

Decision 20-06-037 June 25, 2020

**BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA**

Application of PACIFIC GAS AND ELECTRIC COMPANY (U39E) for a Certificate of Public Convenience and Necessity Authorizing the Construction of the Egbert Switching Station Project.

Application 17-12-021

**DECISION GRANTING CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY AUTHORIZING CONSTRUCTION OF THE EGBERT SWITCHING STATION PROJECT**

**Summary**

This decision grants Pacific Gas and Electric Company a certificate of public convenience and necessity authorizing the construction of the Egbert Switching Station Project with the environmentally superior project alternative and all mitigation measures identified in the final Environmental Impact Report for this project. This proceeding is closed.

**1. Background**

Pacific Gas and Electric Company (PG&E) filed Application 17-12-021 to request a certificate of public convenience and necessity (CPCN) to construct the Egbert Switching Station Project on December 28, 2017. The proposed project

includes construction, operation, and maintenance of a new 230 kilovolt (kV) switching station to be located in the Portola Place District in the City and

County of San Francisco, along with new transmission lines leading to the station. The proposed project would provide another path to serve customers in San Francisco in the event that the existing substation and/or existing transmission lines become inoperable due to an extreme event.

The proposed project would include the following components:<sup>1</sup>

- Egbert Switching Station: A new 230 kV switching station, housed in an approximately 11,000-square-foot building, would be constructed on a 1.7-acre parcel at 1755 Egbert Avenue, San Francisco.
- Jefferson-Egbert Transmission Line: A new approximately 3.1-mile 230 kV underground transmission line would be installed between an existing Jefferson-Martin transmission line vault near the intersection of Guadalupe Canyon Parkway and Carter Street in the City of Brisbane, and the proposed Egbert Switching Station in the City and County of San Francisco.
- Egbert-Embarcadero and Martin-Egbert Transmission Lines: Two new 230 kV transmission line segments, each approximately 0.4 miles long, would be installed between the proposed Egbert Switching Station and the existing Martin-Embarcadero transmission line near the intersection of Bayshore Boulevard and Bacon Street.
- Existing Martin Substation: Once the proposed switching station and transmission lines are constructed and operational, the Jefferson transmission line terminal and associated equipment at Martin Substation would be removed.
- Existing Embarcadero and Jefferson Substations: Minor modifications for protection and control of the rerouted

---

<sup>1</sup> See the Final EIR for the proposed project at ES-2.

existing Jefferson and Embarcadero transmission lines would occur at the existing Embarcadero and Jefferson Substations.

On April 3, 2018, the assigned Commissioner issued a scoping memo to identify the issues to be considered in this proceeding and to direct interested stakeholders to participate in the California Environmental Quality Act (CEQA) public comment process for the proposed project.

The California Public Utilities Commission (Commission) prepared a Final Environmental Impact Report (EIR) pursuant to the CEQA for the proposed project. The Commission issued the notice of availability of this Final EIR on December 23, 2019.<sup>2</sup>

The Commission held a prehearing conference on February 20, 2020 to discuss the scope of the proceeding and determine the need for hearing and schedule for resolving the matter. At the prehearing conference (PHC), PG&E expressed its support for the environmentally superior project alternative identified in the Final EIR. PG&E also affirmed that it had no concerns about the feasibility of the environmentally superior project alternative or any mitigation measures identified in the Final EIR.

On March 4, 2020, the assigned Commissioner issued a supplemental scoping memo. Since this application is uncontested, the scoping memo determined that no hearing was necessary. The scoping memo also directed PG&E to file a declaration with an updated estimate of the maximum cost of the

---

<sup>2</sup> [https://www.cpuc.ca.gov/environment/info/dudek/egbert/Egbert\\_FEIR\\_Dec2019.pdf](https://www.cpuc.ca.gov/environment/info/dudek/egbert/Egbert_FEIR_Dec2019.pdf)

proposed project and determined that the case would be submitted upon the filing of such declaration.

On April 30, 2020, PG&E timely filed a declaration with an updated estimate of the maximum cost of the proposed project, including the environmentally superior project alternative and all mitigation measures identified in the Final EIR.

## **2. Issues Before the Commission**

Pursuant to Public Utilities Code (Pub. Util. Code) § 1001 et seq., PG&E may not proceed with the proposed project absent certification by the Commission that the present or future public convenience and necessity require it, and the Commission shall determine the maximum cost of the approved project.

Under General Order (GO) 131-D, the Commission conducts this review through the process established by CEQA. The Commission, as the lead agency for review of this project, conducted a review to identify environmental impacts of the project, and ways to avoid or reduce environmental damage, for consideration in the determination of whether to approve the project or a project alternative. The Commission issued a Final EIR for this project that identifies the environmental impacts of the project, along with an environmentally superior project alternative and appropriate mitigation measures.

In accordance with CEQA, the Commission will consider the feasibility of an identified environmentally superior project alternative and all identified mitigation measures, and if there are unavoidable significant impacts, whether there are overriding considerations that merit project approval. In addition,

pursuant to General Order (GO) 131-D and Decision (D.) 06-01-042, the Commission will not approve 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.

Accordingly, the issues before the Commission are as follows:

- a. Did the Commission review and consider the EIR, was the EIR completed in compliance with CEQA, and does the EIR reflect the Commission's independent judgment?
- b. Does the EIR identify mitigation measures and/or an environmentally superior project alternative that will eliminate or lessen the identified significant environmental impacts? Are any of these mitigation measures and/or project alternative infeasible?
- c. Does the proposed project serve a present or future public convenience and necessity? To the extent that the proposed project and/or project alternatives result in significant and unavoidable impacts, are there overriding considerations that nevertheless merit Commission approval of the proposed project or project alternative?
- d. Is the proposed project and/or environmentally superior project alternative designed in compliance with the Commission's policies governing the mitigation of EMF effects using low-cost and no-cost measures?
- e. If a certificate is granted, what is the maximum cost of the approved project?

### **3. Environmental Review**

We have reviewed and considered the EIR and find that substantial evidence supports the EIR's findings. We certify that the Commission completed the EIR in accordance with CEQA, and that the EIR reflects our independent judgement.

The Commission's environmental review was completed after notice and opportunity for public comment. On November 16, 2018, the Commission published a Notice of Preparation (NOP) of an EIR for the project and invited public comments, due on December 17, 2018. The Commission held a public informational meeting in Brisbane on December 3, 2018 and published a scoping report on January 30, 2019. The Commission released a Draft EIR for public review on September 30, 2019, for a 45-day public review period, ending November 14, 2019.

The Final EIR, released on December 23, 2019, documents and addresses all public comment letters received by the Commission during the 45-day public review period.<sup>3</sup> The Final EIR includes mitigation measures for environmental impacts and an environmentally superior project alternative.

#### **4. Mitigation Measures**

We find that the mitigation measures identified in the Final EIR are feasible. In Table ES-1 in Section ES-7 of the Final EIR, the Commission summarized the environmental impacts and feasible mitigation measures that the Commission identified for the proposed project.<sup>4</sup> At the PHC, PG&E affirmed that it had no concerns about the feasibility of the mitigation measures identified in the Final EIR.

---

<sup>3</sup> Table 2-1 of the Final EIR lists all comment letters received by the Commission during the Draft EIR review period. The following stakeholders submitted comments: California Department of Transportation, the Governor's Office of Planning and Research, Bayshore Sanitary District, Pacific Gas & Electric, Steve Gowin, Stephanie Gowin and Wallis Wong.

<sup>4</sup> The list of feasible mitigation measures from the Final EIR is also attached to this decision.

The Final EIR found that the proposed project would not have any significant environmental impacts that cannot be mitigated to a less than significant level with the mitigation measures identified in the Final EIR, except for a potentially significant Class I land use impact associated with the Sunnydale HOPE Master Plan development project (see Section 4 below).

### **5. Environmentally Superior Project Alternative**

We find that the environmentally superior project alternative identified in the Final EIR is feasible and would address the potentially significant Class I land use impact associated with the Sunnydale HOPE Master Plan development project.

In Section E-3 of the Final EIR, the Commission identified the Sunnydale Option A Alternative as the environmentally superior project alternative since it would avoid the Class I land use impact associated with the proposed project and not create any substantially greater impacts as compared to the proposed project.<sup>5</sup> Under this alternative, the project would largely remain the same as the proposed project, other than construction of a segment of the proposed Jefferson-Egbert transmission line that avoids impacts to the Sunnydale HOPE Master Plan development project. Although the segment would be approximately 0.6 miles longer than the proposed project segment, most impacts would be similar to the proposed project, with the exception of air quality, energy, and GHG emissions, which would marginally increase due construction activities for undergrounding

---

<sup>5</sup> The Final EIR also discussed the No Project Alternative and determined that not constructing the project would eliminate environmental impacts but also would not achieve the project's reliability and resilience objectives.



the longer transmission line. The slight increase in impacts to air quality, energy, and GHGs during construction of the Sunnydale Option A Alternative would be considered temporary and not significant.

At the PHC, PG&E expressed its support for the environmentally superior project alternative identified in the final EIR and affirmed that it had no concerns about the feasibility of this environmentally superior project alternative.

## **6. Public Need for Project**

We find that the proposed project serves a public need.<sup>6</sup> In the Final EIR, the Commission found that the proposed project would address reliability concerns for the San Francisco Peninsula.

Section A-3 of the Final EIR described the reliability issue and the need for the project. Electricity customers on the San Francisco Peninsula are currently served by only two sources: Martin Substation's 230 kV and 115 kV systems from the south, and the Trans Bay Cable LLC Trans Bay Cable from the east. Should the transmission systems at Martin Substation be rendered inoperable, the Trans Bay Cable, if it functions properly, could only supply approximately 46% of San Francisco's typical weekday electrical needs. A loss of operation of the Martin Substation would result in blackouts and rotating outages in San Francisco until the infrastructure at Martin Substation could be repaired. The proposed project would address the San Francisco Peninsula's reliability

---

<sup>6</sup> Since the proposed project does not result in significant impacts after inclusion of the environmentally superior project alternative and all mitigation measures, we do not need to determine whether there are overriding considerations that nevertheless merit Commission approval of the proposed project or project alternative.

concerns by reconfiguring the existing 230 kV transmission lines terminating at the Martin Substation to provide a new 230 kV path bypassing the Martin Substation to the new Egbert Switching Station. This would provide an alternative source for the San Francisco Peninsula that, together with the Trans Bay Cable, could support 100% of its power demands even if the Martin Substation is not operational.

