

Decision 17-07-008 July 13, 2017

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of PACIFIC GAS AND ELECTRIC COMPANY, a California corporation, for a Permit to Construct the Sanger Substation Expansion Project Pursuant to General Order 131-D. (U39E)

Application 15-09-012
(Filed September 30, 2015)

**DECISION GRANTING PACIFIC GAS AND ELECTRIC COMPANY
A PERMIT TO CONSTRUCT THE SANGER SUBSTATION EXPANSION
PROJECT**

Summary

This decision grants Pacific Gas and Electric Company a Permit to Construct the Sanger Substation Expansion Project. This proceeding is closed.

1. Proposed Project

Pacific Gas and Electric Company (PG&E) has proposed the Sanger Substation Expansion Project to replace facilities built in the 1920s by upgrading and expanding the existing substation with a new breaker-and-a-half bus configuration. This will enable the substation to better serve as the hub for the Central Valley 115 kV transmission system.¹

The project is located in unincorporated Fresno County, approximately two miles west of the City of Sanger and approximately three miles southeast of the City of Fresno. The Sanger Substation currently occupies an approximately

¹ Application 15-09-012 at 1.

4.5-acre parcel. The substation will expand onto approximately 7 acres adjacent to the existing substation on property acquired by PG&E.

Twelve power lines connect to the 115 kV bus at the Sanger Substation, importing and exporting approximately 200 MW of net power under peak conditions. The major distribution substations served by Sanger through its 115kV lines include Manchester, Barton, Airways, California Avenue, Malaga, West Fresno, Las Palmas, Clovis, Reedley, and Parlier. According to PG&E, the existing 115 kV transfer facilities at the substation do not meet PG&E's current utility standards and must be updated.

All of the existing circuit breakers will be removed and replaced, along with 24 disconnect switches, 18 steel support structures, and one control building.

PG&E will also install new electric equipment at the substation, including new circuit breakers, bus structures, 115 kV disconnect switches, instrument transformers, protective relaying, metering and control equipment, remote supervisory control and data acquisition equipment, telemetering equipment, an auxiliary alternating current and direct current power system, an electric grounding system, and underground conduits or trench systems. Existing structures and conductors located outside the existing substation will be reconfigured to connect to the new substation equipment. This will be achieved by relocating and replacing existing structures and installing new structures to accommodate the new line angles resulting from the new arrangements. No new power lines will be constructed; however, due to the reconfiguration of existing power lines, approximately 17 existing lattice steel towers and 24 wood poles will be removed, and approximately 41 new tubular steel poles or light duty steel poles will be installed.

2. Procedural Background

PG&E filed this application on September 30, 2015. On October 14, 2015, PG&E filed a Compliance Filing including declarations of advertising, posting, and mailing to affected governmental bodies and property owners to give notice of the application, as required by General Order (GO) 131-D, Section XI.A. No protests were filed.

On January 20, 2017, the Commission's Energy Division circulated the Draft Initial Study and Mitigated Negative Declaration (IS/MND) for public review, in compliance with the California Environmental Quality Act (CEQA) and CPUC Rule 17.1. The Commission also filed the Draft IS/MND with the State Clearinghouse on this date, initiating a 30-day public review period. Additionally on this date, the Commission circulated a Notice of Intent to adopt the MND for PG&E's Permit to Construct. The availability of the Draft IS/MND was announced on the Commission's website and in local² newspapers; copies of the document were made available on the Commission's website and at two local libraries.

During the public review period for the Draft IS/MND, the Commission received comments from one public agency, one tribal government office, and the applicant. A few revisions were made to the Draft IS/MND to clarify and respond to comments regarding the sections on Project Description, Agriculture, Air Quality, Cultural Resources, Hazards and Hazardous Materials, Mandatory Findings, and Cultural Resources. These comments were made during the

² Local refers to the locality where the construction would take place – the Fresno-Sanger area.

public review period and are included and responded to in the Final IS/MND.³ (Final IS/MND, ch. 7.) Despite these minor revisions, the Final IS/MND does not identify any new significant environmental impacts, and does not omit any existing mitigation measures from those identified in the Draft IS/MND.

3. Scope of Issues

Pursuant to GO 131-D, in order to issue a Permit to Construct, the Commission must find that the project complies with CEQA. CEQA requires the lead agency to conduct a review of the project to identify environmental impacts and ways to avoid or reduce environmental damage. These impacts and mitigating factors are considered in the determination of whether to approve the project or a project alternative. Here, the lead agency is the Commission. If the initial study shows there is no substantial evidence that the proposed project may have a significant effect on the environment, or if the initial study identifies potentially significant effects and the project proponent makes or agrees to revisions to the project plan that will reduce all project-related environmental impacts to less than significant levels, then the lead agency shall prepare a negative declaration or MND, subject to public notice and the opportunity for the public review and comment. (CEQA Guidelines §§ 15070-15073.)

³ The Energy Division issued the Final IS/MND on March 17, 2017. The Final IS/MND is hereby identified as Exhibit A and received into the record of this proceeding.

Prior to approving the project or a project alternative, CEQA requires the lead agency to consider the MND and corresponding comments received during the public review process. The lead agency can adopt the MND only if it finds, on the basis of the whole record, that there is no substantial evidence the project will have a significant effect on the environment, and that the MND reflects the lead agency's independent judgment and analysis. (CEQA Guidelines § 15074(a)-(b).)

If the lead agency adopts a MND, CEQA also requires the lead agency to adopt a program for monitoring or reporting the changes or conditions required to mitigate or avoid significant environmental effects. (CEQA Guidelines § 15074(d).)

In addition, pursuant to GO 131-D and Decision (D.) 06-01-042, the Commission will not certify a project unless its design is in compliance with the Commission's policies governing the mitigation of electromagnetic field (EMF) effects using low-cost and no-cost measures.

As described previously, the Energy Division has prepared a Final IS/MND for the proposed project. Accordingly, the following issues will be determined in this proceeding:

1. Is there no substantial evidence that the project, as revised pursuant to the Final MND and Mitigation Monitoring and Reporting Plan, will have a significant effect on the environment?
2. Was the MND completed in compliance with CEQA, and does the MND reflect the Commission's independent judgment?
3. Is the proposed project designed in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures?

