water to a school would be a significant impact.

APM HAZ-1 would reduce impacts by requiring that SDG&E prepare and implement an SPCC Plan that would include worker training and hazardous materials control processes to prevent hazardous materials from entering waterways. APM HAZ-2 would reduce potential impacts to less-than-significant levels through adherence to SDG&E's Management of Contaminated Equipment and Materials, Hazardous Materials Business Plan, which includes procedures and protocols for control and management of hazardous materials and wastes. APM HYDRO-1 requires use of erosion control BMPs to manage, clean up, and control of hazardous substances (including spills) in compliance with SWRCB Order 2009-0009-DWQ. Implementation of these APMs would prevent exposure of nearby schools to hazardous materials. Impacts would be less than significant and no mitigation is required.

Waste

All waste would be disposed of in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste disposal, and would be transported off-site to a licensed landfill. No impacts to schools located within 0.25 mile of the project would occur. There would be no impact.

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Operation and Maintenance

Proposed Substation and TL 6965 Inspections

The proposed substation and portions of the transmission corridor are within 0.25 mile of a school. During the operational phase the substation and transmission line would be unattended and operated remotely. Routine maintenance inspections at the substation would occur during six trips per year, with a 1-week-long major maintenance inspection occurring once annually. Aerial and ground inspections of TL 6965 would be performed in conjunction with inspections of existing lines within the transmission corridor and would not increase the risk of release of hazardous emissions or involve the handling of hazardous or acutely hazardous materials, substances, or wastes. Impacts would be less than significant, and no mitigation is required.

Proposed Substation

The substation transformers would hold approximately 11,000 gallons of mineral oil during substation operation. Emergency maintenance on the substation would occur on an as-needed basis and all hazardous materials used for emergency maintenance would be contained within the substation pad. The substation pad includes a concrete containment basin with a capacity of 11,000 gallons, which is greater than the volume of hazardous materials including mineral oil that could be potentially used during maintenance activities. Any leaked or spilled hazardous materials would be contained within the substation facility and would not spread or transported off site to any nearby schools. Impacts from substation operation and maintenance would be less than significant, and no mitigation is required.

TL 6965

No hazardous materials are required for TL 6965 operation. TL 6965 maintenance activities have the potential to use some of the hazardous materials identified in Table 4.8-6. Maintenance of the new power line could result in a spill of hazardous materials that could be transported to nearby schools if not properly contained, resulting in a significant impact. In the unlikely event that a leak or spill occurs, it would be minimal in volume and would affect a very limited area because only a small amount of hazardous material would be present in any one vehicle or piece of equipment; however the release of hazardous materials would be a significant impact if not properly contained and treated. APM HAZ-2 requires SDG&E to implement its Hazardous Materials Business Plan, which includes procedures for management of hazardous materials, including wastes. Impacts associated with project maintenance would be reduced with APM HAZ-2. Impacts would be less than significant, and no mitigation is required.

Proposed Substation and TL 6965 Herbicide Use

Herbicides may be used to prevent vegetation that is cleared during vegetation management activities from re-establishing during the project operational period and to control invasive weeds in the transmission corridor. Herbicide drift could result in the transport of herbicides to schools within 0.25 mile of the substation or transmission line and result in a significant impact. Mitigation Measure Biology-9 specifies qualifications for herbicide applicators and restricts the timing of herbicide application to reduce herbicide drift. Impacts from herbicide use would be less than significant with mitigation.

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Mitigation Measure: Biology-9

Significance after Mitigation: Less than significant.

Impact Hazards-4: Located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment (*No impact*)

The project would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. There are no open DTSC or RWQCB cases within 0.25 mile of the proposed project corridor and substation site (DTSC 2013; SWRCB 2013). The closest open case to the project site is a 7-11 property, classified as a leaking underground storage tank site that is under RWQCB oversight, located more than 2 miles northwest of Miguel Substation. Three sites were identified within 0.25 mile of the project area (refer to Table 4.8-1), all of which require no further action and are now closed. These sites would not be disturbed during project construction due to their distance from the project area. There would be no impact.