The California Independent System Operator Board approved the proposed project based on recommendations from its staff in the 2014–2015 Transmission Planning Process. The California Independent System Operator Board concluded that the proposed project was needed to increase the reliability and resiliency of the San Francisco Peninsula in case of an extreme event that could render the electric transmission system at the Martin Substation inoperable.

The Commission found in Section C-6.7 of the Final EIR that it would not be feasible to meet the project's objectives with demand side alternatives to the proposed project, such as distributed generation, energy efficiency, demand response, and energy storage. Demand side alternative programs would not occur at a scale that would eliminate the need for the energy delivered by the Martin Substation to the San Francisco region (350 megawatt (MW)).

## **7. EMF Policy Compliance**

The Commission has examined EMF impacts in several previous proceedings.<sup>7</sup> We found 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. Because there is no agreement among scientists that exposure to EMF creates any potential health risk, and because CEQA does not define or adopt any standards to address the potential health risk impacts of possible exposure to EMFs, the Commission does not consider magnetic fields in the context of CEQA and determination of environmental impacts.

However, recognizing that public concern remains, we do require, pursuant to GO 131-D, Section X.A, that all requests for a CPCN 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.

In Section D-16 of the Final EIR, the Commission found that the proposed project incorporates low-cost and no-cost EMF mitigation measures consistent with D.93-11-013 and D.06-01-042.

## **8. Maximum Cost of Project**

Pub. Util. Code § 1005.5(a) requires that, whenever the Commission issues a certificate authorizing an electrical or gas corporation to construct plant

---

<sup>7</sup> See D.06-01-042 and D.93-11-013.

estimated to cost greater than \$50 million, it specifies a maximum cost determined to be reasonable and prudent for the facility.

In its declaration filed on April 30, 2020, PG&E estimated the maximum reasonable cost for the Project to be \$294.65 million, including \$59 million for contingencies. We find that this is a reasonable and prudent maximum cost for the facility.

This estimate is higher than the estimate that PG&E provided in its application in 2017.<sup>8</sup> PG&E asserts in its declaration that the primary drivers of the project cost increases from the estimate included in its application are design changes to implement the environmentally superior project alternative, increases in the cost of land in San Francisco and increases in construction costs.

PG&E estimated that the annual cost to operate and maintain the Project is \$80,000, which is the same as the estimate in the application.

By specifying these maximum costs, the Commission does not waive our authority to review or challenge actual costs incurred for reasonableness and prudence at the Federal Energy Regulatory Commission (FERC). In furtherance of our interest in exercising this authority, we direct PG&E to submit, pursuant to GO 96-B, quarterly information-only submittals to Energy Division reporting on the status of project development and spending.

Under Section 1005.5(b), PG&E must apply to the Commission for a determination of the reasonableness of any costs in excess of the adopted

---

<sup>8</sup> PG&E's application included a project cost estimate of \$260,856,348, including contingencies.

maximum cost. We direct PG&E to notify Energy Division as soon as it reasonably anticipates that the project costs will exceed the maximum cost and, within three months thereafter, to apply to the Commission for a determination of the reasonableness of such excess costs.

### **9. Waiver of Comment Period**

This is an uncontested matter where the 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.

### **10. Assignment of Proceeding**

Liane Randolph is the assigned Commissioner and Stephanie S. Wang is the assigned Administrative Law Judge in this proceeding.

### **Findings of Fact**

1. The Commission completed the Final EIR for the proposed project in accordance with CEQA. The Final EIR for the proposed project reflects the Commission's independent judgement.
2. The mitigation measures identified in the Final EIR for the proposed project are feasible.
3. The environmentally superior project alternative identified in the Final EIR for the proposed project is feasible.
4. The proposed project would not have any significant environmental impacts that cannot be mitigated to a less than significant level with the mitigation measures and the environmentally superior project alternative identified in the Final EIR.

5. The proposed project would serve a public need by addressing reliability concerns for the San Francisco Peninsula.

6. The maximum reasonable cost for the proposed project is \$294.65 million, including \$59 million for contingencies.

7. This application is uncontested.

### **Conclusions of Law**

1. The mitigation measures included in the Mitigation Monitoring and Reporting Program attached to this decision should be adopted.

2. The environmentally superior project alternative identified in the Final EIR should be required.

3. The proposed project complies with the Commission's policies on EMF mitigation measures.

## **O R D E R**

### **IT IS ORDERED** that:

1. The applicant, Pacific Gas & Electric Company, is granted a certificate of public convenience and necessity authorizing the construction of the Egbert Switching Station Project, with the environmentally superior project alternative and all mitigation measures identified in the final Environmental Impact Report for this project, in conformance with the Mitigation Monitoring and Reporting Program attached to this decision.

2. The California Public Utilities Commission's Energy Division (Energy Division) may approve requests by Pacific Gas & Electric Company (PG&E) for minor project refinements that may be necessary due to final engineering of the Egbert Switching Station Project so long as such minor project refinements are

located within the geographic boundary of the study area of the Final Environmental Impact Report 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 today's decision.

3. The maximum reasonable cost for the Egbert Switching Station Project is \$294.65 million, including \$59 million for contingencies.

4. Pacific Gas & Electric Company shall notify the Energy Division as soon as it reasonably anticipates that Egbert Switching Station Project costs will exceed the adopted maximum reasonable cost and, within three months thereafter, apply to the Commission for a determination of the reasonableness of such excess costs pursuant to Public Utilities Code § 1005.5(b).

5. Application 17-12-021 is closed.

This order is effective today.

Dated June 25, 2020, at San Francisco, California

MARYBEL BATJER

President

LIANE M. RANDOLPH

MARTHA GUZMAN ACEVES

CLIFFORD RECHTSCHAFFEN

GENEVIEVE SHIROMA

Commissioners

Table 1 shows the mitigation monitoring, compliance, and reporting program for the PG&E Egbert Switching Station (Martin Substation Extension) Project. The CPUC is responsible for ensuring compliance with provisions of the monitoring program. In addition to the project mitigation measures (highlighted in light green), the Applicant Proposed Measures (APMs) that are incorporated as part of the proposed project are listed in the following table.

