

PG&E Vierra Reinforcement Project – Application No. 18-06-004
Data Request Set No. 1 – Initial Responses
October 29, 2018

Vierra Data Request No. 1 includes the first round of data requests for the following technical areas:

- Air Quality
- Biological Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise and Vibration
- Project Description
- Transportation and Traffic
- Utilities and Service Systems

Below are initial responses. Answers to the remaining questions are forthcoming.

Air Quality

AQ-1 The data deficiency response CD included emissions tables as pdf files. Staff needs the original spreadsheet files with live, embedded calculations to complete the analysis of the project. Please provide the original Excel spreadsheet files for air quality and greenhouse gas (GHG) emission estimates with live, embedded calculations. Please provide the CalEEMod output files as Excel spreadsheets.

***PG&E Response:** The requested data is forthcoming.*

AQ-2 Page 2.0-25 of Chapter 2.0 – Project Description of the Proponent’s Environmental Assessment (PEA) states that constructing the substation expansion would take approximately 12 to 18 months to complete. However, as shown in **Table 2.0-3** on page 2.0-27 of the PEA as well as in the “Vierra Air Calculations” document on the data deficiency response CD, the longest period that the applicant used to estimate the emissions during substation expansion was only 52 weeks (i.e., 12 months). Staff needs emission estimates for the worst-case scenario. If the substation expansion could take up to 18 months to complete, please update the emission estimates, assuming 18 months of substation expansion instead of 12 months.

***PG&E Response:** A 12-month construction period is the worst-case scenario for air quality calculations based on the same level of effort required to construct the project as would occur over an 18-month period, and the application of daily screening levels and annual emission thresholds.*

AQ-3 Page 2 of 102 of the “Vierra Air Calculations” document on the data deficiency response CD shows three phases (A, B, and C) of the substation expansion. Phase A is shown as grading (on page 14 of 102). Please explain the difference between phase B and phase C of the substation expansion.

***PG&E Response:** Phases A, B, and C correspond to groups of construction equipment that are to be used for different lengths of time. Phase A includes construction equipment that will be used for less than 10 weeks. Phase B includes construction equipment that will be used for approximately 30 weeks (or less, the length of use was rounded up for some equipment), and Phase C includes equipment that will be used for 52 weeks.*

AQ-4 Page 3 of 102 of the “Vierra Air Calculations” document on the data deficiency response CD shows emission estimates of nitrogen oxides (NOx), hydrocarbon (HC), carbon monoxide (CO), and particulate matter (PM) from the operation of a helicopter. The applicant did not provide estimates of the sulfur oxides (SOx) emissions from the helicopter. **Table 3.7-2** in Section 3.7 – Greenhouse Gas Emissions of the PEA shows that the carbon dioxide equivalent (CO₂e) emissions of helicopter use would be 0.1 metric tons/year, but no detailed calculations were provided. Please provide detailed calculations of the SOx and GHG emissions of the helicopter.

***PG&E Response:** The detailed calculations are being submitted separately on CD.*

AQ-5 The daily emissions of HC from operation of the helicopter is shown as 7.30 pounds per day (lbs./day) on page 3 of 102 of the “Vierra Air Calculations” document on the data deficiency response CD. However, the reactive organic gas (ROG) emissions of the helicopter is shown as 7.0 lbs/day on page 4 of 102 of the same document. Please clarify why these numbers are different. Was ROG considered as a fraction of HC?

***PG&E Response:** There was a typographical error on page 4 of 102. The ROG emissions from the helicopter should have been listed as 7.3 lb/hr. Helicopter emissions were estimated using emission factors from the FOCA Guidance. This reference included emission factors for hydrocarbons (HC). For simplicity when calculating total project emissions, it was assumed that HC emissions were equal to ROG emissions.*

AQ-6 Page 16 of 102 of the “Vierra Air Calculations” document on the data deficiency response CD shows that the applicant used the hauling trip number of 1,044 for the Phase 5B – Substation Expansion. Staff would like to know how the hauling trip number of 1,044 was determined for the project. Please clarify whether the hauling trip number is for each day or for the whole construction period.