Mitigation Measures: None required.

Impact Hazards-5: Located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, or be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project corridor (*Less than significant*)

The project is not located within an airport land use plan, within 2 miles of a public airport or public use airport, or within the vicinity of a private airstrip. The project may include the use of helicopters for transporting materials. These helicopters may fly within approximately 1,500 feet of residences, which requires compliance with federal requirements related to safety. As discussed in Section 4.14: Transportation and Traffic, SDG&E would comply with all federal requirements. The project would also introduce new power poles and aboveground power lines to the area. These poles would not be located within an airport land use plan or within 2 miles of a public airport. The proposed power poles would also be shorter than the adjacent transmission towers; therefore, the proposed power line would not present a hazard to air traffic and public safety. Safety hazards from air traffic would be less than significant; no mitigation is required.

Mitigation Measures: None required.

Impact Hazards-6: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan (*Less than significant with mitigation*)

Construction

Temporary road or lane closures may be necessary during project construction to ensure safety of the public and workers. Traffic on Hunte Parkway by the substation site may be periodically restricted to one way to allow for the transport of materials to and from the substation site and

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for installation of the underground distribution line in Hunte Parkway. Construction activities would not result in full road closure except for temporary closure of SR-125. Temporary road or lane closures could impair implementation of an emergency response plan or evacuation plan, or disrupt emergency vehicle traffic and access resulting in a significant impact.

Mitigation Measure Traffic-1 requires closure of SR-125 to occur during off-peak, non-daytime hours, from 10 PM to 5 AM, and for signage to be posted prior to the closure to alert drivers. Mitigation Measure Traffic-4 would be implemented to reduce impacts from temporary road closures on project roadways by requiring notice to emergency services. Notice would allow emergency services agencies to plan for the road closures. Project construction would not impair implementation of or physically interfere with an adopted emergency response or evacuation plan with use of Mitigation Measure Traffic-4. Impacts to emergency access in the project area would be less than significant with mitigation.

Operation and Maintenance

During the operational phase, the substation and transmission line would be unattended and operated remotely. Roadway access could be temporarily blocked for emergency access in the event of a storm downing a power line along a roadway. SDG&E would promptly respond to the area of the downed line and repair the line in such a scenario. SDG&E would follow standard practices that are used for all power lines, including those currently existing in the transmission corridor. Existing lines are present within the transmission corridor and the proposed power line would not increase the potential for road closure in response to a downed power line. The impact would be less than significant.

Mitigation Measures: Traffic-1 and Traffic-4

Significance after Mitigation: Less than significant.

Impact Hazards-7: Potential to 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 (*Less than significant with mitigation*)

Construction

The majority of the transmission corridor is located on lands designated by CalFire as moderate, little, or no threat for fire hazard. Both the proposed substation and Miguel Substation have high and very high fire hazard ratings (Figure 4.8-1). Portions of the project area are located within the urban-wildland interface fire area. Project construction would generally be restricted to areas that have been cleared of vegetation. Vegetation clearance within all existing easements would meet all state and CPUC clearance requirements (i.e., CPUC GO 95). Sufficient fire stations are located in the project vicinity that would be available to service the area in the event of a fire (see Section 4.12: Public Services). Vehicles and equipment would primarily use existing roadways to access work areas, which would be cleared of brush, as necessary, to minimize fire hazards. New access ways would be cleared of vegetation prior to construction, and vegetation removal may occur along overland access routes, as necessary, for fire prevention purposes. These practices would reduce the potential for a fire; however, equipment and vehicles used

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during construction or worker behavior such as smoking and disposing of cigarettes or parking vehicles on dry vegetation could create sparks and ignite a fire. This would be a significant impact. The project includes APM HAZ-3, which includes several provisions to reduce risk of fire, including restrictions on smoking and vehicle idling, use of fire patrols, and adherence to SDG&E's site-specific Construction Fire Plan. APM HAZ-3 also prohibits work during times of high fire threat. The project vehicles, equipment, and workers could potentially cause a wildfire to start even with implementation of APM HAZ-3, and this would be a significant impact. Mitigation Measure Hazards-2 requires a water truck to be available for fire suppression during construction, and also requires coordination with CalFire regarding use of other fire prevention equipment. Impacts from wildland fires would be less than significant with mitigation.