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers  | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions                 | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions       |
|-------------------|--|--|---|--------------------------------------|
| <i>Aesthetics</i> |  |  |   |                                      |
| APM AE-1          | <b>Nighttime Lighting to Minimize Potential Visual Impacts.</b> Because much of the switching station equipment will be located within an enclosed structure, the proposed switching station will have less outdoor lighting than at a conventional outdoor switching station. Design and layout for new outdoor lighting at the switching station will incorporate measures such as use of non-glare or hooded fixtures and directional lighting to reduce spillover into areas outside the switching station site and minimize the visibility of lighting from off-site locations. | PG&E to implement measure as described | CPUC to review lighting design to verify compliance<br>CPUC to verify improvements in the field | Prior to and following construction. |
| APM AE-2          | <b>Construction Cleanup.</b> Construction activities will be kept as clean and inconspicuous as practical. Construction debris will be picked up regularly from construction areas.  | PG&E to implement measure as described | CPUC to perform regular monitoring to verify compliance   | During construction.                 |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers   | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions   |
|--------------------|---|---|--|--|
| <b>MM AE-1</b>     | Pacific Gas & Electric Company (PG&E) shall coordinate with the City and County of San Francisco regarding the installation of landscaping along the perimeter of the switching station site on Egbert Avenue. Landscaping may include low-growing landscaping such as shrubs and groundcover that meet safety and security requirements as determined by the California Public Utilities Commission (CPUC).  | PG&E to implement measure as described  | CPUC to verify City and County of San Francisco participation in the review process through meeting notes  | Prior to construction. Measure applies to switching station perimeter wall.                                  |
| <i>Air Quality</i> |   |   |  |  |
| APM AQ-1           | <p><b>Minimize Fugitive Dust.</b> Consistent with Table 8-2 of the CEQA Guidelines (BAAQMD 2017c), PG&amp;E will minimize dust emissions during construction by implementing the following measures:</p> <ul style="list-style-type: none"> <li>• Water all exposed soil surfaces (e.g., unpaved parking areas, unpaved staging areas, soil piles, graded areas, and unpaved access roads) at least twice daily, except when rains are occurring; or apply non-toxic soil stabilizers such as soil binders, crushed rock, or gravel.</li> <li>• Cover all trucks hauling soil, sand, and other loose materials.</li> <li>• Limit all vehicle speeds on unpaved roads to 15 miles per hour.</li> <li>• All roadways, driveways, and sidewalks to be paved will be completed as soon as possible after grading unless seeding, soil binders, or gravel are used.</li> </ul> | PG&E to implement measure as defined and incorporate commitments into construction contracts. | CPUC to inspect periodically for dust control within and outside of the work area in order to ensure that fugitive dust has been controlled outside the work area. | During construction at all active construction areas, unpaved access roads, parking area, and staging areas. |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria                                       | Timing and Location of Actions                                     |
|------------------|--|--|--|--|
|                  | <ul style="list-style-type: none"> <li>• Sweep streets daily (with water sprayers and brooms or mechanical sweeps, if necessary) if visible soil material is carried onto adjacent public roads.</li> <li>• Post a publicly visible sign with the telephone number and person to contact regarding dust complaints. This person will respond and take corrective action within 48 hours. BAAQMD’s phone number will also be visible to ensure compliance with applicable regulations.</li> </ul> <p>As shown in [PEA] Table 3.3-6 [Table D.3-4 of this EIR], there are no numeric thresholds of significance for fugitive dust. Rather, it is BAAQMD’s opinion that “projects implementing construction best management practices will reduce fugitive dust emissions to a less than significant level” (BAAQMD 2017a). Because the measures included in APM AQ-1 are consistent with Table 8-2 of the CEQA Guidelines (BAAQMD 2017a), construction emissions resulting from fugitive dust are expected to be less than significant. Furthermore, the project is not expected to require implementation of the additional measures from Table 8-3 of the CEQA Guidelines because PM<sub>10</sub> and PM<sub>2.5</sub> exhaust emissions are below the significance thresholds, as described below.</p> |  |  |  |
| APM AQ-2         | <p><b>Minimize Construction Exhaust Emissions.</b> The following measures will be implemented during construction to further</p>   | PG&E to implement measure as defined and incorporate commitment into | CPUC to periodically inspect traffic speeds within the work area in order to ensure that | During construction on all unpaved access roads and along the ROW. |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria                           | Timing and Location of Actions                       |
|------------------|--|---|--|--|
|                  | <p>minimize the less-than-significant construction exhaust emissions:</p> <ul style="list-style-type: none"> <li>• Minimize unnecessary construction vehicle idling time. The ability to limit construction vehicle idling time is dependent upon the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project will apply a “common sense” approach to vehicle use such that idling is reduced as far as possible below the maximum of five consecutive minutes required by regulation (13 CCR 2449 and 2485). If a vehicle is not required for use immediately or continuously for construction activities or for other safety-related reasons, its engine will be shut off.</li> <li>• Maintain all construction equipment in accordance with manufacturer’s specifications. Check all equipment using a certified mechanic, and confirm that equipment is in proper condition prior to operation.</li> </ul> | <p>construction contracts.</p>                                  | <p>fugitive dust has been controlled outside the work area.</p>              |  |
| <p>APM AQ-3</p>  | <p><b>Minimize Potential Naturally Occurring Asbestos Emissions.</b> The following measures will</p>   | <p>PG&amp;E to implement measure as defined and incorporate</p> | <p>CPUC to verify in the field. Effectiveness criteria – actively graded</p> | <p>During construction at actively graded areas.</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions                         | Monitoring Requirements and Effectiveness Criteria                    | Timing and Location of Actions |
|------------------|--|--|---|--------------------------------|
|                  | <p>be implemented prior to and during construction to minimize the potential for NOA emissions:</p> <ul style="list-style-type: none"> <li>• Prior to commencement of construction, samples of the proposed Jefferson-Egbert Transmission Line construction areas within the serpentine (Sp) stratigraphic unit will be analyzed for presence of asbestos, serpentinite, or ultramafic rock.</li> <li>• If asbestos, serpentinite, or ultramafic rock is determined to be present at the specific project location, implement all applicable provisions of the Asbestos ATCM for Construction, Grading, Quarrying, and Surface Mining Operations (17 CCR 93105), including the following:<br/>For disturbed areas of 1 acre or less: <ul style="list-style-type: none"> <li>– Construction vehicle speed at the work site will be limited to 15 miles per hour or less.</li> <li>– Prior to any ground disturbance, sufficient water will be applied to the area to be disturbed to prevent visible emissions from crossing the property line.</li> <li>– Areas to be graded or excavated will be kept adequately wetted to prevent visible emissions from crossing the property line.</li> <li>– Storage piles will be kept adequately wetted, treated with a chemical dust suppressant, or covered when material is not being added to or removed from the pile.</li> <li>– Equipment will be washed down before moving from the property onto a paved public road.</li> </ul> </li> </ul> | <p>commitment into construction contracts.</p> | <p>areas do not exceed a cumulative total of eight acres per day.</p> |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers            | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions   |
|-----------------------------|---|--|---|--|
|                             | <ul style="list-style-type: none"> <li>- Visible track-out on the paved public road will be cleaned within 24 hours using wet sweeping or a High Efficiency Particulate Air filter-equipped vacuum device.</li> <li>- For disturbed areas of more than 1 acre:</li> <li>- Submit an Asbestos Dust Mitigation Plan to BAAQMD, and obtain approval prior to commencement of construction.</li> <li>- Implement and maintain the provisions of the approved Asbestos Dust Mitigation Plan from the beginning of construction through the duration of the construction activity</li> </ul>  |  |   |  |
| <i>Biological Resources</i> |   |  |   |  |
| APM BIO-1                   | <p><b>General Measures.</b> A worker environmental awareness program biological resources module will be conducted for on-site construction personnel prior to the start of construction activities. The module will explain the APMs and any other measures developed to prevent impacts on special-status species, including nesting birds. The module will also include a description of special-status species and their habitat needs, as well as an explanation of the status of these species and their protection under the federal and California ESAs, and other statutes. A brochure will be provided with color photos of sensitive species, as well as a discussion of any permit measures. A copy of the program and brochure will be provided to CPUC at least 30 days prior to the start of construction for project files.</p> | <p>Implement worker awareness program as defined.</p> <p>Prepare weekly monitoring report summarizing biological monitoring activities (include environmental training sign-in sheets, biological monitors assigned to project components, compliance issues/concerns and general observations).</p> <p>Implement CPUC monitoring: Line item</p> | <p>Prior to and during construction</p> <p>During construction</p> <p>During construction</p> | <p>PG&amp;E and CPUC</p> <p>* Applicable to all project components during construction</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|------------------|---|---|---|---|
|                  | <p>This APM also includes the following measures:</p> <ul style="list-style-type: none"> <li>• Environmental Inspector: A qualified environmental inspector will verify implementation and compliance with all APMs. The environmental inspector will have the authority to stop work or determine alternative work practices where safe to do so, as appropriate, if construction activities are likely to impact sensitive biological resources.</li> <li>• Litter and trash management: All food scraps, wrappers, food containers, cans, bottles, and other trash from the project area will be deposited in closed trash containers. Trash containers will be removed from the project work areas at the end of each working day unless located in an existing substation, potential staging area, or the switching station site.</li> <li>• Parking: Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed or developed areas or work areas as identified in this document.</li> <li>• Pets and firearms: No pets or firearms will be permitted at the project site.</li> </ul> | <p>in compliance monitoring report.</p>   |   |   |
| APM BIO-2        | <p><b>Pre-Construction Surveys.</b> If construction is to occur during the avian nesting season (February 1 through August 31), a preconstruction migratory bird and raptor nesting survey will be performed by a qualified biologist. Note that given the urban nature of the project, surveys will be limited in urban areas to along</p>   | <p>Verify biologist qualifications<br/>Conduct nesting bird survey(s) as defined<br/>Implement CPUC monitoring: Line item</p> | <p>Prior to construction<br/>Prior to construction<br/>During construction<br/>Prior to construction/CPUC to review and approve and</p> | <p>PG&amp;E and CPUC<br/>* Applicable to all project components during construction</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions |
|------------------|---|--|--|--------------------------------|
|                  | <p>streets within 50 feet of work with public access; surveys will not occur, for instance, in residential private property or backyards other than what can be observed from the street.</p> <p>If nesting birds are identified in areas susceptible to disturbance from construction activities, PG&amp;E will establish a specific buffer zone to be maintained for that nest. Factors to be considered include intervening topography, roads, development, type of work, visual screening from the nest, nearby noise sources, etc. Buffers will not apply to construction-related traffic using existing roads that are not limited to project-specific use (that is, city streets, highways, etc.). Consideration will also include timing of nesting (that is, if the birds' nests are found in the project area during actual construction).</p> <p>Preconstruction bird nesting surveys will be conducted in the project area no more than 15 days before work is performed in the nesting season. A nest will be determined to be active if eggs or young are present in the nest.</p> <p>Upon discovery of active nests, appropriate minimization measures (e.g., buffers or shielding) will be determined and approved by the PG&amp;E biologist. PG&amp;E's biologist will determine the use of a buffer or shield and work may proceed based upon: acclimation of the species or individual to disturbance, nest type (cavity, tree, ground, etc.), and level and duration of construction activity.</p> <p>In the unlikely event a listed species is found nesting nearby in this urban environment that cannot be</p> | <p>in compliance monitoring report.</p> <p>Document survey efforts in daily log and report to CPUC at the end of each week.</p> <p>Documentation of monitoring active nests on daily basis within buffer areas (within 50 feet of construction activities or as increased by the biologist)</p> <p>CPUC to review and approve/deny decreases in buffer space</p> | <p>make additional recommendations for avoidance prior to issuance of Notice to Proceed</p> <p>During construction</p> |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|---|------------------------|--|--------------------------------|
