3. Applicable Laws, Regulations, and Standards

Geologic resources and geotechnical hazards are governed primarily by local jurisdictions. The conservation elements and seismic safety elements of city and county general plans contain policies for the protection of geologic features and avoidance of hazards, but do not specifically address transmission line construction projects.

The two major environmental statutes that guide the design and construction of new transmission lines are NEPA and CEQA. These statutes set forth a specific process of environmental impact analysis and public review. In addition, the project owner must comply with several additional federal, state and local applicable statutes, regulations and policies. Relevant, and potentially relevant, statutes, regulations and policies are discussed below.

3.1 Federal

3.1.1 Geology and Mineral Resources

USDA Forest Service

Regulations promulgated under 36 CFR 228 state that each District Ranger has jurisdiction over prospecting and mining operations on Forest Service lands, including permitting, approval of operation plans, and periodic inspection of mining facilities. It is the purpose of the regulations to set forth rules and procedures through which use of the surface of National Forest System lands in connection with operations authorized by the United States mining laws (30 U.S.C. 21–54), which confer a statutory right to enter upon the public lands to search for minerals, shall be conducted so as to minimize adverse environmental impacts on National Forest System surface resources.

Forest Service Manual (FSM) 2800 of the National Forest Service provides policy, management objectives, and regulations for Minerals and Geologic Resources. FSM 2800 consists of several chapters, each providing policy and regulation for a different aspect of mineral or geologic resource management, as follows: 2810 - Mining Claims; 2820 - Mineral Leases, Permits, and Licenses; 2830 - Mineral Reservations and Rights Outstanding; 2840 – Reclamation; 2850 - Mineral Materials; 2860 - Forest Service Authorized Prospecting and Minerals Collecting; and 2880 - Geologic Resources, Hazards, and Services.

Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations"

The Institute of Electrical and Electronics Engineers (IEEE) 693 "Recommended Practices for Seismic Design of Substations" was developed by the Substations Committee of the IEEE Power Engineering Society, and approved by the American National Standards Institute and the IEEE-SA Standards Board. This document provides seismic design recommendations for substations and equipment consisting of seismic criteria, qualification methods and levels, structural capacities, performance requirements for equipment operation, installation methods, and documentation. This recommended practice emphasizes the qualification of electrical equipment.

IEEE 693 is intended to establish standard methods of providing and validating the seismic withstand capability of electrical substation equipment. However, the seismic recommendations for foundation

design should comply with the appropriate current building code. IEEE 693 provides detailed test and analysis methods for each type of major equipment or component found in electrical substations. This recommended practice is intended to assist the substation user or operator in providing substation equipment that will have a high probability of withstanding seismic events to predefined ground acceleration levels. It establishes standard methods of verifying seismic withstand capability, which gives the substation designer the ability to select equipment from various manufacturers, knowing that the seismic withstand rating of each manufacturer's equipment is an equivalent measure. This recommended practice should be used in all areas that may experience earthquakes.

Environmental Protection Agency – Clean Water Act

Stormwater runoff from construction activities can have a significant impact on water quality. As stormwater flows over a construction site, it picks up pollutants like sediment, debris, and chemicals. Polluted stormwater runoff can harm or kill fish and other wildlife. Sedimentation can destroy aquatic habitat and high volumes of runoff can cause stream bank erosion. Under the Clean Water Act, the National Pollutant Discharge Elimination System (NPDES) Stormwater program requires operators of construction sites one acre or larger (including smaller sites that are part of a larger common plan of development) to obtain authorization to discharge stormwater under an NPDES construction stormwater permit and the development and implementation of stormwater pollution prevention plans (SWPPP) is the focus of NPDES stormwater permits for regulated construction activities.

Most states are authorized to implement the Stormwater NPDES permitting program. EPA remains the permitting authority in a few states, territories, and on most land in Indian Country. For construction (and other land disturbing activities) in areas where EPA is the permitting authority, operators must meet the requirements of the EPA Construction General Permit (CGP). In California, Stormwater NPDES permits on non-tribal and non-federal land are overseen by the State of California EPA (CalEPA).

A SWPPP must include a site description, including a map that identifies sources of storm water discharges on the site, anticipated drainage patterns after major grading, areas where major structural and nonstructural measures will be employed, surface waters, including wetlands, and locations of discharge points to surface waters. The SWPPP also describes measures that will be employed, including at least protection of existing vegetation wherever possible, plus stabilization of disturbed areas of site as quickly as practicable, but no more than 14 days after construction activity has ceased.

International Building Code

Published by the International Code-Council (ICC), the scope of this code covers major aspects of construction and design of structures and buildings, except for 3-story one- and two-family dwellings and town homes. The 2006 International Building Code replaces the 1997 Uniform Building Code and contains provisions for structural engineering design. Published by the International Conference of Building Officials, the 2006 International Building Code addresses (IBC) addresses the design and installation of structures and building systems through requirements that emphasize performance. The IBC includes codes governing structural as well as fire- and life-safety provisions covering seismic, wind, accessibility, egress, occupancy, and roofs.

