SUNCREST DYNAMIC REACTIVE POWER SUPPORT PROJECT CONSTRUCTION FIRE PREVENTION PLAN (CFPP)

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LIST OF ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
CAL FIRE	California Department of Forestry and Fire Protection
CFC	California Fire Code (2016)
CFPP	Construction Fire Prevention Plan
CFR	Code of Federal Regulations
FHSZ	Fire Hazard Severity Zone
FPP	Fire Protection Plan
IC	Incident Command or Incident Commander
kV	Kilovolt
MW	Megawatts
NFPA	National Fire Protection Association
NWS	National Weather Service
OSHA	Occupational Safety and Health Administration
Project	Suncrest Dynamic Reactive Power Support
RFW	Red Flag Warning
SCADA	Supervisory Control and Data Acquisition
SDCFA	San Diego County Fire Authority
SDG&E	San Diego Gas and Electric
SSO	Site Safety Officer
TBD	To be determined
U.L.	Underwriter's Laboratory
WUI	Wildland Urban Interface

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DEFINITIONS

- 1. Activity Risk: Activity risks include those actions that present a risk of igniting a wildfire.
- 2. **Fire Patrol**: A Suncrest Dynamic Reactive Power Support individual will be assigned as "Fire Patrol" specifically to monitor work activities when an Activity Risk exists for fire compliance. The Fire Patrol personnel shall regularly patrol the area on foot and monitor the area for any signs of fire or unsafe practices. They shall have no other duties and shall not be sitting in a vehicle or using a cell phone or computer except for emergency-related calls or for checking for Red Flag Warning or other fire hazard or weather conditions. They will have the ability to stop work until an identified hazard has been mitigated.
- 3. **Fire Season**: Fire season is no longer officially designated by the wildland fire agencies. Southern California is considered to be in fire season on a yearlong basis. CAL FIRE adjusts their staffing patterns as fire conditions moderate or escalate and this can be used as an indicator of potential fire activity.
- 4. **Fire Tools**: Essential firefighting tools to be staged near work activities are a Pulaski, McLeod, 5-gallon "Indian" Backpack hand pump water extinguisher, and minimum 20 pound, 2-A, 10-BC Dry Chemical Fire extinguisher .
- 5. **Incident Commander (IC)**: The incident commander is the person responsible for all aspects of an emergency response; including quickly developing incident objectives, managing all incident operations, application of resources as well as responsibility for all persons involved. The incident commander sets priorities and defines the organization of the incident response teams and the overall incident action plan..
- 6. Incident Command System (ICS): The Incident Command System (ICS) is "a systematic tool used for the command, control, and coordination of emergency response" according to the United States Federal Highway Administration. A more detailed definition of an ICS according to the United States Center for Excellence in Disaster Management & Humanitarian Assistance is "a set of personnel, policies, procedures, facilities, and equipment, integrated into a common organizational structure designed to improve emergency response operations of all types and complexities." Responding emergency service providers would establish the ICS and designate an Incident Commander.
- 7. **Red Flag Warning (RFW):** A Red Flag Warning is issued for a stated period of time by the National Weather Service using pre-determined criteria to identify particularly critical wildfire danger in a particular geographic area. All construction and maintenance activities shall temporarily cease during RFWs. The SSO will coordinate with personnel to determine which low fire hazard activities may occur. Should a local fire agency declare a Red Flag

Warning affecting the Suncrest site, the same work activity restrictions occurring during National Weather Service RFW periods would apply. RFW days typically occur in the fall, occasionally in the summer, and again during the spring. Typically, San Diego County will experience approximately 10 RFW days per year.

8. Site Safety Officer (SSO): The Site Safety Officer serves as a liaison to the emergency service agencies and all contractors or inspectors on the jobsite for the utilities on emergency incidents and construction-related activities. The SSO has the authority to stop any project work that appears to pose a particular fire risk or hazard.

1 SUMMARY

This Construction Fire Prevention Plan (CFPP) provides basic direction for fire safety awareness on the Suncrest Dynamic Reactive Power Support Project site during construction. CFPPs do not anticipate every potential fire scenario that may occur during construction, but attempt to educate site personnel to the very real danger associated with fire ignitions. Fire ignitions can, if they involve off-site vegetation under certain weather conditions, develop into large scale wildfires that burn many acres and can threaten public and private assets. Therefore, this CFPP provides standard protocols and approaches for reducing the potential of ignitions for typical construction site activities. When employed, the concepts discussed herein will help minimize and avoid ignitions as well as extinguish any ignitions while they are small and controllable.

Note: as detailed in Section 8, this CFPP requires all site activities to cease during declared Red Flag Warning (RFW) periods. The National Weather Service may issue RFWs at any time when humidity and wind conditions meet pre-determined thresholds that would promote fire ignition and spread. Because the majority of acreage burned in California occurs during RFW weather conditions, all construction activities will be prohibited until the RFW has been lifted.

2 INTRODUCTION

The Suncrest Dynamic Reactive Power Support Project (Project) site is located in San Diego County, California. The Project site is located on privately owned lands in the south central portion of San Diego County, approximately 3.8 miles southwest of the community of Descanso and 3.4 miles southeast of the community of Alpine. Figure 1 illustrates the Project's location. The following Construction Fire Prevention Plan (CFPP) has been prepared for the construction phase of the facility. Regional Access to the Project site is provided by Interstate 8 (I-8) and State Highway 79. Primary access will be from Bell Bluff Truck Trail. The Project site lies within a portion of the northwest quarter of Section 3 of Township 16 South, Range 3 East, on the U.S. Geographical Survey (USGS), 7.5 minute, Viejas Mountain, California quadrangle map.