|                  | <p>avoided, California Department of Fish and Wildlife and U.S. Fish and Wildlife Service will be notified, and CPUC will be provided with nest survey results, if requested. When active nests are identified, monitoring for significant disturbance to the birds will be implemented.</p> <p>Nest checks of active nests will occur each day construction is occurring near the buffer zone. Typically, a nest check will have a minimum duration of 30 minutes, but may be longer or shorter, or more frequent than one check per day, as determined by PG&amp;E's biologist or designated biological monitor based on the type of construction activity (duration, equipment being used, potential for construction-related disturbance) and other factors related to assessment of nest disturbance (weather variations, pair behavior, nest stage, nest type, species, etc.). The biological monitor will record the PG&amp;E construction activity occurring at the time of the nest check and note any work exclusion buffer in effect at the time of the nest check. Non-PG&amp;E activities in the area should also be recorded (e.g., adjacent construction sites, roads, commercial/industrial activities, residential activities, etc.).</p> <p>The biological monitor will record any sign of disturbance to the active nest, including but not limited to parental alarm calls, agitated behavior, distraction displays, nest fleeing and returning, chicks falling out of the nest or chicks or eggs being predated as a result of parental abandonment of the nest. Should the PG&amp;E biological monitor determine project activities are causing or contributing to nest</p> |                        |  |                                |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|------------------|---|--|---|---|
|                  | <p>disturbance that might lead to nest failure, the PG&amp;E biological monitor will coordinate with the Construction Manager to limit the duration or location of work, and/or set other limits related to use of project vehicles, and/or heavy equipment. Should PG&amp;E's biological monitor determine that project activities are not resulting in significant disturbance to the birds, construction activity will continue and nest checks while work is occurring will be conducted periodically.</p>  |  |   |   |
| <p>APM BIO-3</p> | <p><b>Pre-Construction Surveys/Rare Plant Surveys.</b><br/>If the potential Carter Street staging area will be used for the project, a pre-construction survey to assess the site will be conducted. If the area that will be impacted at this potential staging area is covered in gravel, free of vegetation, or covered in ruderal vegetation, then no further vegetation surveys will be conducted at this site prior to its use. If the pre-construction survey identifies that suitable habitat for special-status plants is present, rare plant surveys will be conducted within the staging area. If any special-status plants are observed, they will be fenced off and avoided.</p> | <p>Verify biologist qualifications<br/>Conduct focused surveys as identified<br/>Provide survey report and map of identified and inventoried special-status plant locations if found<br/>Monitor in vicinity of identified special-status plant (qualified biologist) if needed<br/>use fencing, markers or flagging<br/>Implement avoidance measures, if needed<br/>Implement CPUC monitoring: Line item in monitoring report</p> | <p>Prior to construction<br/>Timing is plant-specific<br/>During construction<br/>Prior to construction/CPUC to review and approve and make additional recommendations for avoidance prior to issuance of Notice to Proceed<br/>During construction<br/>During construction</p> | <p>PG&amp;E and CPUC<br/>* Applicable to all project components during construction</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers          | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria             | Timing and Location of Actions             |
|---------------------------|--|--|--|--|
| <i>Cultural Resources</i> |  |  |  |  |
| APM CR-1                  | <p><b>Pre-construction Survey.</b> Any locations that will be subject to ground disturbance but which were not accessible during the pedestrian survey will be surveyed by a CRS/archaeologist prior to project construction under the direction of the PG&amp;E CRS. This will include the location of the proposed Egbert Switching Station and the work area for the proposed Jefferson-Egbert transmission line on the 200 Paul Avenue and 400 Paul Avenue parcels; potential staging areas at Amador Street, Cow Palace, Carter Street, and Martin Substation; and any built-over areas that will be cleared for construction that were not previously surveyed. Although there have been no resources recorded in the vicinity of these locations, the proposed switching station and adjacent parcels have high sensitivity to contain buried or subsurface archaeological remains.</p> <p>Any archeological or historical sites, artifacts, or features identified during the surveys will be examined to determine whether further investigation is needed. If project work is occurring within 100 feet of the find, the work will be immediately redirected from within 100 feet of the find as soon as it is safe to do so. This buffer may be adjusted based on review of the find and context by the CRS. If the discovery can be avoided or protected and no further impacts will occur, the resource will be documented on California Department of Parks and Recreation</p> | <p>PG&amp;E to implement measure as described.<br/>PG&amp;E to submit survey results to CPUC for review and recordkeeping.</p> | <p>CPUC to review all survey results to verify compliance.</p> | <p>During ground-disturbing activities</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions                         | Monitoring Requirements and Effectiveness Criteria                                       | Timing and Location of Actions                                   |
|------------------|---|--|--|--|
|                  | 523 forms to be submitted to the PG&E CRS and the California Historical Resources Information System NWIC, and no further effort will be required   |  |  |  |
| APM CR-2         | <p><b>Worker Environmental Awareness Program Cultural Resources Module.</b> Because there are areas of High or Highest sensitivity for buried cultural resources, all project field personnel will be given training on cultural resources identification and protection, and the laws and penalties governing such protection. This training may be administered as a stand-alone session or included as part of the overall environmental awareness training as required by the project. The training will include, at a minimum, these elements:</p> <ul style="list-style-type: none"> <li>• A review of the environmental setting (prehistory, ethnography, history) associated with the project</li> <li>• A review of Native American cultural concerns and recommendations during project implementation</li> <li>• A review of applicable federal, state, and local laws and ordinances governing cultural resources and historic preservation</li> <li>• A review of what constitutes prehistoric or historic-era archaeological deposits (including maritime archaeological resources) and what the workers should look out for</li> <li>• A discussion of site avoidance requirements and procedures to be followed in the event</li> </ul> | PG&E to conduct training program as described. | PG&E to provide CPUC documentation demonstrating implementation of the training program. | Prior to ground-disturbing activities in all construction areas. |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions           |
|------------------|--|--|---|--|
|                  | <p>unanticipated cultural resources are discovered during construction</p> <ul style="list-style-type: none"> <li>• A discussion of procedures to follow in the event human remains are discovered during construction</li> <li>• A discussion of disciplinary and other actions that could be taken against persons violating historic preservation laws and PG&amp;E policies</li> <li>• A discussion of eligible and potentially eligible built environment resources and procedures to follow regarding minimizing vibration from equipment in designated areas</li> <li>• A statement by the construction company or applicable employer agreeing to abide by the program conditions, PG&amp;E policies, and applicable laws and regulations</li> </ul> <p>All on-site project personnel, including those arriving after the start of construction, will attend this training before beginning work on the project.</p> |  |   |  |
| APM CR-3         | <p><b>Construction Monitoring.</b> In high-sensitivity areas or where a survey was not feasible (i.e., areas are covered with pavement or buildings), a qualified archaeologist will be present to monitor all ground-disturbing construction activities. The monitor will have the authority to halt the ground-disturbing work activity(ies) temporarily within 100 feet of a find, or as determined suitable for protection of this potential resource by the CRS, when safe to do so to assess the find. The assessment, and any subsequent evaluation, will follow the processes described in APM CR-4. Monitoring may be adjusted at the discretion of the</p>   | <p>PG&amp;E to provide qualified archaeological monitor and incorporate monitoring requirements on the construction plans.</p> | <p>CPUC to verify monitoring requirements through review of pre-construction plans. CPUC to verify archaeological monitor in the field.</p> | <p>Prior to and during construction.</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions |
|------------------|--|--|--|--------------------------------|
|                  | CRS based on observation of subsurface conditions and the assessed likelihood of identifying cultural resources.   |  |  |                                |
| APM CR-4         | <p><b>Inadvertent Discoveries of Cultural Deposits.</b> In the event that previously unidentified archaeological, cultural, or historical sites, artifacts, or features are uncovered during implementation of the project, ground-disturbing work will be suspended within 100 feet of the find, or as approved by the CRS suitable to protect the find, and redirected to another location. A CRS or his/her designated representative will examine the discovery and determine whether additional work is needed or whether the buffer requires adjustment. The CRS will coordinate with the PG&amp;E CRS and the state and federal lead officials, as appropriate. If the discovery can be avoided or protected and no further impacts will occur, then the resource will be documented on DPR 523 forms, and no further effort will be required.</p> <p>If the resource cannot be avoided and may be subjected to further impacts, qualified personnel will evaluate the significance of the discovery in accordance with the federal and state laws outlined above; personnel will implement data recovery or other appropriate treatment measures if warranted. A qualified historical archaeologist will complete an evaluation of historical-period resources, while evaluation of prehistoric resources will be completed by a qualified archaeologist specializing in California prehistoric archaeology. Evaluations may include</p> | PG&E to implement measure as defined and incorporate commitments into construction contracts. PG&E to provide project archaeologist in the event that prehistoric or historic cultural resources are discovered. | CPUC and PG&E monitor to ensure work is suspended upon discovery of resources to ensure avoidance of all significant cultural resources. PG&E to provide summary report of mitigation program to CPUC. | During construction.           |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers                                     | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions   |
|--|---|---|---|--|
|  | archival research, oral interviews, and/or field excavations to determine the full depth, extent, nature, and integrity of the deposit.   |   |   |  |
| APM CR-5   | <b>Unanticipated Discovery of Human Remains.</b> If human remains, or suspected human remains, are discovered during construction, work within 100 feet of the find will stop immediately and the construction foreman will contact the designated PG&E CRS; the specialist will then call the San Francisco or San Mateo County Coroner, as appropriate. There will be no further excavation or disturbance of the site, or any nearby area reasonably suspected to overlie adjacent remains, until the county coroner has determined that the remains are not subject to provisions of Section 27491 of the Government Code. If the medical county coroner determines the remains to be Native American, he/she will contact the NAHC within 24 hours. The NAHC will appoint a Most Likely Descendent for recommendations on the treatment and disposition of the remains (Health and Safety Code Section 7050.5, PRC Section 5097.24). | PG&E to provide qualified archaeologist to monitor during ground-disturbing activities. PG&E to contact San Francisco or San Mateo County Coroner if human remains are found. Coroner to contact NAHC if appropriate. | CPUC and PG&E monitor to ensure work is suspended upon discovery of resources to ensure avoidance of all significant cultural resources. The qualifications of the qualified archaeologist shall be approved by the CPUC. | During ground-disturbing activities in all construction areas.                         |
| <i>Geology and Soils / Paleontological Resources</i> |   |   |   |  |
| APM GS-1   | <b>Appropriate Design Measures Implementation.</b> A site-specific geotechnical investigation will be performed to develop appropriate conclusions and recommendations for final design.  | PG&E to implement measure as defined and incorporate recommendation and findings (if necessary) on construction plans. PG&E to provide copies of the  | CPUC to verify incorporation of recommendations and findings on pre-construction plans (if necessary).  | Prior to construction. This measure applies to all components of the proposed project. |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions   |
|------------------|--|---|--|--|
|                  |  | geotechnical evaluation to the CPUC.  |  |  |
| APM GS-2         | <p><b>Appropriate Soil Stability Measures Implementation.</b> Based on available references, bedrock, artificial fills, loam, sandy loam, and clay loam are the primary subsurface materials expected to be encountered in the excavated areas as project construction proceeds. Potentially problematic subsurface conditions may include soft or loose soils. Where soft, loose, or liquefiable soils are encountered during design studies or construction, appropriate measures will be implemented to avoid, accommodate, replace, or improve soft or loose soils and liquefaction hazards. Such measures may include the following:</p> <ul style="list-style-type: none"> <li>• Locating construction staging and operations away from areas of soft and loose soil</li> <li>• Over excavating soft or loose soils and replacing them with suitable non-expansive engineered fill</li> <li>• Increasing the density and strength of soft or loose soils through mechanical vibration and/or compaction</li> <li>• Treating soft or loose soils in place with binding or cementing agents</li> <li>• Adding physical ground improvement such as in situ soil mixing, drain piles, or sheet piles</li> <li>• Deepening of trench and/or using trenchless technology to place the transmission line</li> </ul> | PG&E to implement measure as defined and incorporate recommendation and findings (if necessary) on construction plans. PG&E to provide copies of the geotechnical evaluation to the CPUC. | CPUC to verify incorporation of recommendations and findings on pre-construction plans (if necessary). | Prior to construction. This measure applies to all components of the proposed project constructed at alternative site locations. |