Although unlikely, it is possible that the conductor could fall during installation; however, the conductor would not be energized and there would be no energized lines within the TL 6965 alignment that the falling conductor could make contact with. A falling conductor would therefore not result in a fire hazard within or near the transmission corridor. There would be no impact to wildfires from a falling conductor.

Operation and Maintenance

During the operational phase the substation and power line would be unattended and operated remotely. Routine inspection at the substation would occur during six trips per year, with a 1-week-long major maintenance inspection occurring once annually. An electrical short could result in a fire at the substation; however, the substation pad would be graveled and the pad would be surrounded by a 10- to 12-foot-tall masonry wall, which would contain a fire until such time that it can be addressed by SDG&E and local fire personnel. Aerial and ground inspections of TL 6965 would be performed in conjunction with inspections of existing lines within the transmission corridor and would not increase the potential for wildland fire generation that could expose people or structures to a significant risk of loss, injury, or death. Maintenance activities for the new power line would be similar in scope to current maintenance activities for the existing power lines in the transmission corridor. Vehicles used to access TL 6965 for maintenance activities would use existing and new unvegetated access routes, which would reduce the potential for ignition of dry vegetation during vehicle trips. Impacts from maintenance would be less than significant and no mitigation is required

Electrical lines can start a fire if an object (e.g., tree limb or kite) simultaneously contacts the power line conductors and a second object, such as the ground or a portion of a supporting pole; if two conductors make contact; or if dust or dirt builds up on insulators such that a conductive path to a portion of the pole is created. SDG&E protocols for fire prevention during power line operation would be implemented. Work spaces around poles would be cleared of shrubs and other obstructions for inspection and maintenance purposes, consistent with SDG&E's current vegetation management practices, CPUC GO 95, and PRC Sections 4292 and 4293. Vegetation around poles fitted with specific non-exempt hardware (e.g., fuses, switches) would be cleared to a radius of 10 feet from the base of the pole. Vegetation around poles with external grounds would be cleared to a radius of 5 feet from the pole base. The risk of wildfire from the operation of an additional power line in the transmission corridor would not increase

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measurably from existing conditions with SDG&E implementation of standard operational restrictions to reduce wildfire risk. Impacts from operation of the power line would be less than significant.

Arcing (sparking) between conductor phases is more likely than between a conductor and the ground. Arcing could potentially ignite nearby vegetation and cause a wildfire. System component failures and accidents during maintenance activities can result in line faults that result in arcing on power lines. Power lines are potentially subject to conductor-to-conductor contact, which can occur when very high winds force two conductors on a single pole to oscillate in such a way that they contact one another. This contact can result in arcing. It is rare for power line structures to blow over in high winds; however, TL 6965 would be designed to withstand high winds. If a power line structure were to be blown over, the protection system would shut off power flow in a fraction of a second. The risk of ignition and damage from wildfires would therefore be very low from downing of a power line structure. Vegetation clearing requirements discussed above would reduce the risk of wildfire ignition if arcing or downing of a power line structure occurs. SDG&E's proposed annual inspections would allow for identification of corrosion, equipment misalignment, loose fittings, and other common mechanical problems that could contribute to arcing. The proposed project would not measurably increase the risk of arcing and associated wildfires in the transmission corridor because there are three existing electrical lines in the corridor with similar impacts. Operational impacts of TL 6965 would be less than significant and no mitigation is required.

Mitigation Measure: Hazards-2

Mitigation Measure Hazards-2. SDG&E and/or its contractors shall have water tanks and/or water trucks sited/available at active project sites for fire protection during project construction. All construction vehicles shall have fire suppression equipment. Construction personnel shall be required to park vehicles away from dry vegetation. Prior to construction, SDG&E and its contractors shall contact and coordinate with CalFire and applicable local fire departments (i.e., City of Chula Vista and San Diego County) to determine the appropriate amounts of fire equipment to be carried on the vehicles and appropriate locations for the water tanks if water trucks are not used. SDG&E shall submit verification of its consultation with CalFire and the local fire departments to CPUC.