The Project proposes to construct a Static Var Compensator (SVC) facility and a 230 kV single circuit underground transmission line connecting the SVC to the existing Suncrest Substation owned and operated by San Diego Gas and Electric (SDG&E). The Project land use would include access road, an on-site water storage tank, a chain link perimeter fence, and related infrastructure for the SVC facility, as described herein.

The majority of the project site will be constructed in areas of San Diego County classified as a Very High Fire Hazard Severity Zone (FHSZ) by California Department of Forestry and Fire Protection (CAL FIRE) (FRAP 2014). Fire hazard designations are based on topography, vegetation, and weather, amongst other factors with more hazardous sites including steep terrain, unmaintained fuels/vegetation, and wildland urban interface (WUI) locations.

The Project area is largely undisturbed and the dominant vegetation types are chaparral and oak woodlands. Topography in the vicinity of the Project area is undulating with steep hills interspersed by narrow valleys and deep canyons. The Project site occurs on a ridgeline which trends approximately west to east with Viejas Mountain to the west and Japatul Valley to the south. Topography on the site is gentle slopes (less than 5%) and then drops off to steeper terrain (30%) that drains to the south via a steeply incised drainage into Japatul Valley. Site elevations range from approximately 3,000 to 3,200 feet above mean sea level.

The Project area currently consists of a mixture of semi-rural residential developed lands and open space in both private and federal land holdings. The Project site is located on privately owned lands within the administrative boundary of the United States Forest Service-Cleveland National Forest. SDG&E privately owned lands, including the Suncrest Substation, are within one mile of the Project limits on the west side and the Cleveland National Forest lands are to the north of the Project site. Individual, private ownerships occur to the east and south of the Project site.

While the Project area is bound in nearly all directions by undeveloped vegetated lands, several features of the built environment are present in the immediate vicinity. The Suncrest Substation, constructed in 2012, is located at the western terminus of the proposed transmission line approximately one mile west of the location of the proposed SVC. Several localized development improvements were made within the area during construction of the Suncrest Substation and the larger SDG&E Sunrise Powerlink Transmission Project. Bell Bluff Truck Trail, a dirt road, was widened to 30 feet and paved to provide access to the Suncrest Substation. The Project site is accessed from Bell Bluff Truck Trail Road.

Fire protection in the project area is shared by several agencies, with the San Diego County Fire Authority (SDCFA) and CALFIRE providing significant resources. The Project is located within the SDCFA responsibility area. Emergency response for the Project would be provided, initially, by the SDCFA Descanso Fire Station 45, which is staffed with CALFIRE firefighter/paramedics via Schedule A contract with SDCFA.



3 EMERGENCY NOTIFICATION PROCEDURES

Any fire event at or near the site will trigger the emergency notification procedures identified in this section. Fire reporting is critical for tracking where, when, how, and why fire ignitions occur and will help the fire agencies develop protocols for reducing their occurrence.

3.1 First Call: 9-1-1

Reporting Fires and other emergencies: The first call should be to 9-1-1 so that appropriate apparatus can be dispatched.

The personnel in Table 1 are the primary site contacts to be notified during a fire emergency.

Name*	Position	Telephone Number*
	Site Safety Officer	
	Site Manager	
	Project Manager	
	Project Engineer	
	Construction Supervisor	

Table 1Emergency Notification Primary Contacts

Note:

Upon designation of each of the positions listed, the Names and contact numbers and emails shall be inserted into this table.

Technical Staff Contact: Project contact information will be provided to local fire agencies/stations to assist responding firefighters during an emergency. A copy of this CFPP will be submitted to the responding fire agencies.

The first call should be to 911 so that emergency responders can be dispatched. Travel times to the site require notification of 911 as early as possible after the fire or other emergency has been observed.

Emergency related contacts near the site include:

- Fire/Emergency Medical CAL FIRE Dispatch Center, Monte Vista 2249 Jamacha Rd., El Cajon, California 92019 (Emergency: 9-1-1 and Non-emergency: 619.590.3100)
- Law Enforcement Support– San Diego County Sheriff's Communications Center, San Diego, California 92193 (Emergency: 9-1-1 and Non-emergency: 858.565.5200)
- SDCFA Station 45 9718 River Drive, Descanso, California 91916 (Emergency: 9-1-1 and Non-emergency: 619.445.4731)

Suncrest Dynamic Reactive Power Support Project Construction Fire Prevention Plan (CFPP)

- SDCFA Administrative Office 5510 Overland Ave., Suite 250, San Diego, California 92123 (non-emergency: 858.974.5999)
- San Diego County Sheriff, Alpine Station 2751 Alpine Blvd., Alpine, California 91901 (non-emergency: 619.659.2600)
- San Diego County Sheriff, Pine Valley Substation 28696 Old Highway 80, Pine Valley, California 91962 (non-emergency: 619.938.8400)
- California Highway Patrol, El Cajon Office 1722 E. Main St., El Cajon, California 92021 (non-emergency: 619.401.2000)
- Sharp Grossmont Hospital 5555 Grossmont Center Drive, La Mesa, California 91942 (non-emergency: 619.740.6000)

To facilitate the arrival of fire services during construction, an emergency response meeting point will be established with the SDCFA and CAL FIRE. The Site Safety Officer (SSO), or designee if other SSO tasks have not been completed, will meet the emergency response team at the meeting point (location to be determined, but likely to be at the Project's primary entrance driveway – refer to Figure 2), to lead them into the site. The meeting point will be selected with fire agency input.