Application No. A.17-12-021

PG&E Egbert Switching Station (Martin Substation Extension) Project

Mitigation Monitoring, Compliance, and Reporting Program

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions                         | Monitoring Requirements and Effectiveness Criteria                                       | Timing and Location of Actions                                   |
|------------------|--|--|--|--|
|                  | beneath liquefiable fills and/or potential for lateral spreading, where feasible   |  |  |  |
| APM PR-1         | <b>Worker's Environmental Training Awareness Program - Paleontological Module.</b> The project's worker environmental awareness program, which all workers will complete prior to beginning work on the project site, will include a module on paleontological resources (fossils). The module will discuss the laws protecting paleontological resources, recognition in the field and types of paleontological resources that could be encountered on the project, and the procedures to be followed if a paleontological resource is discovered. A copy of the project's worker environmental awareness training will be provided to CPUC for recordkeeping prior to the start of construction. | PG&E to conduct training program as described. | PG&E to provide CPUC documentation demonstrating implementation of the training program. | Prior to ground-disturbing activities in all construction areas. |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers                | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|---------------------------------|---|--|---|---|
| APM PR-2                        | <p><b>Unanticipated Paleontological Resource Discovery.</b> If fossils are observed during excavation, work in the immediate vicinity of a paleontological find will be halted or redirected to avoid additional impact to the specimen(s) and to allow a professional paleontologist to assess the scientific importance of the find and determine appropriate treatment. If the discovery is significant, the qualified paleontologist will implement data recovery excavation (with the landowner's permission) to scientifically recover and curate the specimen.</p> | <p>PG&amp;E to implement measure as defined and incorporate commitments into construction contracts. PG&amp;E to provide qualified paleontologist, if workers encounter suspected paleontological resources.</p> | <p>CPUC and PG&amp;E monitor to ensure work is suspended upon discovery of resources to ensure avoidance of all significant cultural resources. PG&amp;E to provide summary report of mitigation program to CPUC.</p> | <p>During construction in all work areas where fossils are encountered.</p> |
| <i>Greenhouse Gas Emissions</i> |   |  |   |   |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria                                    | Timing and Location of Actions    |
|------------------|--|---|---|-----------------------------------|
| APM GHG-1        | <p><b>Minimize GHG Emissions</b></p> <ul style="list-style-type: none"> <li>Minimize unnecessary construction vehicle idling time. The ability to limit construction vehicle idling time will depend on the sequence of construction activities and when and where vehicles are needed or staged. Certain vehicles, such as large diesel-powered vehicles, have extended warm-up times following start-up that limit their availability for use following start-up. Where such diesel-powered vehicles are required for repetitive construction tasks, these vehicles may require more idling time. The project will apply a “common sense” approach to vehicle use, so that idling is reduced as far as possible below the maximum of 5 consecutive minutes allowed by California law; if a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off. Construction foremen will include briefings to crews on vehicle use as part of pre-construction conferences. Those briefings will include discussion of a “common sense” approach to vehicle use.</li> <li>Maintain construction equipment in proper working conditions in accordance with PG&amp;E standards.</li> </ul> | PG&E to provide Documentation verifying color of screening materials used at Warnock and Santa Ysabel staging yards | CPUC monitor regularly to verify compliance   | Prior to and during construction. |
| APM GHG-2        | <p><b>Minimize SF6 Emissions</b></p> <ul style="list-style-type: none"> <li>Incorporate Egbert Switching Station into PG&amp;E’s system-wide SF<sub>6</sub> emission reduction program. CARB has adopted the Regulation for Reducing Sulfur Hexafluoride Emissions from Gas Insulated Switchgear sections 95350 to</li> </ul>  | PG&E to Documentation of pre-construction conditions.<br>PG&E to submit documentation to CPUC demonstrating         | CPUC monitor regularly to verify compliance and review/verify documentation submitted | Prior to and during construction  |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|---|--|--|--------------------------------|
|                  | <p>95359, Title 17, CCR, which requires that company-wide SF<sub>6</sub> emission rate not exceed 1 percent by 2020. Since 1998, PG&amp;E has implemented a programmatic plan to inventory, track, and recycle SF<sub>6</sub> inputs, and inventory and monitor system-wide SF<sub>6</sub> leakage rates to facilitate timely replacement of leaking breakers. PG&amp;E has improved its leak detection procedures and increased awareness of SF<sub>6</sub> issues within the company. X-ray technology is now used to inspect internal circuit breaker components to eliminate dismantling of breakers, reducing SF<sub>6</sub> handling and accidental releases. As an active member of EPA's SF<sub>6</sub> Emission Reduction Partnership for Electrical Power Systems, PG&amp;E has focused on reducing SF<sub>6</sub> emissions from its transmission and distribution operations and has reduced the SF<sub>6</sub> leak rate by 89 percent and absolute SF<sub>6</sub> emissions by 83 percent.</p> <ul style="list-style-type: none"> <li>• Require that the breakers at Egbert Switching Station have a manufacturer's guaranteed maximum leakage rate of 0.5 percent per year or less for SF<sub>6</sub>.</li> <li>• Maintain substation breakers in accordance with PG&amp;E's maintenance standards.</li> <li>• Comply with CARB Early Action Measures as these policies become effective.</li> </ul> | <p>that disturbed areas have been restored in accordance with the guidelines provided in section 7.2, "Habitat Enhancement Measures," of the NCCP.</p> |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers                      | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|---------------------------------------|--|---|---|---|
| <i>Hazards and Hazardous Material</i> |  |   |   |   |
| APM HM-1                              | <p><b>Development and Implementation of Hazardous Material and Emergency Response Procedures.</b> PG&amp;E will implement construction controls, training, and communication to minimize the potential exposure of the public and site workers to potential hazardous materials during all phases of project construction and, as appropriate, during the operation and maintenance phase. Construction procedures that will be implemented include worker training appropriate to the worker’s role, and containment and spill control practices in accordance with the Stormwater Pollution Prevention Plan (see APM WQ-1). A site-specific Spill Prevention Control and Countermeasure (SPCC) Plan and a Hazardous Materials Business Plan will be developed for the proposed Egbert Switching Station facility prior to the construction date (see APM WQ-4).</p> <p><b>Worker environmental awareness program hazards and hazardous material module.</b> A worker environmental awareness program will be developed prior to construction. The worker environmental awareness program will communicate environmental issues and appropriate work practices specific to this project to all field personnel. These will include spill prevention and response measures and proper BMPs implementation. The program will emphasize site-specific physical conditions to improve hazard prevention, and will include a</p> | <p>Plans and procedures to be submitted to CPUC. PG&amp;E to conduct training program as described and incorporate measure into construction contracts. PG&amp;E will request approval from the cities of San Francisco, Brisbane or Daly City prior to release of groundwater into their sanitary or storm drain infrastructure.</p> | <p>PG&amp;E to prepare plans and procedures and submit to CPUC to verify. PG&amp;E to submit evidence of training in order for CPUC to verify. If necessary, PG&amp;E must provide hazardous materials disposal documentation for CPUC to verify.</p> | <p>Procedures will be developed prior to construction. Procedures and plans will be implemented during construction activities.</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|---|------------------------|--|--------------------------------|
|                  | <p>review of applicable portions of PG&amp;E’s health and safety plan. A copy of the worker environmental awareness program record will be provided to CPUC for recordkeeping. If it is necessary to store chemicals, they will be managed in accordance with all applicable regulations. Safety data sheets will be maintained and kept available on site, as applicable.</p> <p><b>Potentially contaminated soil.</b> Soil that is suspected of being contaminated (based on existing analytical data or visual, olfactory, or other evidence) and is removed during trenching or excavation activities will be segregated and tested; if the soil is contaminated above hazardous levels, it will be contained and disposed of off site at a licensed waste facility. The presence of known or suspected contaminated soil will require testing and investigation procedures to be supervised by a qualified person, as appropriate, to meet state and federal regulations.</p> <p>If suspected hazardous substances are unexpectedly encountered during trenching or other construction activities (using indicators such as sheen, odor, and/or soil discoloration), work will be stopped until the material is properly characterized and appropriate measures are taken to protect human health and the environment. Appropriate personal protective equipment will be used, and waste management will be performed in accordance with applicable regulations. If excavation of hazardous materials is required, the</p> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|---|------------------------|--|--------------------------------|
|                  | <p>materials will be disposed of in accordance with applicable regulations.</p> <p><b>Groundwater.</b> If necessary, groundwater will be collected during construction, contained, and disposed of in accordance with all applicable regulations. Non-contaminated groundwater will be released to one of the City and County of San Francisco’s combined sanitary and stormwater drainage systems (with prior approval) or will be contained, tested, and disposed of in accordance with applicable regulations.</p> <p><b>Underground storage tanks.</b> If underground or aboveground storage tanks are found to be located along the project route and the route cannot be adjusted to avoid disturbance, the tanks will be removed prior to installation of new facilities at the tank location. If it is determined that removal and disposal of tanks is necessary, a separate work plan describing the proper decommissioning and removal of the tanks and removal of any associated impacted soil will be prepared prior to removal.</p> <p><b>Hazardous materials and hazardous wastes.</b> All hazardous materials and hazardous wastes will be handled, stored, and disposed of in accordance with all applicable regulations by personnel qualified to handle hazardous materials. Practices during construction will include, but will not be limited to, the following:</p> <ul style="list-style-type: none"> <li>• Proper disposal of potentially hazardous materials</li> </ul> |                        |  |                                |