Significance after Mitigation: Less than significant.

4.8.6 Project Alternatives

Table 4.8-9 provides a summary of the potential impacts associated with hazards and hazardous materials from the project alternatives.

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Table 4.8-9 Summary of Impacts from Alternatives by Significance Criteria

Significance Criteria	No Project Alternative	Alternative 1	Alternative 2	Alternative 3
Impact Hazards-1: Potential to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials, or through accidental release of a hazardous material through upset or accident conditions	Less than significant	Less than significant APM HAZ-1, APM HAZ-2, APM HYDRO-1	Less than significant APM HAZ-1, APM HAZ-2, APM HYDRO-1	Less than significant with mitigation APM HAZ-1, APM HAZ-2, APM HYDRO-1 MM Utilities-1, MM Hazards-1
Impact Hazards-2: Potential to expose workers or the public to excessive shock from AC interference on adjacent metallic pipelines	No impact	No impact	No impact	No impact
Impact Hazards-3: Potential to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school	Less than significant	Less than significant with mitigation APM AIR-3, APM HAZ-1, APM HAZ-2, APM HYDRO-1 MM Biology-9	Less than significant with mitigation APM AIR-3, APM HAZ-1, APM HAZ-2, APM HYDRO-1 MM Biology-9	Less than significant with mitigation APM HAZ-1, APM HAZ-2, APM HYDRO-1 MM Biology-9
Impact Hazards-4: Located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, create a significant hazard to the public or the environment	No impact	No impact	No impact	No impact
Impact Hazards-5: Located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, or be located within the vicinity of a private airstrip, and result in a safety hazard for people residing or working in the project corridor	No impact	No impact	No impact	No impact
Impact Hazards-6: Potential to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan	Less than significant	Less than significant	Less than significant	Less than significant with mitigation MM Traffic-4
Impact Hazards-7: Potential to 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	No impact	Less than significant with mitigation APM HAZ-3 MM Hazards-2	Less than significant with mitigation APM HAZ-3 MM Hazards-2	Less than significant with mitigation APM HAZ-3 MM Hazards-2

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Alternative 1: 230/12-kV Substation and 230-kV Loop-in

Environmental Setting

This alternative would involve construction of a 230/12-kV substation within the SDG&E fee-owned parcel south of Hunte Parkway. The hazards and hazardous materials conditions for the proposed substation and Hunte Parkway and OTC staging yards described in Section 4.8.1 would apply to this alternative.

Impacts and Mitigation Measures

230/12-kV Substation. Impacts from Alternative 1, construction of a 230/12-kV substation south of Hunte Parkway, would be similar to the impacts from construction of the proposed substation. The 230/12-kV substation would be larger than the proposed substation, and would have a longer construction timeframe of approximately 24 to 30 months compared to the estimated 18 to 24 months for the proposed project. The hazardous materials in this alternative would largely be the same as the proposed project, but the longer construction timeframe would result in the use of hazardous materials in greater volume and for a greater period of time at the substation site. The use and transport of hazardous materials would result in significant impacts if the hazardous materials spilled or leaked during construction. These impacts would be less than significant with application of APM HAZ-1, APM HAZ-2, and APM HYDRO-1, which require worker training and clean-up of any leaking or spilled hazardous materials. Impacts would be less than significant and no mitigation is required.

Hazards and hazardous materials impacts from operation and maintenance of Alternative 1 would be similar to those for the proposed substation. Both the proposed project and Alternative 1 could cause an increase in exposure of the public or the environment to hazards or hazardous materials as a result of herbicide drift. The impact from operation and maintenance of Alternative 1 would be less than significant with implementation of Mitigation Measure Biology-9.