4. Environmental Impacts

The proposed project will have either no significant impacts or less than significant impacts with respect to forest resources,⁴ air quality,⁵ geology and soils,⁶ greenhouse gasses,⁷ land use and planning,⁸ mineral resources,⁹ noise,¹⁰ population and housing,¹¹ public services,¹² recreation,¹³ and utilities and service systems.¹⁴

The proposed project has potentially significant impacts with respect to aesthetics,¹⁵ agricultural resources,¹⁶ biological resources,¹⁷ cultural resources,¹⁸ hazards and hazardous materials,¹⁹ hydrology and water quality,²⁰ and transportation and traffic.²¹ However, with the implementation of the mitigation

⁴ Final IS/MND at 5.2-1 (2017).

⁵ *Id.* at 5.3-7 - 5.3-13.

⁶ *Id.* at 5.6-5 - 5.6-8.

⁷ *Id.* at 5.7-5 - 5.7-11.

⁸ *Id.* at 5.10-4 - 5.10-7.

⁹ *Id.* at 5.11-2 - 5.11-3.

¹⁰ *Id.* at 5.12-6 - 5.12-12.

¹¹ *Id.* at 5.13-2 - 5.13-3.

¹² *Id.* at 5.14-2 - 5.14-4.

¹³ *Id.* at 5.15-2 - 5.15-3.

¹⁴ *Id.* at 5.17-4 - 5.17-9.

¹⁵ *Id.* at 5.1-15 - 5.1-21.

¹⁶ *Id.* at 5.2-3 - 5.2-8.

¹⁷ *Id.* at 5.4-10 - 5.4-28.

¹⁸ *Id.* at 5.5-8 - 5.5-16.

¹⁹ *Id.* at 5.8-7 - 5.8-14.

²⁰ *Id.* at 5.9-4 - 5.9-10.

²¹ *Id.* at 5.16-6 - 5.16-16.

measures identified in the in the Sanger Substation Expansion Project Final MND Mitigation Measures, the potentially significant impacts are reduced to less than significant levels.²²

5. EMF

The Commission examined EMF impacts in several previous proceedings.²³ The scientific evidence presented in those proceedings was uncertain as to the possible health effects of EMFs, and we did not find it appropriate to adopt any related numerical standards. Given the lack of scientific consensus regarding the potential health risks of EMF exposure, and that CEQA does not define or adopt any standards to address the potential health risk of EMF exposure, the Commission does not consider EMFs in the context of CEQA or environmental impact determination.

However, recognizing that public concern remains, we do require, pursuant to GO 131-D, Section X.A., that all requests for a Permit to Construct include a description of the measures taken or proposed by the utility to reduce the potential for exposure to EMFs generated by the proposed project. The Commission developed an interim policy that requires utilities, *inter alia*, to identify the no-cost measures undertaken and the low-cost measures implemented to reduce the potential EMF impacts. The benchmark established for low-cost measures is four percent of the total budgeted project cost that results in an EMF reduction of at least 15 percent.²⁴

²² The Sanger Substation Expansion Project Final MND Mitigation Measures, attached hereto, are hereby identified as Exhibit B and received into the record of this proceeding.

²³ See D.06-01-042 and D.93-11-013.

²⁴ Measured from the edge of the utility's right-of-way.

In accordance with Section X.A. of GO 131-D, D.06-01-042, and the EMF Design Guidelines (EMF Guidelines) for Electrical Utilities, the applicant must prepare a Substation Field Management Plan (FMP) Checklist. The FMP Checklist is for substation projects and identifies the no-cost and low-cost EMF reduction measures that will be installed as part of the final engineering design for the project. Accordingly, the Substation FMP Checklist for this project proposes the following measures to reduce the EMF levels from the substation's facilities:

- Keep high current devices, transformers, capacitors, and reactors away from the substation property lines.
- For underground duct banks, the minimum distance should be 12 feet from the adjacent property lines or as close to 12 feet as practical.
- Locate new substations close to existing power lines to the extent practical.
- Increase the substation property boundary to the extent practical.

This design complies with the applicant's EMF Guidelines prepared in accordance with the Commission's EMF decisions D.93-11-013 and D.06-01-042.

6. Waiver of Comment Period

This is an uncontested matter where the Proposed Decision grants the relief requested. Accordingly, pursuant to Section 311(g)(2) of the Public Utilities Code and Rule 14.6(c)(2) of the Commission's Rules of Practice and Procedure, the otherwise applicable 30-day period for public review and comment is waived.

7. Category and Need for Hearing

We confirm the Commissions preliminary categorization of this proceeding, but change the preliminary determination regarding a need for hearings.

The Commission preliminarily categorized this proceeding as ratesetting. (Resolution ALJ 176-3365.)²⁵ We confirm this preliminary determination of category. Anyone who disagreed with the Scoping Memo's confirmation of the categorization had ten days to file an appeal. No appeals were filed; thus, our confirmation stands.

The Commission also made the preliminary determination that hearings are required. We change this determination to evidentiary hearings are not required. We conclude hearings are not needed because no protests or responses were filed, the applicant remained the sole party throughout the proceeding, and no material factual issues were presented in the scope of this proceeding.

8. Assignment of Proceeding

For this proceeding, Carla J. Peterman is the assigned Commissioner and Eric Wildgrube is the assigned Administrative Law Judge.

Findings of Fact

1. The proposed project will have either no significant impacts or less than significant impacts with respect to forest resources, air quality, geology and soils, greenhouse gasses, land use and planning, mineral resources, noise, population and housing, public services, recreation, and utilities and service systems.

²⁵ Resolution ALJ 176-3365 was issued on October 22, 2015.

2. The proposed project has potentially significant impacts with respect to aesthetics, agricultural resources, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and transportation and traffic. However, with the implementation of the mitigation measures identified in the Mitigation Monitoring and Reporting Plan included in the Final IS/MND, the potentially significant impacts are reduced to less than significant levels.