Application No. A.17-12-021

PG&E Egbert Switching Station (Martin Substation Extension) Project

Mitigation Monitoring, Compliance, and Reporting Program

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|--|------------------------|--|--------------------------------|
|                  | <ul style="list-style-type: none"> <li>• Site-specific buffers for construction vehicles and equipment located near sensitive resources/receptors</li> <li>• Emergency response and reporting procedures to address any potential hazardous material spills as described in Section D.10, Hydrology and Water Quality.</li> </ul> <p>Applicable portions of PG&amp;E plans for Martin Substation (e.g., Risk Management Plan or Site Management Plan) and testing for potential hazardous materials in soil as required under the Maher Ordinance will also be adhered to.</p> <p>For the operation and maintenance phase of the project, existing operational hazardous substance control and emergency response plans will be updated as appropriate to incorporate necessary modifications resulting from this project.</p> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions                        |
|------------------|--|---|--|---|
| APM HM-2         | <p><b>Emergency Spill Supplies and Equipment.</b> Materials will be available on the project site during construction to contain, collect, and dispose of any minor spill. Oil-absorbent material, tarps, and storage drums will be available on the project site during construction, and will be used to contain and control any minor releases of oil. If excess water and liquid concrete escapes during pouring, it will be directed to adjacent lined and bermed areas, where the concrete will dry, and then be transported for disposal per applicable regulations.</p>  | <p>PG&amp;E to provide supplies and equipment in construction and staging areas.</p>  | <p>CPUC to monitor occasionally to ensure supplies and equipment stocked and accessible.</p>   | <p>During construction activities.</p>                |
| APM HM-3         | <p><b>Soil, Groundwater, Underground Tank, and Wastewater Characterization.</b> In areas where existing data are not available, soil and groundwater sampling will be conducted in project areas prior to or upon commencement of construction. Appropriate handling, transportation, and disposal locations will be determined based on results of the analyses performed on soil and groundwater. In addition, results will be provided to contractor and construction crews to inform them about soil and groundwater conditions and potential hazards. The location, distribution, and/or frequency of the sampling locations will be determined during final design with the intent to provide adequate representation of the</p> | <p>PG&amp;E to perform sampling and provide results to the contractor and CPUC. PG&amp;E must submit sampling in areas subject to Maher Ordinance to SFDPH for review and approval.</p> | <p>PG&amp;E provide sampling results to contractor and CPUC; submit sampling in areas subject to Maher ordinance to SFDPH for review and approval.</p> | <p>Prior to or upon commencement of construction.</p> |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions  |
|------------------|---|---|--|---|
|                  | <p>conditions in the construction area. Sampling will likely be more intensive in areas along the project alignment (1) where potential residual contamination associated with the four former LUST and two EnviroStor cleanup sites may exist, (2) near the transformer oil spill in the vicinity of 607 Carter Street, San Francisco, (3) near the locations of six historic auto service stations and two historic dry cleaners, and (4) subject to the Maher Ordinance (see [PEA] Section 3.8.3 [Section D.9.2 of this EIR]). The sampling program in areas subject to the Maher Ordinance must be reviewed and approved by the SFDPH prior to construction.</p>  |   |  |   |
| <b>MM HM-1</b>   | <p>Prior to commencing work on the Egbert Switching Station as well as all project components within 500 feet of a leaking underground storage tank (LUST), State Response site, voluntary cleanup site, historical gas station/filling station/service station, historical dry cleaner or laundry facilities, or historical auto service station, Pacific Gas &amp; Electric Company (PG&amp;E) shall submit site history documentation for proposed work areas for review. For work within the area designated under the Maher Ordinance, PG&amp;E shall submit site history documentation to the San Francisco Department of Public Health (SFDPH) and the California Public Utilities Commission (CPUC). For areas not subject to the Maher Ordinance, PG&amp;E shall</p> | <p>PG&amp;E to prepare a subsurface investigation report, and if necessary, an SMP.</p> | <p>PG&amp;E to submit subsurface investigation report to qualified person approved by CPUC for review; CPUC to approve subsurface investigation report, and if applicable, SMP, prior to construction.</p> | <p>Reports to be submitted prior to construction. If applicable, SMP to be implemented during construction.</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|--|------------------------|--|--------------------------------|
|                  | <p>submit site history documentation to the CPUC only. An independent qualified person approved by CPUC shall review all site documentation provided by PG&amp;E and all comments, questions, or clarifications requested shall be addressed prior to report approval by CPUC. For work areas within the limits of the Maher Ordinance, if the site history indicates that hazardous materials may be present in the soil/groundwater, the CPUC and/or SFPDH would require additional documentation, as follows:</p> <ol style="list-style-type: none"> <li>1. PG&amp;E shall submit a Work Plan for analysis of sampled soil and/or groundwater.</li> <li>2. PG&amp;E shall conduct subsurface soil and/or groundwater sampling requested by the CPUC and/or SFPDH and submit a subsurface investigation report (i.e., soil testing), prepared by a qualified person (professional geologist, licensed civil engineer, or engineering geologist), for review and approval. The subsurface investigation report shall document sampling locations, sampling protocol, and laboratory analyses to be conducted on the samples, and shall include testing for the complete list of analytes required by the Maher Ordinance, and other hazardous substances that the CPUC and/or SFPDH determines may be present, such as known radioactive substances near the Hunter's Point Shipyard.</li> <li>3. If the subsurface investigation report indicates exceedances of the Department of Toxic Substances Control's or Regional Water Quality</li> </ol> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|--|------------------------|--|--------------------------------|
|                  | <p>Control Board's health risk levels or other applicable standards, PG&amp;E shall have a qualified person prepare a site mitigation plan (SMP) prior to authorization to commence construction. The SMP must describe procedures, methods, and devices to protect site worker's and adjacent sensitive receptor's health safety from contaminated soil, groundwater, and soil vapor, if present. The SMP shall include figures and drawings showing areas where soil testing indicates exposure levels may be exceeded, environmental contingency procedures, post-excavation confirmation sampling, appropriate handling and disposal of contaminated soil, and a commitment to prepare and certify a final project report. The SMP shall also reference and briefly describe construction-related documents (dust, stormwater, odor, and noise control plans). The SMP shall be reviewed and approved by the CPUC and/or SFDPH prior to construction work within applicable project work areas.</p> <p>The SMP would be focused on protecting site workers and adjacent sensitive receptors from any health and safety threats stemming from excavation and handling of potentially contaminated soil and/or groundwater. CPUC may waive soils testing, on a case-by-case basis, for work sites in which PG&amp;E can demonstrate in writing that (a) there would be no soil excavation associated with the work (e.g., staging areas), or</p> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers                   | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria                            | Timing and Location of Actions  |
|------------------------------------|--|---|---|---|
|                                    | (b) the site history indicates that there is no information that hazardous substances may be present in the soil or groundwater at concentrations exceeding either the Department of Toxic Substances Control's or the Regional Water Quality Control Board's health risk levels.  |   |   |   |
| <i>Hydrology and Water Quality</i> |  |   |   |   |
| APM WQ-1                           | <p><b>Development and Implementation of a Stormwater Pollution Prevention Plan.</b> Stormwater discharges associated with project construction activities are regulated under the General Construction Permit. Cases in which construction will disturb more than 1 acre of soil require submittal of a Notice of Intent, development of a SWPPP (both certified by the Legally Responsible Person), periodic monitoring and inspections, retention of monitoring records, reporting of incidences of noncompliance, and submittal of annual compliance reports. PG&amp;E will comply with all General Construction Permit requirements.</p> <p>Following project approval, PG&amp;E will prepare and implement a SWPPP, which will address erosion and sediment control to minimize construction impacts on surface water quality, as well as reduce the potential for stormwater to impact adjacent properties. The SWPPP will be designed specifically for the hydrologic setting of the proposed project (e.g., surface topography, storm drain configuration, etc.). Implementation of the SWPPP will help stabilize graded areas and</p> | <p>PG&amp;E to implement measure as defined.</p> <p>PG&amp;E to submit SWPP to RWQCB to receive General Construction Permit.</p> <p>PG&amp;E will provide CPUC a copy of SWPPP for recordkeeping.</p> | <p>CPUC to conduct occasional inspections to ensure compliance with SWPPP</p> | <p>SWPPP to be prepared prior to construction</p> <p>SWPPP to be implemented during construction activities</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|---|------------------------|--|--------------------------------|
|                  | <p>reduce erosion and sedimentation. The SWPPP will propose BMPs that will be implemented during construction activities. Erosion and sediment control BMPs such as straw wattles, erosion control blankets, and/or silt fences will be installed in compliance with the SWPPP and the General Construction Permit. Suitable soil stabilization BMPs will be used to protect exposed areas during construction activities, as specified in the SWPPP. During construction activities, BMPs will be implemented to reduce exposure of construction materials and wastes to stormwater. BMPs will be installed following manufacturers specifications and according to standard industry practice. Erosion and sediment control measures may include the following:</p> <ul style="list-style-type: none"> <li>• Straw wattle, silt fence, or gravel bag berms</li> <li>• Track out control at all entrances and exits</li> <li>• Stockpile management</li> <li>• Effective dust control measures</li> <li>• Good housekeeping measures</li> <li>• Stabilization measures which may include wood mulch, gravel, or revegetation</li> </ul> <p>Identified erosion and sediment control measures will be installed prior to the start of construction activities and will be inspected and improved as needed as required by the Construction General Permit. Temporary sediment control measures intended to minimize sediment transport from temporarily disturbed areas such as silt fences or wattles will remain in place until disturbed areas are stabilized. In</p> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions                         | Monitoring Requirements and Effectiveness Criteria                                       | Timing and Location of Actions                                  |
|------------------|--|--|--|---|
|                  | <p>areas where soil is to be temporarily stockpiled, soil will be placed in a controlled area and will be managed using industry standard stockpile management techniques. Where construction activities occur near a surface water body or drainage channel, the staging of construction materials and equipment and excavation spoil stockpiles will be placed and managed in a manner which minimizes the risk of sediment transport to the drainage. Any surplus soil will be transported from the site and disposed of in accordance with federal, state, and local regulations.</p> <p>The SWPPP will identify areas where refueling and vehicle-maintenance activities and storage of hazardous materials will be permitted, if necessary.</p> <p>A copy of the SWPPP will be provided to CPUC for recordkeeping. The plan will be maintained and updated during construction as required by the Construction General Permit.</p> |  |  |   |
| APM WQ-2         | <p><b>Worker Environmental Awareness Program Water Quality Module.</b> A worker environmental awareness program will be developed and provided separately to CPUC staff prior to construction. The project's worker environmental awareness program will communicate environmental issues and appropriate work practices specific to this project to all field personnel. These will include spill prevention and response measures and proper BMP implementation. A copy of the project's worker environmental awareness program record will be</p>   | PG&E to conduct training program as described. | PG&E to submit program record to CPUC for recordkeeping at the completion of the project | Prior to ground-disturbing activities in all construction areas |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| <b>APM / MM Numbers</b>      | <b>Description<br/>Applicant Proposed Measure / Mitigation Measure</b>   | <b>Implementation Actions</b>                     | <b>Monitoring Requirements and Effectiveness Criteria</b>  | <b>Timing and Location of Actions</b>                      |
|------------------------------|--|---|--|--|
|                              | provided to CPUC for recordkeeping at the completion of the project. An environmental monitoring program will also be implemented to ensure that the plans are followed throughout the construction period.  |   |  |  |
| APM WQ-3                     | <b>Project Site Restoration.</b> As part of the final construction activities, PG&E will restore all removed curbs and gutters, repave, and restore landscaping or vegetation as necessary.  | PG&E to implement measure as defined              | PG&E to provide CPUC with restoration plans for review   | During final construction activities                       |
| APM WQ-4                     | <b>Spill Prevention, Control, and Countermeasure (SPCC) Plan for Egbert Switching Station.</b> PG&E will prepare an SPCC plan for the new switching station for implementation during operation as required by applicable regulations (CFR 40 Part 112). The plan will include engineered and operational methods for preventing, containing, and controlling potential releases (e.g., construction of a retention pond, moats, or berms) as well as provisions for quick and safe cleanup. | PG&E to implement measure as defined              | California Unified Program Agency (CUPA) to conduct occasional inspections to ensure compliance with SPCC Plan | During operation   |
| APM WQ-5                     | <b>Stormwater Control Plan for Egbert Switching Station.</b> PG&E will prepare and implement a Stormwater Control Plan to manage stormwater during operation at the new switching station to align with the City of San Francisco Ordinance Number 64-16 of the Public Works Code-Stormwater Management Requirements.  | PG&E to implement measure as defined              | San Francisco Public Works to conduct occasional inspections to ensure compliance with Stormwater Control Plan | During project operation                                   |
| <i>Land Use and Planning</i> |  |   |  |  |
| APM LU-1                     | <b>Provide Construction Notification and Minimize Construction Disturbance.</b> A public liaison representative will provide the public with advance   | PG&E's public liaison will prepare and distribute | PG&E to submit draft notification and  | PG&E liaison to distribute notices to affected parties 2-4 |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions               |
|------------------|---|---|---|--|
|                  | notification of construction activities, between two and four weeks prior to construction. The announcement will state specifically where and when construction will occur in the area. Notices will provide tips on reducing noise intrusion (e.g., closing windows facing the planned construction).  | construction notifications to affected parties.   | distribution list to CPUC for review and approval.  | weeks prior to commencement of construction. |