Alternative 1 requires the use of hazardous materials within 0.25 mile of one school, the High Tech Schools complex; the other five schools near the proposed project would not be within 0.25 mile of the Alternative 1 project area. The High Tech Schools complex would be subject to the same impacts from hazardous emissions as the proposed project. APMs AIR-3, HAZ-1, HAZ-2, and HYDRO-1 would reduce impacts from construction of the 230/12-kV substation within 0.25 mile of a school, as described in Section 4.8.5. Impacts would be less than significant and no mitigation is required.

Alternative 1 would require lane closures on Hunte Parkway during distribution line construction. Emergency response vehicles would be able to travel around any temporary lane closures and the impact would not be significant. Impacts would be less than significant and no mitigation is required.

The extended period of construction at the substation site (about 6 months longer) relative to the proposed project would increase the potential for wildfires in this area because workers would be present in the area and activities that could start a wildfire would be conducted over a

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longer time period. APM HAZ-3 would reduce the impact by restricting worker smoking and requiring fire patrols. Given the long duration of construction and high fire risk in the vicinity of the substation, construction would still result in a significant impact to fire hazards even with APM HAZ-3. Mitigation Measure Hazards-2 would reduce this impact by requiring fire suppression equipment and water tanks. Impacts would be less than significant with mitigation.

Alternative 1 is not located in an area with an open hazardous material site or an airport land use plan. There would be no impact from hazardous material sites or airports.

No Power Line. Alternative 1 would not include modifications to Miguel Substation or construction of a new power line. Hazards and hazardous materials impacts from construction of the proposed 69-kV power line, including use of helicopters and Eastlake and Miguel staging yards, would not occur. Potential operational impacts related to AC interference or wildfire impacts related to power line arcing would be avoided because this alternative would not involve construction of a new aboveground power line parallel to the existing gas and water pipelines between SR-125 and Hunte Parkway. Alternative 1 avoids the potential for release of natural gas from damage or rupture of the fuel pipelines in the transmission corridor because the alternative would not be constructed in proximity to gas pipelines. Work areas along the transmission corridor and within the Eastlake and Miguel Substation staging yards would not be used for Alternative 1. Alternative 1 would eliminate the effects related to the potential for hazardous emissions, effects to schools, and potential for wildfires along the transmission corridor.

Alternative 2: 69/12-kV Substation and Generation at Border and Larkspur Electric Generating Facilities

Environmental Setting

Alternative 2 would involve construction of a substation, distribution lines, and TL 6910 loop-in in the same manner as the proposed project. The hazards and hazardous materials conditions for the proposed substation and Hunte Parkway and OTC staging yards described in Section 4.8.1 would apply to this alternative.

Impacts and Mitigation Measures

Alternative 2 does not include construction of a new power line and thereby avoids hazards and hazardous materials impacts resulting from construction of the proposed TL 6965 power line, including use of helicopters and use of the Eastlake and Miguel Substation staging yards. Alternative 2 avoids the potential for release of natural gas from damage or rupture of the fuel pipelines in the transmission corridor because the alternative would not be constructed in proximity to gas pipelines. Potential operational impacts related to AC interference and wildfire hazards from power line arcing would be avoided because this alternative does not include a new overhead power line.

69/12-kV Substation. Similar to the proposed project, Alternative 2 includes construction of a 69/12-kV substation, 12-kV distribution circuits and loop-in of TL 6910. Alternative 2 has the same potential for impacts to hazards and hazardous materials as the proposed project from

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construction of these project elements. Alternative 2 avoids all hazards and hazardous materials impacts associated with construction of TL 6965 and Miguel Substation modifications.

Alternative 2 includes the use and transport of hazardous materials, use of hazardous materials within 0.25 mile of a school, and increased fire risk from construction. These impacts are potentially significant. The impacts from Alternative 2 construction would be reduced through implementation of APMs HAZ-1, HAZ-2, and HYDRO-1, which require proper containment and clean-up of any hazardous material spills, and HAZ-3, which specifies restrictions to reduce wildfire risk. Potential impacts to wildfire risk would be significant after implementation of these APMs. Mitigation Measures Hazards-2 requires use of fire suppression techniques, as described in Section 4.8.5. Impacts from construction of Alternative 2 would be less than significant with mitigation.