***PG&E Response:** The hauling trip number includes export and import of fill from the substation expansion during construction of the substation pad, when equipment usage at the substation site is at its peak. The initial calculation was based on construction of the substation pad requiring an estimated 8,350 cubic yards being hauled. As indicated in Section 2.7.6, the estimated volume is slightly higher, at 10,000 cubic yards, and will occur over a 4 week period, which equates to 20 round-trips a day. The air emissions calculations have been re-run using this volume and the assumption that the trucks used to haul the material will have a capacity of 25 yards. The calculations are being submitted separately on CD.*

AQ-7 The applicant’s proposed measure (APM), **APM AIR-1**, referred to the fugitive dust control measures in the SJVAPCD 2015 Guidance for Assessing and Mitigating Air Quality Impacts. However, the control measures listed in **APM AIR-1** did not include all the fugitive dust control measures from the SJVAPCD 2015 guidance (pages 77-78). The following table shows comparison of the control measures from **APM AIR-1** and those from the SJVAPCD 2015 guidance. Staff needs to understand why the applicant did not include all the control measures from the SJVAPCD 2015 guidance. Please revise the **APM AIR-1** to include all the dust control measures from the SJVAPCD. Please provide a dust control plan example that was approved by the SJVAPCD for a similar project.

***PG&E Response:** PG&E selected measures from the list within the SJVAPCD2015 Guidance for Assessing and Mitigating Air Quality Impacts that are applicable and appropriate for this project site to control dust. There are five measures in the guidance document that were not included in the APM:*

- *Maintain areas in a stabilized condition by restricting vehicle access*
- *Store and handle materials in a three-sided structure*
- *Don't overload haul trucks [as] overloaded trucks are likely to spill bulk materials*
- *Clean the interior of cargo compartments on emptied haul trucks prior to leaving a site*
- *Monitor dust-generating activities and implement appropriate measures for maximum dust control*

PG&E is amenable to including these additional measures in APM AIR-1 with the exception of store and handle material in a three-sided structure. Installation of a three-sided structure for the storage of materials could unnecessarily add to the project work area and is not needed because inactive storage piles will be stabilized with water, chemical stabilizers/dust suppressants, tarps, or other suitable cover.

AQ-8 According to SJVAPCD' s 2015 Guidance for Assessing and Mitigating Air Quality Impacts, sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). The location of sensitive receptors is needed to assess toxic impacts on public health.

The PEA listed some sensitive receptors in the vicinity of the project. However, staff needs the complete list of the sensitive receptors. Since most of the emissions from the proposed project are represented by fugitive dust and exhaust emissions generated by mobile sources, the sensitive receptors located within 1,000 feet of the proposed project should be considered in order to assess the impacts on public health.

Please confirm that besides the sensitive receptors listed on pages 3.3-11 to 3.3-12 in the PEA, there are no other sensitive receptors including schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s) located within 1,000 feet of the proposed project.

PG&E Response: *There are ten residences and one place of worship within 1,000 feet of the proposed project. The distances are listed below. There are no schools, parks, playgrounds, day care centers, nursing homes, or hospitals located within 1,000 feet of the proposed project.*

<i>Sensitive Receptor</i>	<i>Location and Approximate Distance in Feet from (Substation Expansion) [Pole Work Area]</i>
<i>Place of Worship</i>	<i>South side of Yosemite Avenue (610) [545]</i>
<i>House</i>	<i>South side of Vierra Road (115) [80]</i>
<i>House</i>	<i>South side of Vierra Road (280) [215]</i>
<i>House</i>	<i>South side of Vierra Road (400) [335]</i>
<i>House</i>	<i>South side of Vierra Road (435) [375]</i>
<i>House</i>	<i>South side of Vierra Road (470) [410]</i>
<i>House</i>	<i>West end of Vierra Road (635) [80]</i>
<i>House</i>	<i>North side of Yosemite Avenue (800) [515]</i>
<i>House</i>	<i>South side of Yosemite Avenue (1020) [890]</i>
<i>House</i>	<i>North side of Yosemite Avenue (1510) [905] and 625 feet from SA-3</i>
<i>House</i>	<i>South side of Yosemite Avenue (1900) [1215] and 940 feet from SA-3</i>

AQ-9 In its 2015 Risk Assessment Guidelines, the Office of Environmental Health Hazard Assessment (OEHHA) recommends assessing cancer risk for projects where the maximally exposed individual resident or sensitive receptor is exposed for two months or longer. According to the PEA, constructing the substation expansion would take approximately 12 to 18 months to complete and would likely begin prior to power line construction, which is estimated to take approximately 3 to 4 months to complete. Please justify why a health risk assessment (HRA) was not conducted.

PG&E Response: PG&E is preparing a health risk assessment and will submit it to the CPUC upon completion (estimated to be completed in four weeks).