3. The proposed project is designed in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures.

4. The Final IS/MND was completed in compliance with CEQA.

5. The Commission has reviewed and considered the information contained in the Final IS/MND.

6. The Final IS/MND reflects the Commission's independent judgment and analysis.

Conclusions of Law

1. PG&E should be granted a Permit to Construct the Sanger Substation Expansion Project in conformance with the Mitigation Measures attached to this order.

2. The proceeding should be categorized as ratesetting.

3. Hearings are not required.

4. This proceeding should be closed.

5. This order should be effective immediately.

O R D E R

IT IS ORDERED that:

1. The applicant, Pacific Gas and Electric Company, is granted a Permit to Construct the Sanger Substation Expansion Project in conformance with the Mitigation Measures attached to this order.
2. The mitigation measures set forth in the Sanger Substation Expansion Project Final Mitigated Negative Declaration Mitigation Measures are adopted.
3. The Energy Division may approve requests by Pacific Gas and Electric Company for minor project refinements that may be necessary due to final engineering of the Sanger Substation Expansion Project so long as such minor project refinements are located within the geographic boundary of the study area of the Final Mitigated Negative Declaration and do not, without mitigation, result in a new significant impact or a substantial increase in the severity of a previously identified significant impact based on the criteria used in the environmental document; conflict with any mitigation measure or applicable law or policy; or trigger an additional permit requirement. PG&E shall seek any other project refinements by a petition to modify this decision.

4. Application 15-09-012 is categorized as ratesetting.
5. Hearings are not required.
6. Application 15-09-012 is closed.

This order is effective immediately.

Dated July 13, 2017, at San Francisco, California.

MICHAEL PICKER
President
CARLA J. PETERMAN
LIANE M. RANDOLPH
MARTHA GUZMAN ACEVES
CLIFFORD RECHTSCHAFFEN
Commissioners

ATTACHMENT

Final MND Mitigation Measures

Implementation of the following mitigation measures would avoid potentially significant impacts identified in the IS or reduce them to less than significant levels.

Aesthetics

MM AES-1 (supplements APM AES-2): Lighting utilized for night-time construction and for security during construction shall be shielded and oriented away from sensitive receptors.

MM AES-2 (supplements APM AES-3): All conductor used for the proposed project shall be non-specular.

Agriculture and Forest Resources

MM AGR-1: Farmland Construction Impact Mitigation (supplements APM AGR-1). PG&E shall implement the following measures for temporarily disturbed Farmland:

- The applicant shall survey agricultural fields prior to construction and return all temporary disturbance areas to pre-construction conditions (i.e, meeting the definition of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency) after the completion of construction, except that crops will not be replanted.
- If topsoil is removed from an area to accommodate temporary construction activities, it shall be restored to preconstruction conditions within two months of the completion of construction, except that crops will not be replanted by PG&E.

Biological Resources

MM BIO-1: Biological Resources Worker Environmental Awareness Program. The applicant shall develop a Worker Environmental Awareness Program (WEAP). Prior to the start of construction, all construction crew members and contractors shall be required to attend the WEAP training presented by a CPUC-approved, qualified biologist. All construction crew members and contractors who attend the training shall sign a form indicating that they attended the training and understood the information. Follow-up training shall be conducted as needed; new workers shall attend WEAP training prior to beginning at the work site. A record of all trained personnel shall be kept on site, and a sticker indicating training completion shall be worn on all worker hard hats.

The WEAP training shall include a review of the special status species and other sensitive resources (e.g., nesting birds) that could exist in the project area, the locations where sensitive biological resources do or may occur, the limits of the work area, applicable laws and regulations, penalties for non-compliance, and APMs and mitigation measures to be implemented for avoidance of these sensitive resources. Additionally, personnel shall be trained for situations where it is necessary to contact a qualified biologist (e.g., should any sensitive biological resources such as an active nest be found during construction). If sensitive resources are found, the qualified biologist shall provide guidelines for the personnel to avoid impacts on them. All WEAP participants shall receive a brochure that outlines all this information including contact information for the appropriate environmental personnel.

MM BIO-2: Pre-activity surveys for sensitive species. A CPUC-approved qualified biologist shall conduct a pre-activity survey for all activities occurring near where sensitive resources may be found within 7 days prior to work commencing. If there is no work in an area for 7 days, it shall be considered a new work area if construction begins again. The biologist shall survey all suitable habitat for sensitive species within 100 feet of the activities (see MM BIO-4, MM BIO-6, or MM BIO-7 for additional nesting bird procedures). If any species listed by the state or federal endangered species acts or protected by other statutes, or their signs, are found, the CPUC and the appropriate wildlife agencies shall be notified within 48 hours to confirm appropriate avoidance measures. If it is determined that construction activity cannot avoid areas where sensitive biological resources are present, the qualified biologist shall coordinate with the CPUC, CDFW, and/or USFWS, as necessary.

If a potential San Joaquin kit fox den is found then a minimum buffer of 50 feet shall be implemented. For a known den, the buffer shall be 100 feet and for a natal den the avoidance buffer shall be determined on a case-by-case basis in coordination with CDFW and USFWS. If dens cannot be avoided by these distances, a CPUC-qualified biologist shall determine occupation following the procedures outlined in USFWS Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior to and During Ground Disturbance (USFWS 2011) and consult and coordinate with CDFW and USFWS.

MM BIO-3: Biological Monitoring. A CPUC-approved qualified biological monitor shall develop an appropriate schedule of monitoring to ensure that disturbance is minimized to sensitive resources to the greatest extent possible during project activities. The schedule shall ensure that a CPUC-approved qualified biological monitor (1.) visits the project area regularly (at a minimum of every 7 days); (2.) is present to monitor all ground disturbing activities, such as grading and trenching; and (3.) is present to monitor any observed special status species (observed sign or individual) that may be disturbed by project activities. Biological monitors shall be familiar with San Joaquin kit fox and burrowing owl. Avian biologists present during nesting bird season may act as the biological monitor if qualified.