| APM LU-2         | <b>Provide Public Liaison Person and Toll-Free Information Hotline.</b> PG&E will identify and provide a public liaison person before and during construction to respond to concerns of neighboring residents about noise, dust, and other construction disturbance. Procedures for reaching the public liaison officer via telephone, email, or in person will be included in notices distributed to the public as described above. PG&E will also establish a toll-free telephone number for receiving questions or complaints during construction. | PG&E will provide a public liaison before and during construction activities.<br><br>PG&E will establish a toll-free number for public to utilize.              | CPUC to test public lines of communication to verify they are in working order.                             | Prior to and during construction.            |
| <b>MM-LU-1</b>   | Pacific Gas & Electric Company (PG&E) shall coordinate the installation of the Santos Street segment of the Jefferson-Egbert transmission line with the City and County of San Francisco. The transmission line shall be installed in the realigned street section and shall avoid street sections planned for vacation/realignment in the Sunnydale HOPE SF Master Plan.   | PG&E will coordinate the construction of the Santos Street segment of the Jefferson-Egbert transmission line to avoid streets planned for vacation/realignment. | CPUC to review construction plans and confer with the City and County of San Francisco Planning Department. | Prior to construction plan approval.         |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions   |
|------------------|--|---|---|--|
| <i>Noise</i>     |  |   |   |  |
| APM NO-1         | <b>Noise Minimization with Portable Barriers.</b> Compressors and other small stationary equipment used during construction will be shielded with portable barriers if appropriate and if located within 200 feet of a residence.  | Include this condition in the construction specifications and on construction staging plans.  | Check specifications and plans; spot check periodically during construction to verify compliance.                       | Check plans once (office review) prior to contractor notice to proceed; periodic spot checks during construction.                                    |
| APM NO-2         | <b>Noise Minimization with Quiet Equipment.</b> Quiet equipment will be used during construction whenever possible (e.g., equipment that incorporates noise-control elements into the design, such as quiet model compressors, can be specified).  | Include this condition in the construction specifications and on construction staging plans.  | Check specifications and plans; spot check periodically during construction to verify compliance.                       | Check plans once (office review) prior to contractor notice to proceed; periodic spot checks during construction.                                    |
| APM NO-3         | <b>Noise Minimization through Direction of Exhaust.</b> When in proximity to noise-sensitive uses, equipment exhaust stacks and vents will be directed away from those noise-sensitive uses where feasible.  | Include this condition in the construction specifications and on construction staging plans.  | Check specifications and plans; spot check periodically during construction to verify compliance.                       | Check plans once (office review) prior to contractor notice to proceed; periodic spot checks during construction.                                    |
| APM NO-4         | <b>Noise Disruption Minimization through Residential Notification.</b> In the event that nighttime construction is necessary, such as if certain activities such as line splicing or auger boring in certain soil conditions need to continue to completion, affected residents will be notified in advance by mail, personal visit, or door-hanger, and will be informed of the expected work schedule. | Identify construction areas in close proximity to residences, determine the risk for nighttime construction necessity, prepare notification materials to use if night work is deemed necessary, | Review areas with nighttime risk, review communication plan, Confirm notification is provided in advance of night work. | Check notification materials and communication plan (office review) prior to contractor notice to proceed; periodic spot checks during construction. |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|------------------|---|--|---|---|
|                  |   | draft communication plan.  |   |   |
| APM NO-5         | <p><b>Auger Bore Noise Minimization Measures.</b> Temporary barriers utilizing materials such as intermodal containers or frac tanks, plywood walls, mass-loaded vinyl (vinyl impregnated with metal), sound-absorbing blankets, hay bales, or similar materials will be used to reduce noise generated by the auger bore operations. Auger bore activities will be limited to daylight hours unless a situation arises where ceasing the activity would compromise safety (both human health and environmental) and/or the integrity of the project. If nighttime auger bore activities are required, the project will monitor actual noise levels from auger bore activities between 8:00 p.m. and 7:00 a.m. If the nighttime noise levels created by the auger bore operation are found to result in a complaint and are in excess of the ambient noise level by 5 dBA at the nearest residential property plane, PG&amp;E will, within 24 hours of the excess measurement, employ additional minimization measures to the extent practicable. Such measures may include ensuring that semi-permanent stationary equipment (e.g., generators) are stationed as far from sensitive areas as practicable, utilizing sound attenuated “quiet” or “Hollywood/Movie Studio” silencing packages, or modifying barriers to further reduce noise levels.</p> | Include this condition in the construction specifications and on construction staging plans. | Check specifications and plans; spot check periodically during construction to verify compliance. | Check plans once (office review) prior to contractor notice to proceed; periodic spot checks during construction. |
| APM NO-6         | <p><b>Noise Minimization Equipment Specification.</b> PG&amp;E will specify general construction noise</p>  | Include this condition in the construction   | Check specifications and plans; spot check  | Check plans once (office review) prior to   |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|------------------|---|---|---|---|
|                  | reduction measures that require the contractor to ensure that all equipment is in good working order, adequately muffled, and maintained in accordance with the manufacturers' recommendations.   | specifications and on construction staging plans.   | periodically during construction to verify compliance.  | contractor notice to proceed; periodic spot checks during construction.   |
| APM NO-7         | <b>Incorporate Vibration Assessment into Project Construction.</b> Where pile driving may be required within streets with adjacent residential uses, final design efforts and construction methods will consider soils and hammer type and use when assessing potential for vibration. Vibration monitoring will be conducted during pile driving activities, or in response to a complaint, to confirm that vibration levels are within acceptable guidelines. Site-specific minimization measures such as modifying the type of hammer, reducing hammer energy, or modifying hammer frequency will be implemented as necessary to reduce the potential effects of off-site vibration. Monitoring may be reduced or eliminated when it has been established that these measures, if required, are effective for the site conditions. | Prepare site specific soil classification analyses for locations where pile driving is proposed. Select pile driver equipment/ method with least vibration potential, and suited to identified soil characteristics. Provide vibration monitoring during pile driving activities, at least until it is demonstrated that vibration levels will be within acceptable levels. | Review/accept soil classification report and resulting pile driving specifications. Review vibration monitoring plan associated with pile driving activity. | Review soil classification report, pile driving specifications, and vibration monitoring plan once (office review) prior to contractor notice to proceed; periodic spot checks during construction. |
| MM NO-1          | For construction occurring within the City and County of San Francisco (not involving pile driving or other impact equipment), in the event noise levels during daytime (7 AM to 8 PM) construction activities are expected to exceed 80 dBA Leq at 100 feet (for portions of the project alignment where noise-sensitive areas are located, Pacific Gas & Electric Company (PG&E) shall implement noise reduction measures to reduce noise levels to below 80 dBA Leq at 100 feet.   | Include sensitive receptor locations/nearest property lines on final design plans.  | Monitor noise where noise sensitive areas are located during construction to verify compliance with specified noise levels.                                 | Spot monitor noise levels during construction.<br><br>Construction work areas adjacent to sensitive receptor for PG&E's proposed  |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers      | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions                                  |
|-----------------------|--|---|---|---|
|                       | <p>For construction occurring within the City of Daly City, in the event noise levels during daytime (8 AM to 5 PM) construction activities are expected to exceed 90 dBA Leq at the closest residences (for portions of the project alignment where noise-sensitive areas are located within 190 feet of the alignment), PG&amp;E shall implement noise reduction measures to reduce noise levels to below 90 dBA Leq at the closest residences. For nighttime construction (8 PM to 7 AM) in all jurisdictions, PG&amp;E shall implement noise reduction measures to reduce construction noise levels at residences adjacent to the construction area to no greater than 5 dBA Leq above ambient noise levels. Measures to be implemented could include: (1) portable noise barriers erected temporarily to reduce noise impacts at specific locations; or (2) if noise barriers would not reduce daytime construction noise levels from non-impact construction equipment to below 80 dBA Leq at 100 feet (City and County of San Francisco) or to 90 dBA Leq at the closest residence (Cities of Daly City and Brisbane), or to no greater than 5 dBA Leq above ambient noise levels (nighttime), depending on the location of residences and the level of construction noise, PG&amp;E shall offer to relocate affected residents until the impact has been determined to not be adverse.</p> |   |   | <p>project and all alternatives.</p>                            |
| <i>Transportation</i> |  |   |   |   |
| <p>APM TR-1</p>       | <p><b>Traffic Management Implementation.</b> PG&amp;E will follow its standard safety practices, including installing appropriate barriers between work zones and transportation facilities, posting adequate signs, and using proper construction techniques. PG&amp;E will</p>   | <p>PG&amp;E to implement measure as defined. PG&amp;E to incorporate measure into</p> | <p>PG&amp;E to submit Plan to CPUC and the City and County of San Francisco, City of Brisbane, and City</p> | <p>PG&amp;E develop Plan prior commencement of construction</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions        | Monitoring Requirements and Effectiveness Criteria   | Timing and Location of Actions                        |
|------------------|--|-------------------------------|--|---|
|                  | <p>coordinate construction traffic access at the proposed switching station and proposed transmission lines within the city and county of San Francisco with SFMTA during project construction. Access during project construction to Martin Substation and the transmission lines within the cities of Brisbane and Daly City, respectively, will be coordinated with SamTrans. PG&amp;E is a member of the California Joint Utility Traffic Control Committee, which published the California Joint Utility Traffic Control Manual (2010). PG&amp;E will follow the recommendations in this manual regarding basic standards for the safe movement of traffic on highways and streets in accordance with Section 21400 of the California Vehicle Code. These recommendations include provisions for safe access of police, fire, and other rescue vehicles.</p> <p>In addition, PG&amp;E will apply for an Excavation Permit and a Special Traffic Permit from each of the cities (San Francisco, Brisbane, and Daly City), and will also submit a Traffic Management Plan as part of each application. The Traffic Management Plan will include the following elements and activities:</p> <ul style="list-style-type: none"> <li>• Consult with SF Muni and SamTrans at least 1 month prior to construction to coordinate bus stop relocation (as necessary) and to reduce potential interruption of transit service.</li> <li>• Include a discussion of work hours, haul routes, limits on lengths of open trench, work area delineation, traffic control, and flagging.</li> </ul> | <p>construction contracts</p> | <p>of Daly City for review and approval<br/>                     PG&amp;E to provide documentation of coordination with affected service providers in the City(s) and confirmation with all required conditions to ensure that construction activities would not preclude emergency vehicle access</p> | <p>PG&amp;E to implement plan during construction</p> |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions | Monitoring Requirements and Effectiveness Criteria | Timing and Location of Actions |
|------------------|--|------------------------|--|--------------------------------|
|                  | <ul style="list-style-type: none"> <li>• Identify all access and parking restrictions and signage requirements, including any bicycle route or pedestrian detours, should the need for these arise during final design.</li> <li>• Lay out a plan for notifications and a process for communicating with affected residents and businesses prior to the start of construction. Advance public notification would include postings of notices and appropriate signage of construction activities. The written notification will include the construction schedule, the exact location and duration of activities within each street (i.e., which lanes and access points/driveways would be blocked on which days and for how long), and a toll-free telephone number for receiving questions or complaints.</li> <li>• Include a plan to coordinate all construction activities with emergency service providers in the area at least 1 month in advance. Emergency service providers will be notified of the timing, location, and duration of construction activities. All roads will remain passable to emergency service vehicles at all times.</li> <li>• Include the requirement that all open trenches be covered with metal plates at the end of each workday to accommodate traffic and access.</li> <li>• Specify the street restoration requirements pursuant to PG&amp;E's franchise agreements with the City and County of San Francisco, City of Brisbane, and City of Daly City.</li> </ul> |                        |  |                                |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers                 | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions  |
|----------------------------------|---|---|---|---|
|                                  | <ul style="list-style-type: none"> <li>Identify all roadway locations where special construction techniques (e.g., trenchless techniques or night construction) would be used to minimize impacts to traffic flow.</li> <li>Develop circulation and detour plans to minimize impacts to local street circulation. This may include the use of signing and flagging to guide vehicles through and/or around the construction zone. These plans will also address loading zones.</li> <li>Consult Caltrans and obtain an encroachment permit if necessary per final construction and engineering design.</li> </ul> |   |   |   |
| <b>MM TR-1</b>                   | Prior to the permanent operation of the proposed project, as part of the final construction activities of the proposed project (i.e., transmission line installation), Pacific Gas & Electric Company (PG&E) shall restore all removed curbs, gutters, and sidewalks, repave all removed or damaged paved surfaces, restore landscaping or vegetation as necessary, and clean up the job site, including the Sunnydale HOPE SF project site.  | PG&E to implement measure as defined. PG&E to incorporate measure into construction contracts.            | PG&E to submit contract documents to CPUC for verification. CPUC monitor to confirm implementation prior to operation.                        | PG&E to implement all construction cleanup and improvements as part of final construction activities. |
| <i>Tribal Cultural Resources</i> |   |   |   |   |
| <b>MM TCR-1</b>                  | Should a potential tribal cultural resource (TCR) be inadvertently encountered, construction activities near the encounter shall be temporarily halted and Pacific Gas & Electric Company (PG&E) and the California Public Utilities Commission (CPUC) shall be notified. If the unanticipated resource is archaeological in nature, appropriate management requirements shall be implemented, as outlined in   | In the event of inadvertent resource discovery, PG&E and CPUC would comply with the measure as described. | CPUC to provide oversight during notification and consultation; CPUC to maintain written record notification and consultation for the record. | During construction   |