3.2 Evacuation Procedures

During significant emergency situations at or near the Project site, the site manager and/or SSO, in consultation with law enforcement or fire authorities, as possible, may issue an evacuation notice. When an evacuation has been declared, all site employees will gather at the designated assembly area which would be the site's primary access driveway, but may be elsewhere, depending on the emergency and as designated by the SSO. The SSO will account for all personnel, as time allows. Once all employees are accounted for, or sooner if dictated by the emergency, the vehicles will safely convoy from the site to safe zones, which are generally areas off-site away from the threat including the greater San Diego urban areas. Should there still be persons within the site after the evacuation has been called, the SSO will send convened personnel off site to safe zones and the SSO and designated construction supervisors will perform a sweep of the facility if it is safe to do so, to locate persons and reconvene at the assembly area. Once all personnel are accounted for, they will exit the site. The Primary Designated Assembly Area is located at the main entrance and as illustrated on Figure 2, the Site Fire Safety Plan. Secondary assembly areas would be designated by the SSO and would be dependent on the nature of the emergency and its location.

Should a structure or wildland fire (or other emergency) occur that threatens the primary assembly area; other locations may be designated as secondary assembly areas by the SSO or supervisors, as

dictated by the situation. The SSO and/or Site Supervisors should be prepared to be available to the IC throughout the incident to facilitate information exchange.

3.2.1 Evacuation Routes

Depending on the type and severity of the emergency, along with weather and/or localized site conditions, roadways designated on Figure 3 will be used for evacuating the area. The primary evacuation route is via Bell Bluff Truck Trail and Japatul Valley Road, which intersects with I-8. Secondary evacuation is provided south on Japatul Valley Road, west on Japatul Road, and north on Tavern Road, which connects with I-8. The secondary route, which travels south then west, would not be preferable in some emergencies due to its traveling through wildfire exposed landscapes. Use of this route is recommended to be limited to situations where it can be confirmed that evacuees would not be exposed to unsafe conditions or when fire and law enforcement direct evacuation along this route, if the primary evacuation route is determined to be unsafe for northerly evacuation. Both evacuation routes provide access to westbound or eastbound I-8.

The SSO and site managers are primarily responsible for evacuations. They will employ situation awareness procedures to determine the emergency, talk with fire officials, as possible, and declare the emergency status. Foreman level supervisors shall assist the SSO in accounting for personnel. The SSO or his/her designee, shall be assigned to meet and guide firefighting resources to the scene.





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4 SUNCREST DYNAMIC REACTIVE POWER SUPPORT PROJECT ROLES AND RESPONSIBILITIES

All employees should know how to prevent and respond to fires, and are responsible for adhering to policies regarding fire emergencies. In particular, the following sections detail general responsibilities, by position.

4.1 Project Owner/Management

A site specific Fire Protection Plan (FPP) (Dudek 2016) to determine overall fire risk was prepared and approved for the Project. The Project is required to implement necessary measures to reduce the risk of fire and comply with federal, state, and local fire safety/protection policies. Additionally, Owners/Management will conduct necessary training and make equipment available to provide a safe working environment for employees and contractors.

4.2 Site Safety Officer (SSO)

The SSO in addition to previously identified duties, will also manage the Project's FPP and this CFPP and shall maintain all records pertaining to the plan. Among the other responsibilities of the SSO are:

- Understanding the CFPP and its mandates for training, fire prevention, fire suppression, and evacuation.
- Understanding the fire risk associated with the site and with activities that will occur on site.
- Developing and administering the fire prevention and safety training program.
- Ensuring that fire control equipment and systems are properly maintained and in good working condition.
- Monitoring combustibles on the site and managing where they are stored.
- Conducting fire safety surveys and making recommendations.
- Posting fire rules on the project bulletin board at the contractor's field office and areas visible to employees.
- Stopping project work activities that pose a fire hazard or are not in compliance with this CFPP.
- Reporting all fires ignited on the site, whether structural, vegetation, electrical, or other to CPUC, SDCFA and CAL FIRE.

4.3 Supervisors

Supervisors are responsible for:

- Ensuring that employees receive appropriate fire safety training
- Notifying the SSO when changes in operation increase the risk of fire
- Enforcing fire prevention and protection policies
- Accounting for employees/contractors in the case of an evacuation
- Performing site sweeps to round up staff
- Facilitating fire agency access to the site if designated by the SSO
- Cooperating with the fire agencies/Incident Command during and following fires
- Identifying unsafe work practices that may lead to fire ignitions

4.4 Employees/Contractors

All employees and contractors shall:

- Complete all required training before working on site without supervision
- Conduct operations safely to limit the risk of fire
- Report potential fire hazards to their supervisors
- Follow fire emergency procedures
- Understand the emergency evacuation protocols

5 CONSTRUCTION FIRE PREVENTION PLAN GOALS

The primary goals of this CFPP are to address the identified ignition sources and risks so that the personnel involved with constructing and final decommissioning of the Project have clearly defined protocols and procedures for reducing fire risk and maintaining a fire safe worksite. Among the fire related goals developed for the Suncrest Dynamic Reactive Power Support site are:

- Prevent/minimize fires during construction, operation and decommissioning
- Provide a safe work-site for all employees, contractors, visitors and emergency personnel
- Prevent shock to emergency responders, workers, and unauthorized trespassers
- Prevent arcing or sparking, which could ignite vegetation on site
- Prevent or minimize dollar loss to the equipment
- Prevent or minimize potential for a fire starting on site to spread off site
- Provide water, appropriate fire extinguishers and access for firefighters
- Provide adequate signage and shut off devices to stop power feed into power lines in the event of a line failure, or fire in right of way
- Provide water trucks equipped with fire extinguishers, hoses, shovels, and Pulaski's when work involves the use of chainsaws, chippers, vegetation masticators, grading/blading, grinders, drill rigs, tractors, torches, and/or explosives.
- Provide the ability to report a fire or other emergency to 911 without delay and to make contact with internet websites and personnel
- Report all fire ignitions, regardless of size, to the SDCFA and/or CAL FIRE

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6 SITE AND PROJECT DESCRIPTION

6.1 Location

The Project site is located on privately owned lands in an unincorporated portion of San Diego County, approximately 33 miles from the Pacific Ocean. Specifically, it is located in the south central portion of San Diego County, approximately 3.8 miles southwest of the community of Descanso and approximately 3.4 miles southeast of the community of Alpine (Figure 1, Project Vicinity Map). The City of El Cajon is situated approximately 17 miles to the west. The Project will be constructed immediately south of Bell Bluff Truck Trail within an approximately six-acre portion of Assessor's Parcel Number (APN) 523-040-080. The project site is located in a portion of the northwest quarter of Section 3 of Township 16 South, Range 3 East, on the U.S. Geographical Survey (USGS), 7.5 minute, Viejas Mountain, California quadrangle map.

6.2 Vegetation

The Project area is comprised of chaparral and oak woodlands with pockets of disturbance dominated by non-native grasses and forbs. There are seven vegetation communities/land cover types in the Project area, including urban developed, Engelmann and Coast Live oak woodlands, Chamise chaparral, California buckwheat scrub, Bigberry Manzanita-chamise chaparral, Non-native grassland, and ruderal (Dudek 2016). These fuel types are fire adapted vegetation which historically experience occasional wildfire and can burn in an extreme manner under the occasional severe fire weather (dry and windy) conditions that occur in the area.

6.3 Project Description

The proposed Suncrest Dynamic Reactive Power Support Project involves two primary components: the Static Var Compensator (SVC) facility and the 230 kV single circuit underground transmission line (underground transmission line). The project would consist of the following primary components:

- Construction of a new SVC facility with a a nominal terminal voltage of 230 kV;
- Construction of two new access driveways to facilitate construction, operation, and maintenance of the SVC;
- Installation of a new approximately 1-mile 230 kV single-circuit underground electrical transmission line within a concrete-encased electrical duct bank between the SVC and the Suncrest Substation 230 kV bus;

Suncrest Dynamic Reactive Power Support Project Construction Fire Prevention Plan (CFPP)

- Installation of fiber optic cable within the same underground duct bank as the 230 kV cable to provide communications for line relaying, the Supervisory Control and Data Acquisition (SCADA) communications and control system, and other devices as required;
- Installation of up to five splice vaults to facilitate installation of the new underground cable and operation and maintenance of the transmission line;
- Installation of a 12 kV underground electrical distribution feed to the SVC; and,
- Installation of an intermediate pole and riser pole approximately 85 to 95 feet in height north of the Suncrest Substation to transition the transmission line from underground to overhead to connect to the 230 kV bus.

Please refer to the the CPUC Proceeding No. A 15-08-027 for a complete project description.

6.4 CPUC Environmental Mitigation Compliance

The CFPP has been prepared to comply with the environmental mitigation measures included in the CPUC proceedings, which states the following (HAZ-5):

• NEET West and/or its contractor(s) shall follow all of the requirements and recommendations contained in the FPP prepared for the Proposed Project by Dudek, dated June 2016. These requirements include, but are not limited to, design and implementation of defensible space around the proposed SVC facility according to the parameters described in the FPP; conducting training sessions with local fire station personnel and providing technical support to fire personnel regarding electrical fires and firefighting at energized facilities; appropriate design of driveways and access roads to allow for safe and efficient fire personnel and equipment access; development and implementation of a propriate protocols for de-energizing the proposed facilities; inclusion of a 10,000-gallon water storage tank accessible to firefighters at the SVC site, and arrangement of electrical equipment on the SVC site to maintain adequate setbacks from vegetated areas..

7 PROJECT SPECIFIC RISK SUMMARY

7.1 Fire Risk

Fire risks must be assessed based upon the potential frequency (probability of an incident occurring) and consequence (potential damage should an event occur). The evaluation of fire risks must take into account the frequency and severity of fires and other significant incidents.

The Study Area includes common risk types as well as heightened sources of risk. Common risks that result in emergency calls include accidental injuries (residential, vehicle, other), medical related incidents including heart attacks, strokes and other serious conditions and illnesses, accidental vegetation fires, and occasional structure or electrical fires.