The biological monitor shall be responsible for ensuring that impacts on special status species, their associated habitat, and/or sensitive resources are avoided to the fullest extent possible, and the monitor shall have full authority to halt construction if the monitor observes actual or potential disturbances to sensitive resources. At a minimum of once per 7 days, the monitor shall survey all project components near where construction activities may occur in the next 7 days, as well as the irrigation ditch area. Where appropriate, monitors shall flag the boundaries of areas where activities need to be restricted to protect special status species. If a special status species is present in the project area while construction activities are occurring, the restricted areas shall be monitored to ensure their protection during construction.

MM BIO-4: Mitigation for nesting birds (Supersedes APM BIO-14). The applicant shall implement the measures below in all work areas where any construction-related activities are conducted during the nesting bird season (February 1 to September 15) for all species except Swainson's hawk and white-tailed kite (see MM BIO-7), and burrowing owl (see MM BIO-6).

Nesting Bird Survey Requirements. If work is scheduled to occur during nesting bird season, then the following provisions shall be employed:

- A CPUC-approved qualified avian biologist shall conduct surveys for nesting birds within 7 days prior to the start of any construction-related activities. Areas shall be re-surveyed every 7 days while construction activities are occurring. If there is no work in an area for 7 days, it shall be considered a new work area if construction resumes. In addition, a CPUC-approved qualified monitor shall conduct pre-construction clearance sweeps for nesting birds at all access, staging and, work areas where suitable habitat is present within approximately 24 hours of construction activities each day during the nesting season.
- Surveys shall be conducted with the appropriate buffer, duration, level of effort, and timing based on level of construction disturbance, time of day, and

environmental factors. Surveys shall be conducted within a 500 foot buffer of active work areas for raptors and a 250 foot buffer for non-raptors, at a minimum.

- Surveys shall be conducted at a minimum between February 1 and September 15; however, the survey season may need to begin earlier or end later depending on species and weather conditions.
- Survey results shall be provided to the CPUC each week.

Avoid Impacts on Nesting Birds.

- When a nest of any avian or raptor species is located within 500 feet of a construction site, a CPUC-approved qualified avian biologist shall determine whether the nest is active. A nest shall be defined as active once a bird begins nest construction or when a raptor begins “nest decoration.” An inactive nest is defined as a nest that has been abandoned by the adult bird or once fledglings are no longer dependent on the nest site or parental care.
- If the nest is active, then the qualified biologist shall implement an exclusionary buffer to prevent construction activities from occurring within a specified distance from the active nest. For active raptor nests located more than 500 feet from the nearest work site, and non-raptor active nests located more than 250 feet from the nearest work site, no additional measures shall be implemented. A minimum standard buffer of 500 feet for an active raptor nest or 250 feet for an active non-raptor nest, as recommended by CDFW (Bahm pers. comm. 2016), shall be implemented when construction activities are occurring. Buffers shall not apply to construction-related traffic using existing roads that are not limited to project-specific use (i.e., county roads, highways, etc.).
- If any active nest of a species listed by the state or federal endangered species acts or fully protected species (other than those specified MM BIO-7) is found, then the minimum standard buffer shall be implemented and the CPUC and the appropriate wildlife agencies shall be notified immediately (within 48 hours).
- As appropriate, nest deterrent strategies may be used to prevent birds from nesting in construction equipment or staged materials. This includes covering equipment with tarps or covering small holes. Bird netting may not be used due to risk of entanglement.
- If construction requires removal of a structure or tree that contains a known or historic nest, then removal of that structure must occur when the nest is determined to be inactive and, if feasible, outside of nesting season.
- PG&E shall adhere to recommendations published by APLIC’s Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012), as feasible.

Monitoring and Reporting. Nest locations and exclusion buffers shall be mapped (using a geographic information system [GIS]) for all identified nests. The information shall be maintained in a database; shall be provided to the CPUC weekly and to USFWS and CDFW monthly; and shall include the following information:

- Date, time, and length of observation period
- Status (active or inactive)
- Species
- Nest location, including nest height
- Behavioral observations
- Site conditions, including construction activities
- Nest exposure
- Estimated date of nest establishment
- Estimated fledge date
- Number of eggs or hatchlings, if observed
- Buffer size implemented

Nests protected by a standard buffer shall be observed by a CPUC-approved qualified avian biologist at a frequency and length of time the avian biologist deems necessary to ensure activities are not causing disturbance to the nest (minimum of once a week during construction) until the biologist has determined that the nest is inactive or until after construction ends in the work area (whichever occurs first). If the biologist observes the birds becoming agitated or the incubating adult leaves the nest as a result of construction activities, he or she shall have the authority to halt work and expand the buffer. No avian reporting shall be required for construction outside of the nesting season unless species are observed nesting outside of the normal season or special status bird species are observed in the project area.

Buffer Reductions. The specified buffer sizes for nests may be reduced on a case-by-case basis based on compelling biological and ecological reasoning (e.g., the biology of the bird species, concealment of the nest by topography, land use type, vegetation, and the level of project activity), and if a CPUC-approved qualified avian biologist determines that a reduced buffer size would not result in the abandonment of the nest or failure. Buffer reduction requests shall be submitted to the independent avian biologist (a qualified avian biologist approved by the CPUC and who reports directly to the CPUC) to be reviewed and approved. The independent avian biologist shall respond to PG&E's request for a buffer reduction within 48 hours. Buffer reduction requests for special status

species (other than those specified in MM BIO-6 and MM BIO-7) shall be submitted to the appropriate wildlife agencies and to the CPUC for approval. The request must include the following:

- Species
- Location
- Pre-existing conditions present on site
- Description of the work to be conducted within the reduced buffer, including equipment type and start date
- Size and expected duration of proposed buffer reduction
- Reason for buffer reduction
- Name and contact information of the CPUC-approved qualified avian biologist who requested the buffer reduction and who shall conduct subsequent monitoring
- Proposed frequency and methods of monitoring necessary for the nest given the type of bird and surrounding conditions as recommended by the CPUC-approved qualified avian biologist

Nests shall be monitored until the avian biologist has determined that the nest is inactive; or construction ends within the standard buffer (whichever occurs first). The biologist shall halt construction and increase the reduced buffer size if it is determined that the nesting bird(s) are agitated or the incubating adult leaves the nest as a result of construction activities.