3.1.2 Paleontology

USDA Forest Service

The Forest Service issues permits authorizing both project-related identification and mitigation efforts in addition to research-related investigations based on the provisions of the Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701 1782) and the Antiquities Act of 1906. Regulations promulgated under 36 CFR 261 state that each Regional Forester has jurisdiction over "Protection of objects or places of historical, archaeological, geological or paleontological interest" (36 CFR 261.70(a)(5)), and that the following are prohibited: "Excavating, damaging, or removing any vertebrate fossil or removing any paleontological resource for commercial purposes without a special use permit" (36 CFR 261.9 (g)). FSM Chapter 2880 - Geologic Resources, Hazards, and Services contains policies and regulations related to paleontologic resource management and preservation. Forest Service policy makes the salvage of known paleontological resources a standard condition of their Special Use Permits. Treatment standards are specific to each forest and rely heavily upon implementation of a mitigation plan developed under the auspices of professional paleontologists at regional museums and universities.

3.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (formerly the Special Studies Zoning Act) regulates development and construction of buildings intended for human occupancy to avoid the hazard of surface fault rupture. While this Act does not specifically regulate overhead transmission lines, it does help define areas where fault rupture is most likely to occur. This Act groups faults into categories of active, potentially active, and inactive. Historic and Holocene age faults are considered active, late Quaternary and Quaternary age faults are considered potentially active, and pre-Quaternary age faults are considered inactive. These classifications are qualified by the conditions that a fault must be shown to be "sufficiently active" and "well defined" by detailed site-specific geologic explorations in order to determine whether building setbacks should be established.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (the Act) of 1990 (Public Resources Code, Chapter7.8, Division 2) directs the California Department of Conservation , Division of Mines and Geology [now called California Geological Survey (CGS)] to delineate Seismic Hazard Zones. The purpose of the Act is to reduce the threat to public health and safety and to minimize the loss of life and property by identifying and mitigating seismic hazards. Cities, counties, and state agencies are directed to use seismic hazard zone maps developed by CGS in their land-use planning and permitting processes. The Act requires that site-specific geotechnical investigations be performed prior to permitting most urban development projects within seismic hazard zones.

California Building Code

The California Building Code, Title 24, Part 2 (CBC, 2007) provides building codes and standards for design and construction of structures in California. The 2007 CBC is based on the 2006 International Building Code with the addition of more extensive structural seismic provisions. As the proposed Project lies within Seismic Zone 4, provisions for design should follow the requirements of Chapter 16 of the CBC, which contains definitions of seismic sources and the procedure used to calculate seismic forces on

structures. Chapter 33 of the CBC contains requirements relevant to the construction of underground transmission lines.

3.3 Local

Elements of the General Plans for Kern, Los Angeles and San Bernardino Counties contain policies for the avoidance of geologic hazards and/or the protection of unique geologic features, as well as for the preservation of paleontologic resources.

Kern County

The Safety Element (Chapter 4) of the Kern County General Plan (2004) provides policies and measures to minimize injuries and loss of life and reduce property damage from seismic and geologic hazards. The main policy relevant to the Project is "The County shall encourage extra precautions be taken for the design of major lifeline installations, such as highways, utilities, and petrochemical pipelines". Proper design of the Project facilities, including all APMs and mitigation measures outlined in this document, would comply with this policy and would be consistent with the Safety Element.

The Land Use, Open Space, and Conservation Element (Chapter 1) of the Kern County General Plan (2004) provides the following policy related to preservation of paleontologic resources: the County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors. Measures to minimize impacts in the plan include preservation of paleontologic resources in areas with known paleontologic resources, where feasible. The Project would be consistent with general plan policy for protection of paleontologic resources through implementation of the APMs and the mitigation measures outlined in this document.

Los Angeles County

The Safety Element of the Los Angeles County General Plan (1990) provides goals and policies to reduce impacts from seismic and geologic hazards and provide a safer environment. The two main policies relevant to the Project are: minimize injury and loss of life, damage, and social, cultural, and economic impacts caused by earthquake hazards; and protect public safety and minimize the social and economic impacts from geologic hazards. Proper design of the Project facilities, including all APMs and mitigation measures outlined in this document, would meet these goals and would be consistent with the Safety Element.

The Conservation, Open Space, and Recreation Element (1986) of the Los Angeles County General Plan provides the following goal related to preservation of paleontologic resources: to preserve and protect sites of historical, archeological, scenic, and scientific value. The Project would be consistent with general plan policy for protection of paleontologic resources through implementation of the APMs and the mitigation measures outlined in this document.

Antelope Valley Areawide General Plan. The Antelope Valley Areawide General Plan (1986) is a component of the Los Angeles County General Plan and provides policies related to public planning in the Antelope Valley area, including policies related to seismic and geologic hazards. These policies generally include enforcing standards and criteria to reduce impacts from seismic and geologic hazards, advocating detailed site evaluations and improved seismic design and construction standards for critical linear system facilities, and programs and practices for dealing with erosion, settlement, and other soil-related hazards. The Project would be consistent with these policies through implementation of the Project APMs and the mitigation measures outlined in this document.

San Bernardino County

The Natural Hazards section of the San Bernardino County General Plan (2002) provides for mitigation of geologic hazards through a combination of engineering, construction, land use and development standards. The Plan addresses the geologic hazards present within the county, including fault rupture, ground shaking, liquefaction, seismically-generated subsidence, seiche and dam inundation, landslides/mudslides, non-seismic subsidence, erosion and volcanic activity. The county has prepared Hazard Overlay Maps to address fault rupture, liquefaction hazards and landslide hazards. Special consideration, including possible engineering/geologic evaluation, is required for development of sites designated on the maps.

The Natural Resources section of the San Bernardino County General Plan (2002) provides for recognizing and protecting mineral resources through permitting. The Plan requires buffer zones between resources and other land uses, and existing mining access routes generally have priority over proposed alterations.