Among the listed potential causes of fire incidents resulting from the installation, operation and maintenance of the SVC facility, as well as from natural conditions that could result in risk of fire. These hazards include several operations and activities associated with the facility that could elevate the probability of ignition. These potential sources of fire risk could include the following:

The Project's fire risks are primarily associated with the following:

7.1.1 Construction and Decommissioning Phase Risks

- Earth-moving equipment create sparks, heat sources, fuel or hydraulic leaks, etc.
- **Chainsaws** may result in vegetation ignition from overheating, spark, fuel leak, etc. Chainsaws should be fueled and maintained only in areas away from combustible fuels.
- Vehicles heated exhausts/catalytic converters in contact with vegetation may result in ignition
- Welders open heat source may result in metallic spark coming into contact with vegetation
- **Wood chippers** include flammable fuels and hydraulic fluid that may overheat and spray onto vegetation with a hose failure
- **Compost piles** large piles that are allowed to dry and are left on-site for extended periods may result in combustion and potential for embers landing in adjacent vegetation
- Grinders sparks from grinding metal components may land on a receptive fuel bed
- **Torches** heat source, open flame, and resulting heated metal shards may come in contact with vegetation

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- **Dynamite/blasting** if necessary, blasting may cause vegetation ignition from open flame, excessive heat or contact of heated material on dry vegetation. The blasting plan will address mitigation for blasting procedures to minimize fire ignition potential.
- Other human-caused accidental ignitions ignitions related to discarded cigarettes, matches, temporary electrical connections, inappropriately placed generators, poor maintenance of equipment, and others.

Fire Prevention Measures for all Construction Activities:

- Minimize combustible and flammable materials storage on site.
- Any combustible or flammable materials that need to be on site should be stored away from ignition sources.
- Parking areas and fuel or oil storage areas shall be cleared of all grass and brush by a distance of at least 30 feet.
- Keep evacuation routes free of obstructions.
- All containers to be labeled as to contents and flammable or combustible liquids to be stored in the same enclosed location.
- Perform hot works according to fire safe practices in a controlled environment and with fire suppression equipment at the job site. All provided guidelines for hot works herein and in NFPA 51b, and industry standards, shall be implemented on this site.
- Dispose of combustible waste promptly and according to applicable laws and regulations.
- All fuel leaks shall be reported and repaired without delay.
- Do not overload circuits or rely on extension cords where other upgrades would be safer.
- Turn off and unplug electrical equipment when not in use.
- Contractors on-site will be directed to restrict use of chainsaws, chippers, vegetation
 masticators, grinders, drill rigs, tractors, torches, and explosives to low-fire risk conditions,
 which would include higher humidity (15% and higher) and low winds (less than 10 mph).
 Dry, windy days should be avoided for these types of activities. When the above tools are
 used, water trucks equipped with hoses, shovels, Pulaski, and axes shall easily be accessible
 to personnel.
- All vehicles shall be equipped with a 20 pound, 3A-40BC Dry Chemical Fire Extinguisher, a 5-gallon backpack pump fire extinguisher, and a 48-inch round point shovel, and a first aid kit.

• During significant emergency situations, an evacuation notice may be issued by the site manager or SSO. When an evacuation has been called, all site employees will gather at the designated assembly area and the SSO, or a designated supervisor, will account for all personnel. Once all employees are accounted for, the vehicles will safely convoy from the site to safe zones, which are generally areas off-site away from the threat.

7.1.2 Contractor On-site Risk

Contractors should know how to prevent and respond to fires, and are responsible for adhering to Suncrest Dynamic Reactive Power Support Project's policies regarding fire emergencies. These general fire prevention measures should help in the efforts to prevent a fire from occurring while on site.

Fire Prevention Measures for Consultants/Contractors:

- Vehicles equipped with fire prevention equipment:
 - 20 pound, ABC Fire Extinguisher(s) (multi-purpose extinguisher)
 - 48-inch round point shovel
 - 5-gallons water or water backpack
 - First-aid kit
- No driving or parking of vehicles (cars, trucks, ATVs or similar) over unmaintained and dry vegetation.
- Site access limited during Red Flag Warning Weather periods; stay alert to fire and weather conditions and evacuate employees, if safe to do so.
- Contractors will conduct operations safely to limit the risk of fire
- Hot Work shall adhere to the guidelines provided below in Section 7.5.
- During significant emergency situations, an evacuation notice may be issued by the site manager or SSO. When an evacuation has been called, all consultant or contractor employees will gather at the designated assembly area and the SSO, or a designated supervisor, will account for all personnel. Once all employees are accounted for, the vehicles will safely convoy from the site to safe zones, which are generally areas off-site away from the threat.

7.2 Suncrest Dynamic Reactive Power Support Project Risk Rating

The estimated risk associated with the Suncrest Dynamic Reactive Power Support site is considered to be low to moderate during construction and decommissioning and low during operation, based on the successful application of FPP and CFPP fire risk reducing requirements. The risk of fires associated with this type of facility is low. There have been very few SVC facility fire ignitions in California.

The active construction phase results in higher potential for fires. Hot works, vegetation clearing, and other activities that may result in flame, heat or spark sources can ignite vegetation, especially if non-native grasses have established and cured. Although there will be a potential for structural/equipment fires and wildfires, the risk is considered manageable as indicated by the low historic fire occurrence at similar electrical facilities.

7.3 Risk Reduction Measures

The following measures will be employed, as appropriate, during construction to reduce the risk of ignitions. These measures will be enforced through the SSO and ongoing worker safety training.