Nesting in Active Work Areas. Non-special status species found building nests within the standard buffer zone after specific project activities begin and the activities are not expected to increase in duration, intensity, or distance from the nest, shall be assumed tolerant of that specific project activity and such nests shall be protected by the immediate implementation of the maximum buffer practicable (as determined by the CPUC-approved avian biologist). Notification, which includes the same data in the above reduction request, shall then be sent to the CPUC's independent avian biologist within 24 hours and the independent avian biologist shall have the authority to increase the buffer distance. These nests shall be monitored on a schedule determined by the qualified CPUC-approved avian biologist during construction activities until the avian biologist has determined that the nest is inactive; or construction ends within the standard buffer zone (whichever occurs first). If the CPUC-approved avian biologist determines that the nesting bird(s) are not tolerant of project activities, the buffer shall be expanded, and may be expanded beyond the standard buffer distance.

MM BIO-5: Wildlife Protection (Supersedes APMs BIO-4, -5, and -10). The applicant shall implement the following measures to ensure protection of all wildlife species.

- Vehicle speed limits on existing unpaved access routes shall not exceed 15 miles per hour and shall not exceed 10 miles per hour on overland access roads. County speed limits shall be followed on existing paved roads. Construction personnel shall avoid collision with wildlife.
- If night work is required, all lighting shall be shielded and point downward and away from any identified sensitive biological resources.
- All trash and debris shall be secured in animal-proof containers before the end of each workday. Containers shall be emptied at least once per week and disposed of at an appropriate off-site location.
- All construction personnel shall not harass any wildlife and shall allow wildlife to leave the work area on their own volition.
- Disturbance limits shall be visibly flagged to ensure construction personnel minimize the construction footprint.

MM BIO-6: Specific Requirements for Burrowing Owl (Supersedes APM BIO-13).

A CPUC-approved qualified avian biologist familiar with burrowing owl biology and survey methods shall conduct a pre-construction survey for this species no more than 30 days prior to construction activities during the non-breeding season and no more than 14 days prior to construction during the breeding season (February 1 to August 31 with some variance by geographic location and climatic conditions; CDFW 2012). The biologist shall confirm whether the owls are occupying the site and whether they are actively nesting. If any burrowing owl or sign of an occupied burrow is observed, the CPUC shall be informed as soon as possible (and within 48 hours). Surveys shall include the irrigation ditch and any area with suitable habitat within 656 feet (200 meters) of the project activities. If access to areas with suitable habitat is restricted, the biologist shall visually survey with a spotting scope, binoculars, or other visual techniques.

If an occupied burrow is identified, the CPUC-approved qualified biologist shall immediately implement a minimum 200 meter (656 foot) buffer. Then an appropriate burrow-specific buffer shall be recommended by the CPUC-approved qualified biologist based on the circumstances (e.g., owl tolerance and construction activity level) and as explained by the Staff Report on Burrowing Owl Mitigation (CDFW 2012 or more recent), which shall be approved by the CPUC and then implemented.

In areas where owl presence or owl sign is not found, weekly surveys for burrowing owl and its sign shall be conducted for the remainder of the first breeding season and all

following breeding seasons. Survey areas shall include work areas where construction-related activities are occurring, and surveys shall adhere to the following procedures:

- A CPUC-approved qualified avian biologist shall conduct surveys for nesting birds within 7 days prior to the start of any construction-related activities. Areas shall be re-surveyed every 7 days while construction activities are occurring. If there is no work in an area for 7 days, it shall be considered a new work area if construction resumes. In addition, a CPUC-approved qualified monitor shall conduct pre-construction clearance sweeps for nesting birds at all work areas where suitable habitat is present within approximately 24 hours of construction activities each day during the nesting season.
- Surveys shall be conducted with the appropriate duration, level of effort, and timing based on level of construction disturbance, time of day, and environmental factors. Surveys shall be conducted in the irrigation ditch, and any area with suitable habitat within 656 feet (200 meters) of project activities, at a minimum. If access to areas with suitable habitat is restricted, the biologist shall visually survey with a spotting scope, binoculars, or other visual techniques.
- Surveys shall be conducted at a minimum between February 1 and September 15; however, the survey season may need to begin earlier or end later depending on species and weather conditions.
- Survey results shall be provided to the CPUC each week.

MM BIO-7: Specific Requirements for Special Status Raptors (Supersedes APM BIO-12). A CPUC-approved qualified avian biologist shall conduct pre-construction surveys for Swainson's hawk and white-tailed kite in appropriate habitat within 0.5 miles of project construction activities prior to the start of construction during breeding season (i.e., the "first" breeding season). The avian biologist shall be familiar with the survey methods and biology of these species. Surveys for Swainson's hawk shall follow the protocols outlined in the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (CDFW 2000a or more recent).

If an active nest (i.e., when nest decoration begins) is identified within 0.5 miles of construction activities, then a CPUC-approved qualified avian biologist shall implement a 0.5 miles buffer around the nest. The CPUC and CDFW shall be informed of the nest as soon as possible (and within 48 hours). Requests to reduce standard buffers must be sent to the CPUC to be reviewed in coordination with CDFW.

If no indication of Swainson's hawk or white-tailed hawk nesting (indications include vocalizations or observations of nesting activities, nests, perched adults, displaying adults, eggs, chicks) is found during protocol-level surveys, weekly surveys for nesting Swainson's hawk and white-tailed kite shall be conducted for the remainder of the

breeding season in all work areas where any construction-related activities are occurring, according to the following procedures:

- A CPUC-approved qualified avian biologist shall conduct surveys for nesting birds within 7 days prior to the start of any construction-related activities. Areas shall be re-surveyed every 7 days while construction activities are occurring. If there is no work in an area for 7 days, it shall be considered a new work area if construction resumes. In addition, a CPUC-approved qualified monitor shall conduct pre-construction clearance sweeps for nesting birds at all work areas where suitable habitat is present within approximately 24 hours of construction activities each day during the nesting season.
- Surveys shall be conducted with the appropriate duration, level of effort, and timing based on level of construction disturbance, time of day, and environmental factors. Survey areas shall include work areas and a 500-foot buffer, at a minimum.
- Surveys shall be conducted at a minimum between February 1 and September 15; however, the survey season may need to begin earlier or end later depending on species and weather conditions.
- Survey results shall be provided to the CPUC each week.