Hazards and hazardous materials impacts from operation and maintenance of Alternative 2 would be similar to those for the proposed project substation. Both the proposed project and Alternative 2 could cause a substantial increase in exposure of the public or the environment to hazards or hazardous materials as a result of herbicide drift. The impact from operation and maintenance of Alternative 2 would be less than significant with implementation of Mitigation Measure Biology-9.

Alternative 2 is not located in an area with an open hazardous material site or an airport land use plan. There would be no impact from hazardous material sites or airports.

Power Generation at Border and Larkspur. Power generation at Border and Larkspur electric generating facilities would not result in hazards or hazardous materials impacts because the electric generating facilities are part of the baseline conditions; they currently exist and currently provide power to SDG&E. There would be no increased impacts to hazards or hazardous materials from use of these resources.

Alternative 3: 69/12-kV Substation and Underground 69-kV Power Line within Public ROW

Environmental Setting

Alternative 3 would involve construction of a substation, distribution lines, and TL 6910 loop-in in the same manner as the proposed project. The existing hazards and hazardous materials conditions for the proposed substation, Miguel Substation, and the Miguel Substation, Hunte Parkway, and OTC staging yards, described in Section 4.8.1, would apply to this alternative. This alternative also involves construction of a 69-kV underground power line within public ROW along Hunte Parkway, Proctor Valley Road, and Mountain Miguel Road. The proposed 69-kV line would be overhead within the Miguel Substation only and would be installed in the same configuration as the proposed project within the Miguel Substation. The underground power line route would be 1 mile longer than the power line route selected for the proposed project.

Two schools that are within 0.25 mile of the proposed project, Eastlake High School and Olympic View Elementary School, would not be located within 0.25 mile of the Alternative 3 alignment and therefore would not be affected by Alternative 3. Four schools that are within

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0.25 mile of the proposed project, Camarena Elementary School, Marshall Elementary Schools, Liberty Elementary School, and the High Tech Schools complex, would also be located within 0.25 mile of Alternative 3. Three additional schools would be located within 0.25 mile of the Alternative 3 alignment and could be affected by the proposed project including:

1. Eastlake Middle School, located approximately 450 feet east of the Alternative 3 underground power line alignment within Hunte Parkway
2. Arroyo Vista Charter School, located approximately 100 feet east of the Alternative 3 underground power line alignment within Hunte Parkway
3. Salt Creek Elementary School, located approximately 70 feet southeast of the Alternative 3 underground power line alignment within Hunte Parkway

No open hazardous materials sites, airports, or airport land use plans would be located within or near the underground alignment.

Impacts and Mitigation Measures

Alternative 3 would result in the same hazards and hazardous materials impacts as construction and operation of the proposed substation. The impacts resulting from construction and operation of the power line would be avoided in this alternative because it would not be constructed. The construction-related hazards and hazardous materials impacts of Alternative 3 would be greater than those of the proposed project in areas such as emergency access and less than those of the proposed project in areas such as AC interference and wildfire potential. Similar to the proposed project, construction of Alternative 3 would necessitate lane and potentially road closures, which could result in significant impacts to emergency access and evacuation. Lane and road closures and detours would be required along Mountain Miguel Road, Proctor Valley Road, and Hunte Parkway for construction of the underground power line.

69/12-kV Substation. Hazards and hazardous materials impacts from construction of the 69/12-kV substation would be the same as the impacts from construction of the proposed substation. Impacts related to hazardous material use and transport, emergency response, and wildfire risks would be significant prior to application of APMs. The impacts from use of hazardous materials during substation construction would be through implementation of APMs HAZ-1, HAZ-2, and HYDRO-1. Impacts from wildfire risk would be reduced by HAZ-3. Impacts to wildfire risk would be significant after APMs. Mitigation Measure Hazards-2 would reduce wildfire impacts, as described in Section 4.8.5. Impacts would be less than significant with mitigation.

Both the proposed project and Alternative 3 could cause a substantial increase in exposure of the public or the environment to hazards or hazardous materials as a result of herbicide drift at the substation. The impact from operation and maintenance of Alternative 3 would be less than significant with implementation of Mitigation Measure Biology-9. Impacts would be less than significant with mitigation.