- Fire rules shall be posted on the project bulletin board at the contractor's field office and areas visible to employees. This shall include all contractors and subcontractors if more than one.
- All internal combustion engines used at the Project site shall be equipped with spark arrestors that are in good working order.
- Once initial two-track roads have been cut and initial fencing completed, light trucks and cars shall be used only on roads where the roadway is cleared of vegetation. Mufflers on all cars and light trucks shall be maintained in good working order.
- The project will be equipped with at least one and up to two water trucks each of 4,000 gallon capacity. Each truck will be equipped with 50 feet of 1 ¹/₄ inch fast response hose w/fog nozzles. Any hose size greater than 1 ¹/₂ inches shall use National Hose (NH) couplings.
- A cache of hose, pumps, fittings, shovels, Pulaski's, etc. will be available at staging sites. The amount of equipment will be determined by consultation between SSO and SDCFA/CAL FIRE. Additionally, on-site pickup trucks will be equipped with first-aid kits, fire extinguishers/backpack pumps and shovels. Contractor vehicles will be required to include the same basic equipment.

Suncrest Dynamic Reactive Power Support Project Construction Fire Prevention Plan (CFPP)

- Equipment parking areas and small stationary engine sites shall be cleared of all extraneous flammable materials.
- A fire watch (person responsible for monitoring for ignitions) will be provided during hot works and shall occur for up to one hour following completion of the hot work activities.
- Smoking will be confined to vehicles or approved smoking areas where fire suppression equipment and appropriate disposal facilities are present. All smoking materials will be disposed of in appropriate disposal bins. Each project construction site shall be equipped with fire extinguishers and firefighting equipment sufficient to extinguish small fires.
- The on-site contractor or Suncrest staff shall coordinate with the SDCFA/CAL FIRE to create a training component for emergency first responders to prepare for specialized emergency incidents that may occur at the Project site.
- Contractor's on-site will be directed to restrict use of chainsaws, chippers, vegetation masticators, grinders, drill rigs, tractors, torches, and explosives to outside of the official fire season (which may include any day with low humidity and high winds as defined in this CFPP) to the greatest extent feasible. When the above tools are used, water trucks equipped with hoses, shovels, Pulaski's, and axes shall easily accessible to personnel.
- All on-site employees shall participate in fire prevention and response training exercises with the SDCFA/CAL FIRE.
- Fire Patrols: Suncrest shall implement ongoing fire patrols during the fire season as defined by local and state agencies. The SSO will be assigned as "Fire Patrol" specifically to monitor work activities when an activity risk exists for fire compliance. The SSO will verify proper tools and equipment are on-site, assesses any fire agency work restrictions, andmay serve as a lookout for fire starts, including staying behind (e.g., a fire watch) to make certain no residual fire exists. Fire watch may be performed by any site personnel. A Site Safety Officer(s) will perform routine patrols of the site during the fire season equipped with a portable fire extinguisher and communications equipment. The Suncrest staff shall notify the SDCFA/CAL FIRE of the name and contact information of the current SSO in the event of any change.
- Fires ignited on site shall be immediately reported to SDCFA and CAL FIRE.
- The engineering, procurement, and construction contracts for the project shall clearly state the fire safety requirements that are the responsibility of any person who enters the site, as described in this Construction Fire Prevention Plan.

7.4 Daily Fire Prevention Measures

To limit the risk of fires, all site staff, employees, and contractors shall take the following precautions:

- Fire safety shall be a component of daily tailgate meetings. Foremen will remind employees of fire safety, prevention, and emergency protocols on a daily basis.
- Smoking will be confined to vehicles or approved smoking areas where fire suppression equipment and appropriate disposal facilities are present. All smoking materials will be disposed of in appropriate disposal bins. Combustible materials will be stored in areas away from native vegetation. Whenever combustibles are being stored in the open air, the SSO shall be informed of the situation.
- Maintain all evacuation routes free of obstructions. Coordinate unavoidable evacuation route blockages such that a secondary route is identified and available.
- Dispose of combustible waste in accordance with all applicable laws and regulations.
- Use and store flammable materials in areas away from ignition sources.
- Properly store chemicals such that incompatible (i.e., chemically reactive) substances are separated appropriately.
- Perform "hot work" (i.e., welding or working with an open flame or other ignition sources) in controlled areas under the supervision of a fire watch. Fire watch may be any site personnel who would watch for accidental ignitions. Hot work permits are required and will be reviewed and granted by the SSO for all hot work.
- Keep equipment in good working order by inspecting electrical wiring and appliances regularly and maintaining motors and tools free of excessive dust and grease.
- Ensure that personal space/trailer/office heating units are safeguarded to prevent tipping, combustible materials in proximity, and proper grounding.
- Report all fuel or petroleum leaks immediately. The Site Mechanic shall ensure that all leaks are repaired immediately upon notification.
- Repair and clean up flammable liquid leaks immediately.
- Keep work areas free of combustible materials.
- Do not rely on extension cords if wiring improvements are needed, and take care not to overload circuits with multiple pieces of equipment.
- Turn off and unplug electrical equipment when not in use.

7.4.1 Fire Prevention/Protection System Maintenance

The Site Mechanic (or trained specialist, when necessary) will ensure that fire suppression and related equipment is maintained according to manufacturers' specifications. National Fire Protection Association (NFPA) guidelines shall be implemented for specific equipment.

The following equipment is subject to ongoing maintenance, inspection, and testing procedures:

- portable fire extinguishers;
- fire alarm systems;
- water trucks and associated equipment; and
- emergency backup generators/systems and the equipment they support.

7.5 Hot Work

These requirements are primarily from California Fire Code (CFC) Chapter 26, "Welding and other Hot Work," and NFPA 51-B, "Fire Prevention During Welding, Cutting and other Hot Work". Hot Work is defined in the CFC as operations involving cutting, welding, Thermit welding, brazing, soldering, grinding, thermal spraying, thawing pipe, or other similar operations. Hot Work areas are defined as the areas exposed to sparks, hot slag, radiant heat, or convective heat because of the Hot Work.