During subsequent breeding seasons following the first season, reconnaissance surveys for Swainson's hawk and white-tailed kite shall be performed in appropriate habitat and at the appropriate time within 0.5 miles of project construction activities in order to detect any new nesting activity. If no indication of nesting is found during reconnaissance surveys, weekly surveys for nesting Swainson's hawk and white-tailed kite shall be conducted for the remainder of the breeding season in all work areas where any construction-related activities are occurring (following procedures in the bullet points above).

Cultural Resources

MM CUL-1: Cultural Resources Monitoring and Treatment (supersedes APM CUL-3). A CPUC-approved archaeologist that meets the Secretary of Interior's Professional Qualifications Standards for archaeology shall implement the following procedures if an unanticipated cultural resource is discovered during construction.

Work shall be halted and excluded from within 100 feet of the resource. Protective barriers shall be installed with signage identifying the area as an "environmentally sensitive area." The CPUC shall be notified of the find. The CPUC will notify parties who have requested notification of the find to the extent allowed, in consideration of confidentiality requirements. Total avoidance of the resource is preferred, and no

additional mitigation is necessary if it is avoided. The resource shall be recorded on California Department of Parks and Recreation 523 forms and filed at the South San Joaquin Valley Information Center.

If the resource cannot be avoided, the CPUC-approved archaeologist shall determine in consultation with the CPUC if there is a potential for the resource to be historical (CEQA Guidelines section 15064.5(a)) or a unique archaeological resource (Public Resources Code 21083.2(g)). The CPUC must provide a response to the CPUC-approved archaeologist within seven days regarding a resource that the CPUC-approved archaeologist has found not to be potentially historical or a unique archaeological resource. If the resource is not potentially a historical or unique archaeological resource, work can resume after the CPUC's concurrence. If the resource is potentially a historical or unique archaeological resource, the CPUC-approved archaeologist shall prepare an Evaluation Plan that details the procedures to be used to determine whether the resource is a historical or unique archaeological resource. The Evaluation Plan shall be submitted to the CPUC for review. The CPUC will approve or request changes to the Evaluation Plan within 7 days of submittal by PG&E. Once approved, the Evaluation Plan shall be implemented, and a report shall be prepared that indicates whether the resource is a historical resource or unique archaeological resource. If the discovery is not historical or a unique archaeological resource and the CPUC concurs with that determination, work may proceed in the area of the discovery. If the discovery is historical or a unique archaeological resource, PG&E shall prepare a Data Recovery Plan that would reduce impacts to less than significant.

The Data Recovery Plan shall be prepared in accordance with CEQA Guidelines section 15126.4(b)(3)(C) and PRC section 21083.2 and shall describe methods that will yield relevant information. The Data Recovery Plan shall be submitted to the CPUC for review and approval. The CPUC will approve or request changes to the Data Recovery Plan within 7 days of submittal by PG&E. Once approved, the applicant shall implement the plan. When the field work is completed, a Data Recovery Field Memo shall be prepared that briefly describes the data and materials recovery. The Data Recovery Field Memo shall be submitted to the CPUC for review and approval. The CPUC will approve or request changes to the Data Recovery Field Memo within 7 days of submittal by PG&E. Once the Data Recovery Field Memo has been approved, construction may proceed in the area of the discovery. A more detailed Data Recovery Report shall be prepared within 90 days of the Data Recovery Field Memo. The Data Recovery Report shall present thorough results of the data recovery efforts, conclusions drawn from the work, and where materials will be curated and shall also contain completed California Department of Parks and Recreation 523 forms. The Data Recovery Report shall be submitted to the CPUC for review and approval. Once approved, the Data Recovery Report and 523 forms shall be filed with the South San Joaquin Valley Information Center.

MM CUL-2: Worker Education Program (supersedes APM CUL-1, supplements APM CUL-4). PG&E shall design and implement a Worker Education Program that shall be provided to all project personnel who may encounter and/or alter historical resources or unique archaeological resources, including construction supervisors and field personnel. No construction worker will be involved in field operations without having participated in the Worker Education Program. The Worker Education Program shall include, at a minimum:

- A review of archaeology, history, prehistory and Native American cultures associated with historical resources in the project vicinity;
- A review of the types of resources that could be uncovered in the area, including historical artifacts associated with the nonextant historical complex at the Sanger Substation site;
- A review of applicable local, state, and federal ordinances, laws, and regulations pertaining to historic preservation and Native American resources;
- A discussion of procedures to be followed in the event that unanticipated cultural resources or human remains are discovered during implementation of the project;
- A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and PG&E policies; and
- A statement by the construction company or applicable employer agreeing to abide by the Worker Education Program, PG&E policies and procedures, and other applicable laws and regulations.

MM CUL-3 (supersedes APM PAL-2): Unanticipated paleontological resource discovery protocol. If a previously unidentified paleontological resource is discovered during construction, PG&E shall immediately require that work be halted within 100 feet of the resource; measures be put in place to prevent further impacts to the resources, such as protective barriers and/or signs, and/or coverings; that PG&E's CPUC-approved Cultural Resources Specialist (CRS) and paleontological resource specialist be notified; and that the CRS notify the CPUC. PG&E's CPUC-approved paleontological resource specialist shall examine the find and determine whether it is unique under Part V of CEQA Guidelines Appendix G. The CPUC-approved paleontologist may develop significance criteria for the fossils likely to be yielded by the Riverbank Formation, subject to CPUC-approval (such criteria will be documented in the PRMMP discussed in MM CUL-4). In the absence of other agreed-upon criteria, a paleontological resource shall be considered unique if it meets the definition of a significant paleontological resource under the 2010 Society of Vertebrate Paleontology *Standard Procedures for the Assessment of Adverse Impacts to Paleontological Resources* definition:

Significant paleontological resources are fossils and fossiliferous deposits, here defined as consisting of identifiable vertebrate fossils, large or small, uncommon invertebrate, plant, and trace fossils, and other data that provide taphonomic, taxonomic, phylogenetic, paleoecologic, stratigraphic, and/or biochronologic information. Paleontological resources are considered to be older than recorded human history and/or older than middle Holocene (i.e., older than about 5,000 radiocarbon years).