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure   | Implementation Actions   | Monitoring Requirements and Effectiveness Criteria  | Timing and Location of Actions   |
|------------------|--|--|---|--|
|                  | <p>Applicant Proposed Measures CR-3 through CR-5. PG&amp;E, in consultation with the CPUC, shall notify Native American tribes that have been identified by the Native American Heritage Commission to be traditionally and culturally affiliated with the geographic area of the proposed project. If the CPUC determines that the potential resource appears to be a TCR (as defined by California Public Resources Code Section 21074), any affected tribe shall be provided a reasonable period of time to conduct a site visit and make recommendations regarding future ground disturbance activities and the treatment and disposition of any discovered TCRs. Depending on the nature of the potential resource and tribal recommendations, review by a qualified archaeologist may be required. Implementation of proposed recommendations shall be made based on the determination of the CPUC that the approach is reasonable and feasible. Activities shall be conducted in accordance with regulatory requirements.</p> |  |   |  |
| <i>Wildfire</i>  |  |  |   |  |
| <b>MM WF-1</b>   | <p>Pacific Gas &amp; Electric Company (PG&amp;E) shall prepare a Project Fire Prevention Plan that addresses procedures for fire prevention at active construction sites and during project maintenance activities for the approved project areas within 1,000 feet of the San Bruno Mountain State Park (classified as a high fire hazard severity zone). The Project Fire Prevention Plan shall include</p>  | <p>Pacific Gas &amp; Electric Company to implement measure as defined and incorporate commitments into construction contracts.</p> | <p>California Public Utilities Commission to periodically inspect the construction site to ensure that required equipment present</p> | <p>During construction, adjacent to wildland vegetation on Carter Street</p> |



**Table 1 Applicant Proposed Measures and Mitigation Measures**

| APM / MM Numbers | Description<br>Applicant Proposed Measure / Mitigation Measure  | Implementation Actions  | Monitoring Requirements and Effectiveness Criteria                                     | Timing and Location of Actions |
|------------------|---|---|--|--------------------------------|
|                  | <p>requirements for carrying emergency fire suppression equipment, conducting “tailgate meetings” that cover fire safety discussions, proper use of tools and equipment, restricting smoking, idling vehicles, and restricting construction or maintenance activities during high fire hazard periods. The Project Fire Prevention Plan shall address the following fire risk reduction measures:</p> <ul style="list-style-type: none"> <li>• Training and briefing all personnel constructing or maintaining the project in fire prevention and suppression methods</li> <li>• Conducting a fire prevention discussion at each morning’s construction safety meeting</li> <li>• Procedures for minimizing potential ignition, including, but not limited to, vegetation clearing, parking requirements/ restrictions, idling restrictions, smoking restrictions, proper use of gas-powered equipment, use of spark arrestors, and hot work restrictions</li> <li>• Work restrictions during Red Flag Warnings and High to Extreme Fire Danger days</li> <li>• Storage of fire suppression tools and backpack pumps with water within 30 feet of work activities</li> <li>• Water sources, including water storage tanks or water trucks that would be used in case of a fire</li> <li>• Assigning personnel to conduct a “fire watch” or “fire patrol” to ensure that risk mitigation and fire preparedness measures are implemented, immediate reporting of a fire,</li> </ul> | <p>Contractor must immediately report any fire to the authority with jurisdiction</p> | <p>Add any fire notifications from the contractor to the project file, for record.</p> |                                |

Application No. A.17-12-021

PG&E Egbert Switching Station (Martin Substation Extension) Project

Mitigation Monitoring, Compliance, and Reporting Program

**Table 1 Applicant Proposed Measures and Mitigation Measures**

| <b>APM / MM Numbers</b> | <b>Description<br/>Applicant Proposed Measure / Mitigation Measure</b>  | <b>Implementation Actions</b> | <b>Monitoring Requirements and Effectiveness Criteria</b> | <b>Timing and Location of Actions</b> |
|-------------------------|---|-------------------------------|---|---------------------------------------|
|                         | and to coordinate with emergency response personnel in the event of a fire<br>The Project Fire Prevention Plan shall be submitted to the California Public Utilities Commission (CPUC) for review and approval at least 30 days prior to initiation of all construction activities in areas within 1,000 feet of the San Bruno Mountain State Park (classified as a high fire hazard severity zone), including equipment staging and materials delivery |                               |   |                                       |

**(END OF APPENDIX A)**