A Hot Work Permit shall be obtained from the on-site SSO, following guidelines from the Fire Agencies, for all Hot Work regardless of location. The SSO will require all Hot Work to be done per requirements in NFPA 51-B and the Fire Code Chapter 26. Hot works permits are required by this CFPP because it is a safety measure that incorporates the SSO. Through this process, hot work on fire weather days can be avoided and on typical weather days, the SSO can review the work activity, its location, and make sure that it is appropriate and that there are no combustible materials or vegetation nearby.

Hot Work shall only be done in fire safe areas designated by the SSO and shall comply with the following:

• All personnel involved in Hot Work shall be trained in safe operation of the equipment by the SSO. This will include providing training at "tailgate safety meetings". They shall also be made aware of the risks involved and emergency procedures, such as how to transmit an alarm and who is responsible to call 911.

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- Signage required in areas where workers may enter indicating "Caution; Hot Work in progress; Stay Clear."
- Hot Work shall not be done on any containers which contain or have contained flammable liquids, gases or solids until containers have been thoroughly cleaned, purged, or inerted.
- A fire extinguisher with a minimum rating of 3-A-40 BC, a 5-gallon backpack pump fire extinguisher, and a 46-inch round point shovel, shall be readily accessible within 25 feet of Hot Work area.
- The SSO shall inspect the Hot Work area before issuing a permit and shall then make daily inspections.
- Welding and cutting shall comply with 2016 CFC Chapter 35 Welding and Hot Work.
- Electric arc hot work shall comply with 2016 CFC Chapter 35 Welding and Hot Work.
- Piping manifolds and Hose Systems for Fuel Gases and Oxygen shall comply with CFC Section 3509.
- Cylinder use and storage shall comply with 2016 CFC Chapter 53, "Compressed Gases."
- Personal Protective Clothing shall be selected to minimize the potential for ignition, burning, trapping hot sparks, and electric shock.
- As considered necessary by the SSO, post work fire monitoring may be required for up to one hour.
- Any ignitions will be immediately extinguished (as possible) by site personnel and the CPUC, SDCFA and CAL FIRE will be notified of the incident.

The SSO shall have the responsibility to assure safe Hot Work operations, and shall have the authority to modify Hot Work activities associated with construction and/or maintenance activities, and to exceed the requirements in NFPA 51-B and the 2016 California Fire Code, to the degree necessary to prevent fire ignition. Workers must be trained on the Hot Work Information and Criteria in this plan.

8 RED FLAG WARNING PROTOCOL

Red Flag Warnings are issued by the National Weather Service (NWS) and indicate that conditions are such (low humidity, high winds) that wildfire ignitions and spread may be facilitated. During Red Flag Warning, site activities will be limited to low fire hazard, non-hot work, unless within an ignition resistant structure.

In order to ensure compliance with Red Flag Warning restrictions, the NWS Web site will be monitored at the site http://www.srh.noaa.gov/ridge2/fire/briefing.php.

Upon announcement of a Red Flag Warning, red flags will be prominently displayed at the Suncrest site entrance driveway gate and main office indicating to employees and contractors that restrictions are in place.

9 FIRE SAFETY BRIEFINGS, INSPECTIONS, AND TRAINING

9.1 Briefings and Inspections

The SSO will conduct routine unannounced inspections a minimum of once weekly. The SSO will develop an inspection check list to document these inspections. Completed checklists will be retained electronically and hard copies stored on site in the SSO's office/trailer. Checklists will be reviewed by the SSO and where issue are found, will be shared with site supervisors for correction. If corrections are not provided within 36 hours, the SSO will stop work and report to Project Owner, who will be responsible for corrections.

Prior to Project initiation, all Project personnel will receive a ½ hour presentation on the contents of this CFPP along with additional fire safety and fire prevention information provided by an informed SSO (or his/her designee). Supervisors/foremen will be responsible for sharing CFPP content with transient Project personnel throughout the duration of the Project. A review of the content of this CFPP will take place at a formal safety briefing; a minimum of once each month.

Each daily safety tailgate session should include an assessment of the day's fire related risks or hazards and the mitigation for each.

Compliance with this CFPP is mandatory. Monitoring compliance with this CFPP is everybody's responsibility. All levels of project management have the authority to shut down any operation that presents an inappropriate amount of fire risk or hazard until it can be properly mitigated.

Violations of any of the requirements of this CFPP will be addressed immediately. Appropriate consequences for repeated or serious negligence in respect to this Plan will be dealt with accordingly.

9.2 Training Requirements

9.2.1 Basic Fire Safety Training

The SSO and or Site Supervisors/Foremen shall present basic fire prevention training to all employees upon employment, and shall maintain documentation of the training, which includes:

- This CFPP, including how it can be accessed
- The project FPP
- Review of OSHA Fire Protection and Prevention: 29 CFR 1926.24, including how it can be accessed;
- Fire Management: Wildfire Prevention (43 C.F.R. 9212.0 et seq.);

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- Proper response and notification in the event of a fire;
- Instruction on the use of portable fire extinguishers (as determined by company policy in the Emergency Action Plan); hand tools such as shovels, and recognition of potential fire hazards.