The results of the evaluation will be submitted to the CPUC, and the CPUC must determine whether or not the resource is unique. The CPUC must respond in writing within seven days stating whether the resource is unique and provide reasoning if it disagrees with the conclusion. If the resource is determined not to be unique, work may commence in the area. If the resource is significant and can be avoided and thus not impacted, PG&E shall document the resource in accordance with professional standards, continue to flag the area for avoidance during construction, and take no further action. Preservation in place, i.e., avoidance, is the preferred method of mitigation for impacts to unique paleontological resources. However, if the resource is unique and cannot feasibly be avoided, PG&E shall consult with the CPUC to determine appropriate mitigation measures. Mitigation methods may include ensuring that fossils are recovered, prepared, identified, catalogued, and analyzed according to current professional standards under the direction of a qualified paleontologist. Methods of recovery, testing, and evaluation shall adhere to current professional standards for recovery, preparation, identification, analysis, and curation, such as the 2010 Society of Vertebrate Paleontology *Standard Procedures for the Assessment of Adverse Impacts to Paleontological Resources*. Work may commence after data recovery (if undertaken) and upon approval by the CPUC.

MM CUL-4 (supersedes APM PAL-3): Paleontological Resources Monitoring and Mitigation Plan. A qualified professional paleontologist shall prepare a Paleontological Resources Monitoring and Mitigation Plan (PRMMP) for the project before the onset of ground disturbing activities. The PRMMP shall be submitted to the CPUC for review and approval at least 30 days prior to the start of any excavation to 5 feet below ground surface. PG&E's CPUC-approved paleontological resource specialist shall direct implementation of the PRMMP.

The PRMMP shall include full-time monitoring of excavations extending more than 5 feet deep and auguring/boring extending to more than 5 feet deep and more than 3 feet in diameter, or in lieu of full-time monitoring, the PRMMP shall include the following requirements:

Initial Monitoring:

1. Prior to the start of construction, PG&E's CPUC-approved paleontological resource specialist shall identify a minimum number and array of excavation types

(i.e. TSP foundation drilling, grading, retention pond) extending more than 5 feet deep and auguring/boring extending to more than 5 feet deep and more than 3 feet in diameter sufficient to obtain data to determine whether the project area is likely to yield significant paleontological resources. The placement of the locations requiring monitor will be developed by the paleontologist in consultation with PG&E's construction team, and will focus on volume of soil to be disturbed to produce a representative sample. The PRMMP shall identify the methods used (e.g., microscopic examination of matrix samples, visual examination of excavated material) to make the determination.

2. At all sites identified by PG&E's CPUC-approved paleontological resource specialist, a CPUC-approved paleontological field monitor shall monitor the excavation and auguring during the initial stages of construction (i.e., from the beginning of construction until a determination is made after initial monitoring as described in this item) to determine whether the project area is likely to yield significant paleontological resources.

Subsequent Monitoring: The results of initial monitoring shall be described in a memo, to be submitted to CPUC for review and approval. CPUC will review and either request revisions or approve the memo within 2 business days of submittal by PG&E. PG&E shall not reduce or stop monitoring until CPUC approves the memo. Based on the results of initial monitoring, the following measures shall be required and described in the PRMMP:

- If PG&E's CPUC-approved paleontological resource specialist determines that no part of the project area is likely to yield significant paleontological resources, further monitoring shall not be required. PG&E must still make available the paleontological resource specialist and paleontological field monitor (available to go to the work site as needed). Training provided pursuant to APM PAL-1 will enable work crews to identify likely fossils, and inform the appropriate parties if such deposits are identified.
- If PG&E's CPUC-approved paleontological resource specialist discovers significant paleontological resources or determines the project area is likely to yield significant paleontological resources, then continued monitoring shall be required as deemed appropriate by the paleontological resource specialist, in consultation with the CPUC and PG&E's construction team, based on the nature, location, and geologic context of the fossil(s), as well as the potential for further disturbance.

If a paleontological resource is discovered at any time during initial monitoring, continued monitoring, or unmonitored construction, PG&E shall notify the CPUC

immediately and the paleontological resource specialist will inspect the matrix for fossils. If a paleontological resource is discovered, MM CUL-3 shall be implemented.

MM CUL-5: Undiscovered potential Tribal Cultural Resources. The following procedure shall be employed (after stopping work and following the procedure for determining eligibility in MM CUL-1) if a resource is encountered and determined by the project's qualified archaeologist to be eligible for the CRHR or a local register of historic resources and is associated with a California Native American Tribe(s) with a traditional and cultural affiliation with the geographic area of the proposed project:

- The project's qualified archaeologist shall notify the CPUC for appropriate action. PG&E will assist the CPUC if needed to identify the lead contact person for the California Native American Tribe(s) potentially associated with the cultural resource and with a traditional and cultural affiliation with the geographic area of the proposed project. The CPUC will contact the lead contact person to set up a meeting with PG&E and the CPUC.
- The project's qualified archaeologist shall participate with the CPUC in discussions with the California Native American Tribe(s) whether the resource is a "tribal cultural resource" as defined by PRC section 21084.3(b) and the tribe(s)' preferred method of mitigation, if the resource is determined to be a TCR.
- If no agreement can be reached for mitigation after discussions with the California Native American Tribe(s) or it is determined that the tribe(s)' preferred mitigation is not feasible, PG&E will implement one of the example mitigation measures listed in PRC section 21080.3(b), or other feasible mitigation.