Biological Resources

BIO-1 The CPUC August 10, 2012, working draft of the PEA Checklist 3.7.1.5 Vegetation Clearance, states “Identify the preliminary location and provide an approximate area of disturbance in the GIS database for each type of vegetation removal.” According to PEA Section 2.7.5, construction of the project “...will require ground-disturbing activities (approximately 2.8 acres at Vierra substation and 0.4 acre at each pole location), including minor vegetation trimming, tree removal, and pole installation and removal.” Elsewhere, the project PEA states that “...the total amount of area disturbed during project construction is estimated to be 9.2 acres. This includes approximately 6.4 acres for tubular steel pole (TSP) sites, pull sites, and temporary access roads and staging areas, and approximately 2.8 acres associated with expanding the substation” (from PEA Air Quality Section 3.3, page 3.3-4). In order to complete a sufficient CEQA analysis of the project, please provide the acres of temporary and permanent impacts by vegetation type, along with supporting GIS data.

PG&E Response: The requested data is forthcoming.

BIO-2 PEA Checklist 3.7.1.5 Vegetation Clearance, states “Any GIS data documenting locations of special-status species should be provided.” Please provide GIS data files of special-status species observations, including the “historical Swainson’s hawk nest tree” (Figure 2, Technical Memorandum for Biological Constraints Analysis, Stillwater 2017a).

PG&E Response: There were no special-status species observations made. The “historical Swainson’s hawk nest tree” was located within the Union Pacific Railroad (UPRR) easement, immediately adjacent to the south side of the tracks, approximately 1,600 feet north of the intersection of South Howland Road and D’Arcy Parkway. The tree is no longer at this location. While the tree is visible on 2016 Google Earth imagery (27°47.945’ N, 121°16.684’ W); the tree is not present on 2017 imagery.

BIO-3 Burrowing Owl: Section 2.3 of the Technical Memorandum for Biological Surveys (Stillwater Sciences, 2017) Burrowing Owl Habitat Assessment/Burrow Survey states that “A western burrowing owl habitat assessment/burrow survey was conducted within suitable habitats located within a 200-meter survey buffer of the following areas:

- along the south side of Christopher Way (proposed corridors J and K),
- along South Howland Road (proposed corridor G), and
- around the Vierra substation expansion area.”

The assessment “incorporated methods identified in CDFW’s Staff Report on Burrowing Owl Mitigation (CDFW 2012).” Because CDFW 2012 recommends that four separate

breeding season surveys be completed between February 15 and July 15, the single survey completed in 2017 is insufficient to detect current burrowing owl presence. Disruption of burrowing owls and/or loss of occupied habitat may result in a significant adverse impact.

Staff has carefully reviewed the CDFW (2012) guidelines and conducted an independent survey of the proposed alignment on September 26, 2018. The 2017 surveys performed by Stillwater Sciences appeared to not have surveyed for burrowing owl along alignment segments H and F (Stillwater Sciences, 2017, Figure 1 and page 3; and Section 2.3); staff's independent survey determined Segment H to be of unsuitable habitat, with no adverse impacts expected). Staff requests the following surveys be conducted along Segments F and J as depicted in Stillwater Sciences (2017) Figure 1 and Figure 3. The following surveys are designed to detect both breeding and nonbreeding burrowing owl occupation; therefore, allowing staff sufficient occupancy data to complete analysis.

- Wintering surveys: please conduct wintering (nonbreeding) surveys for this species (according to CDFW 2012, nonbreeding season surveys consist of four surveys). Staff requests two surveys during the nonbreeding season, which can commence now to avoid delays in the CPUC review. Please refer to CDFW 2012 Appendix D for more information regarding the correct survey protocol, such as timing and weather constraints. Ensure that segments F and J of the proposed alignment are surveyed. Provide a survey report, including GIS files of positive signs of occupancy such as whitewash around burrows and other visual observations and describe appropriate avoidance, minimization and mitigation measures to avoid significant impact to burrowing owl on the project.
- Breeding season surveys: please modify **APM-3** to specify that PG&E will conduct two preconstruction surveys prior to construction activities that occur during the breeding season (spring/summer). Please refer to CDFW 2012 Appendix D for more information regarding the correct survey protocol, such as timing and weather constraints. Ensure that segments F and J of the proposed alignment are surveyed.

Additionally, **APM BIO-3** in the PEA lacks mitigation for any potential occupancy. Submit a burrowing owl focused survey reports upon completion of wintering surveys and breeding season surveys, including GIS files of positive signs such as whitewash or other visual observations, and a proposed new mitigation measure (in the case of occupancy being discovered) in accordance with CDFW 2012.