The SSO shall train all persons entering the site about the fire hazards associated with the specific materials and processes to which they are exposed, and will maintain documentation of the training. Employees will receive this training:

- Upon first entering the facility
- Annually during a pre-planned meeting
- When changes in work processes necessitate additional training

9.2.2 Supervisor/Foreman Fire Safety Training

Prior to Project initiation and each spring prior to the high fire season; all Project supervisors will receive a minimum of one hour training on Wildland Fire Prevention and Safety. This training, created by the SSO or its designee, using this CFPP as its source, will be provided by the SSO or their qualified designee, such as the site compliance monitor. This training will then be shared with all construction personnel either by the Project supervisors or the SSO.

Each supervisor/foreman shall be trained to understand:

- Fire reporting
- Extinguishing small fires in order to prevent them from growing into more serious threats.
- Fire prevention
- Initial Attack Firefighting
- Identifying work activities that may result in a fire hazard

9.2.3 Communication Plan

The ability to communicate with all personnel working on the site is mandatory. The SSO and construction crews will be required to have a cell phone, satellite phone, and/or radios that are operational within the area of work to report an emergency. Communication pathways and equipment will be tested and confirmed operational each day prior to initiating construction activities. All fires and medical emergencies will be immediately reported to SDCFA/CAL FIRE and the CPUC.

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Each on-site worker will carry at all times a laminated, CFPP card listing 24-hour contact information, including telephone numbers for reporting an emergency and immediate steps to take if an incident occurs. Information on the CFPP card will be updated as needed and redistributed to all workers before the initiation of any construction activities. The Project's compliance monitor, who is responsible for ensuring the project complies with all conditions and required measures, will provide the CFPP cards to the site's SSO prior to construction kick-off so that all site staff can be provided training and receive their cards.

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10 PROJECT PERSONNEL FIRE FIGHTING LIMITATIONS

Responding to fires at the Project site, whether structural, wildland, or other, is the responsibility of SDCFA and CAL FIRE. Because their response to the site may require several minutes or more, Suncrest Dynamic employees or contractors should provide only initial firefighting efforts, and only if they have had appropriate training and are comfortable/capable of performing this role. The responding fire agencies will determine whether an Incident Management team will need to be set up and will follow their internal protocols regarding strategy and tactics. The following fire suppression guidelines are recommended:

- Although extinguishing small fires before they spread is an important consideration, employees/contractors are not responsible for fighting fires.
- No employee shall fight a fire beyond the incipient stage and the arrival of professional fire suppression personnel. Involvement in firefighting is voluntary and should only be attempted by trained, qualified individuals and under the request and direction of the Incident Commander (IC). If the IC requests assistance:

The following recommended actions should be carried out in concert with trained firefighters whenever possible.

- Construction equipment operators (dozers, graders, etc.) shall not participate in a firefight unless the operator is trained to do so, equipped with firefighting personal protective equipment, Including fire shelters and equipment cab fire protective curtains. Direct attack by trained operators is the safest strategy. Unintended resource damage can result from equipment operation.
- For distant wildfires that are moving toward the facility, establishment of fire lines and water suppression shall be confined to open grassland or sparsely vegetated areas.
- When establishing wet fire lines ahead of fires, sufficient distance from the fire shall be maintained as to prevent being overrun by the fire. No site contractor or staff will operate heavy equipment to create fire breaks or widen roadways; only appropriate emergency response personnel will make the decision to provide and implement strategic fire breaks.
- The ideal fire line is to widen existing roads and wet down vegetation well in advance of the fire.
- The object of fire lines shall be to protect project property, personnel and containment of the fire.

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- Prior to using water trucks or equipment to establish fire lines, an anchor point and multiple escape routes shall be established. If you are not familiar with this terminology, you should not be fighting a fire.
- Construction water trucks may be used to alter ignition resistance of native plants ahead of the fire or around structures. The control of spot fires created by blowing embers would be another good use for water suppression provided safe distance is maintained from the advancing fire by fire trained and qualified individuals.
- Ground personnel shall not approach closer than 200 feet of any advancing fire.
- Ground suppression shall be limited to groups no smaller than 5 personnel.
- Direct communications shall be maintained between all equipment operators, truck drivers, ground personnel and the incident command center, liaison personnel equipped with radios shall be assigned.
- At no time are creosote thickets or heavily vegetated areas to be entered by ground personnel or operating equipment during a wildland fire.

11 REVIEW AND APPROVAL

The signatory reviewing officials are acknowledging that NextEra Transmission West has established a CFPP when properly implemented, maintained, and enforced, results in fire hazard and risk reduction for the Suncrest Dynamic Reactive Power Support Project's construction. Reviewing agencies do not accept any responsibility for NextEra Transmission West's interpretation or implementation of this plan prior to, during or following the construction, operation and maintenance and decommissioning of the Suncrest Dynamic Reactive Power Support Project or for any resulting actions associated with these activities.

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Reviewed by:

SVC Facility SSO

San Diego County Fire Authority

CAL FIRE

Approved by:

SVC Facility Project Manager

Date

Date

Date

Date

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12 **REFERENCES**

California Fire Code. 2016. California Code of Regulations, Title 24, Part 9.

- Dudek. 2016. Fire Protection Plan for the Suncrest Dynamic Reactive Power Support Project. June 2016
- FRAP (Fire and Resource Assessment Program). 2014. CALFIRE Fire Resource and Assessment Program. California Department of Forestry and Fire Protection. Accessed July 2014. http://frap.cdf.ca.gov/.
- NFPA 51b. National Fire Protection Association. Standard for Fire Prevention During Welding, Cutting, and Other Hot Work.

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APPENDIX A

Common Fire Ignition Sources and Fire Prevention Measures