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69-kV Underground Power Line. No open hazardous materials sites are located near the proposed underground alignment and, therefore, the potential to encounter contaminated soil or groundwater during construction of the underground power line would be very low. Hazardous materials including diesel fuel, hydraulic fluids, and other materials required for operation of heavy equipment would be used during construction of the underground power line. Hazardous materials would be used within 0.25 mile of seven schools (High Tech schools complex, Marshall Elementary, Liberty Elementary, Camarena Elementary, Eastlake Middle, Arroyo Vista Charter, and Salt Creek Elementary) during project construction, resulting in a significant impact. APMs HAZ-1, HAZ-2, and HYDRO-1, require worker training and hazardous materials containment and clean-up. Impacts would be less than significant and no mitigation is required.

Alternative 3 would not involve the use of helicopters; therefore, there would be no potential hazard associated with helicopters or helicopter fueling, including helicopter fueling within 0.25 mile of a school.

Construction of the 69-kV underground power line in public roadways would necessitate temporary partial or full road closures and temporary road crossing and intersection closures during open trench construction of the duct package and vaults. Temporary road closures and crossing closures would occur on approximately 5 miles of roads including the following:

- 0.6 miles of Mountain Miguel Road from Miguel Substation to Proctor Valley Road
- 1.0 mile of Proctor Valley Road from Mountain Miguel Road to Hunte Parkway
- 3.5 miles of Hunte Parkway from Proctor Valley Road to the substation

Vault construction would require a work area larger than a single lane and may require closure of one side of the road or full road closure on Mountain Miguel Road. Underground construction would take approximately 10 to 13 months to complete. The lane closures, potential road closures, and detours would result in general traffic delays and emergency access delays on Mountain Miguel Road, Proctor Valley Road, and Hunte Parkway. These impacts would be significant and greater than the proposed project due to the extended length (duration and distance) of lane closures. Mitigation Measure Traffic-4 would be implemented to require notification of emergency personnel and minimize the potential for impacts to emergency response and evacuation. Impacts would be less than significant with mitigation.

Alternative 3 would avoid potential impacts related to potential damage or rupture of the buried gas pipeline and associated release of natural gas. Alternative 3 would also avoid the potential AC interference impacts to buried gas pipelines because this alternative would not involve construction of a new overhead power line parallel to the existing gas and water pipelines. The buried power line would be constructed within a concrete duct bank, which would reduce potential for AC interference with pipelines in the road.

Hazards and hazardous materials impacts from operation and maintenance of Alternative 3 would be less than those of the proposed project. Maintenance of the underground power line could require lane closures to access the buried power line within the roadway. These lane

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closures would typically be short in duration and would not have a significant impact on emergency access. SDG&E would also implement its standard practices for traffic control associated with maintenance of underground power and distribution lines. Operational impacts on emergency access would be greater than the proposed project, but less than significant.

The power line would be installed underground, and there would therefore be no potential for wildfire from power line arcing or a downed power line. Operation and maintenance impacts to wildfire would be less than significant and less than the proposed overhead power line.

No open hazardous materials sites, airports, or airport land use plans would be located within or near the underground alignment. There would be no impact.

No Project Alternative

Under the No Project Alternative, SDG&E would meet the energy needs of the southeast Chula Vista area by adding two additional transformer banks at the Proctor Valley Substation and installing additional distribution circuits in the Otay Ranch area. None of the facilities associated with the proposed project or alternatives evaluated in this Draft EIR would be constructed. Therefore, none of the impacts associated with hazards and hazardous materials described in this section would occur.

The two additional transformer banks at Proctor Valley Substation have been approved and would be constructed whether or not the project is approved. Construction of these transformer banks would therefore have no impact on hazards or hazardous materials. The construction of additional distribution circuits would involve the use of hazardous materials for construction equipment and the temporary closures of area roads. These impacts would be less than significant with SDG&E's standard operating procedures for hazardous material response and traffic management. Impacts to hazards and hazardous materials from the No Project Alternative would be less than significant.