Hazards and Hazardous Materials

MM HAZ-1: Hazardous Materials Management Plan (supersedes APM HAZ-2 and APM HAZ-4). Prior to construction, the applicant shall prepare a Hazardous Materials Management Plan, which shall be implemented during construction to prevent the release of hazardous materials and hazardous waste. The plan shall include the following requirements and procedures:

1. Training requirements for construction workers in appropriate work practices, including spill prevention and response measures. Additional training requirements for those performing excavation activities shall be required and shall include training on types of contamination and contaminants (e.g., petroleum hydrocarbons, asbestos, and hazardous materials [as defined by the California HSC]) and identifying potentially hazardous contamination (e.g., stained or discolored soil and odor).

2. Contain all hazardous materials at work sites and properly dispose of all such materials.
 - a. Hazardous materials shall be stored on pallets within fenced and secured areas and protected from exposure to weather and further contamination.
 - b. Fuels and lubricants shall be stored only at designated staging areas.
3. Maintain hazardous material spill kits for small spills at all active work sites and staging areas. Thoroughly clean up all spills as soon as they occur.
4. Store sorbent and barrier materials at all construction staging areas, including staging areas used during activities for decommissioning. Sorbent and barrier materials will be used to contain runoff from contaminated areas and from accidental releases of oil or other potentially hazardous materials.
5. Perform all routine equipment maintenance at a shop or at the staging area and recover and dispose of wastes in an appropriate manner.
6. Monitor and remove vehicles used for construction-related activities with chronic or continuous leaks from use and complete repairs before returning them to operation.
7. Store shovels and drums at the staging areas. If small quantities of soil become contaminated, use shovels to collect the soil and store in drums before proper offsite disposal. Large quantities of contaminated soil may be collected using heavy equipment and stored in drums or other suitable containers prior to disposal. Should contamination occur adjacent to staging areas because of runoff, shovels and/or heavy equipment shall be used to collect the contaminated material. Only trained construction workers shall handle hazardous, and potentially hazardous, materials.
8. Transporting, shipping, and disposal procedures for hazardous waste.
9. Procedures for notifying applicant and agency personnel in the event of the discovery of contaminated soil and/or groundwater. Contact information for federal, regional, and local agencies, the applicant's environmental coordinator(s) responsible for the cleanup of contaminated soil or groundwater, and licensed disposal facilities and haulers.

This plan will be submitted to the CPUC for review and approval at least 30 days prior to the start of construction of the proposed project.

MM HAZ-2: Fire Control Measures. PG&E shall implement the following measures prior to and during work at the Fence Meadow Repeater Station:

1. As part of the Worker Training Program, workers will be trained in fire prevention and response practices to be implemented to minimize the risk of fire, and in the event of fire, trained to provide immediate response. At minimum, construction personnel shall be trained in fire reporting and incipient-stage fire prevention, control, and extinguishing (i.e., the fire can be controlled or extinguished by portable fire extinguishers, small hose systems, or portable water supplies without the need for protective clothing or breathing apparatus.)
2. Prohibit smoking at the worksites other than in designated areas chosen that are free of ignitable material. Require disposal of cigarette butts in a way that will not ignite vegetation or other materials.
3. Ensuring an appropriate fire extinguisher is present before initiating and during each hot-work activity (e/g/, welding, brazing, soldering, grinding, and arc cutting).
4. Preventing vehicles with hot exhaust manifolds from idling on roads with combustible vegetation under the vehicles.
5. Do not park vehicles in areas with vegetation prone to ignition.
6. Equip all vehicles with a fire extinguisher.

Transportation and Traffic

MM TRAN-1: Traffic Management Plan (supersedes APM TRAN-1). A Traffic Management Plan shall be prepared upon determination of the final construction schedule and precise locations and durations of lane closures and other project details. Measures to be included in the plan that would allow for:

- Safe vehicle passage shall adhere to the California Manual on Uniform Traffic Control Devices.
- Avoidance of truck queuing on South McCall Avenue of trucks waiting to enter the substation construction site.

Potential measures include:

- Flaggers and/or signage to halt traffic and direct traffic at lane closures and to allow traffic to pass when construction is halted.
- Scheduling lane closures at off-peak times.

- Notification of emergency services providers of the timing, location, and duration of lane closures.
- Requirement that emergency vehicle access is maintained at all times.
- Scheduling construction deliveries and employee arrival to be spread out throughout the day.
- Implementing traffic control within the substation site to move vehicles to allow arriving vehicles to enter the site.

The Traffic Management Plan shall also include the following measures:

- **Limit Vehicle Speeds:** Vehicle speeds shall be limited to 15 miles per hour on unpaved roadways used to access the site during construction. PG&E shall notify owners of property on which internal access roads are located at least one week in advance that the internal access road will be used for construction traffic.
- **Slow Truck Warning:** During truck delivery and exit hours, PG&E shall post signage at appropriate locations (e.g., along South McCall and East Jensen Avenues) warning drivers when there is a possibility for slow trucks to exit the substation site onto South McCall Avenue. Signage shall adhere to the California Manual on Uniform Traffic Control Devices.
- **Road Damage Repair:** PG&E shall repair to pre-project conditions any roads damaged by project vehicle traffic. PG&E shall document roadway conditions with photographs prior to project activities along East Jensen Avenue and South McCall Avenue adjacent to the project area and extending 0.25 miles from the project area. PG&E shall also take photographs after the project is completed and after any repairs that document restoration of pre-project pavement conditions.
- **Emergency Service Provider Notification:** PG&E shall notify the provider of the location, date, time, and duration of the lane closure. PG&E shall make provisions to maintain emergency vehicle access at all times in coordination with local emergency service providers, such as allowing for bypass of slow vehicle traffic during lane closures.

To the extent that compliance with applicable permit requirements, e.g., obtaining the required encroachment permit from Fresno County, would reduce identified significant traffic impact(s) consistent with the performance standards set forth in MM TRAN-1, PG&E may submit such permit(s) in lieu of addressing that impact, subject to review and approval by CPUC prior to the start of construction.

(END OF ATTACHMENT)