***PG&E Response:** The project is located within an area of the City of Lathrop that is undergoing rapid development, including the construction of warehouses along Christopher Way, upgrades to the City's Water Treatment Plant, and planning for industrial developments south of the Vierra project within the areas of the South Lathrop Specific Plan and the Lathrop Gateway Business Park Specific Plan. During a meeting with the City of Lathrop Planning staff, PG&E enquired as to whether burrowing owl was identified or known to occur in the project area and was informed that burrowing owls are not present. Based on the City's knowledge of the area and the lack of evidence of burrowing owls being present during the 2017 site assessment, PG&E recommends that the four additional CPUC-requested surveys occur closer to the time of construction. The earliest that construction would commence, pending project approvals, would be spring 2020. PG&E will perform two surveys during the breeding season (February 15 to July 15, 2019) and two surveys during the non-breeding season of 2019/2020. (If the start of*

construction is spring 2021, the surveys will be delayed for a year.) Should burrowing owls be present, PG&E will avoid active burrows in accordance with the distances identified in the CDFW 2012 guidelines. If an active burrow cannot be avoided, passive relocation will be considered. Relocation will be conducted during the non-nesting season and only after a site-specific relocation plan has been approved by CDFW.

Geology and Soils

GEO-1 The PEA and subsequent information submitted in PG&E's response to CPUC's Data Deficiency letter mentioned construction of minor trenching within the substation yards and construction of slab foundations for microwave facilities. However, for the trenching no information was provided concerning the location, lateral dimensions or depth of excavation and no profile drawings were provided depicting the proposed locations and depths of the microwave facility foundations. Staff needs this information to be able to assess environmental impacts for both paleontologic and geologic resources.

PG&E Response: PG&E has not yet fully performed a Microwave Radio Survey for the new paths to Vierra Substation to confirm the exact location of microwave facilities within substation yards. The depth of microwave tower foundations is dependent on the findings of Geotechnical Analyses. PG&E will provide the requested information when it is available.

Greenhouse Gas Emissions

GHG-1 A note under **Table 3.7-2** on page 3.7-8 of the PEA states that GHG emissions would be reduced by 5 percent with the implementation of **APM GHG-1** as a result of minimizing idling and maintaining equipment in proper operating condition. Please provide a reference for this assumption.

PG&E Response: The requested data is forthcoming.

GHG-2 Please provide details showing how the CO₂e emissions in **Table 3.7-3** of the PEA were calculated for circuit breaker SF₆ leakage.

PG&E Response: The requested data is being submitted separately on CD.

GHG-3 Please make sure that the most updated global warming potentials (GWPs) from the Fifth Assessment Report (AR5) of the Intergovernmental Panel on Climate Change (IPCC) are used to calculate the CO₂e emissions. Otherwise, please justify the use of GWPs from previous versions of the IPCC reports.

PG&E Response: The requested data is forthcoming.

GHG-4 **APM GHG-1** in the final IS/MND (page 5.7-5) for the Sanger project dated March 2017 included a mitigation measure to encourage use of natural gas-powered vehicles for passenger cars and light-duty trucks where feasible and available. Staff would like to know if the applicant is willing to add this mitigation measure to the **APM GHG-1** for the project.

PG&E Response: No, PG&E is not willing to add this mitigation measure as it is not reasonably feasible for this construction project.

Hazards and Hazardous Materials

HH-1 In PEA section 3.8.4.2, **APM HM-1** emphasizes the environmental training that would be given to workers prior to start of construction. However, there is no mention of the health and safety requirements that must be followed during construction. Please provide an outline of the health and safety topics of the program that the construction workers would have to follow.

***PG&E Response:** Health and safety topics of the program will include an overview of Personal Protection Equipment (PPE) (safety vest and hard hat requirements), fire safety and fire control (general requirements, preventative steps, and PPE), personal health and safety, electrical safety, and safety procedures and protocols. Project-specific worker environmental training programs are prepared closer to the start of construction. As indicated in APM HM-1, the worker environmental training program materials will be provided to CPUC staff for review prior to construction.*

Hydrology and Water Quality

HYDRO-1 The PEA and information submitted in PG&E's response to the CPUC's Data Deficiency letter describe the necessity for the project's proposed storm water retention basin. The city of Lathrop's Phase II Municipal Storm Water Permit (Provision E.12.e.(f)) identifies bioretention as the standard (required) storm water treatment control measure unless (1) an alternative treatment control measure that is equivalent to bioretention is proposed and demonstrated (Provision E.12.e.(g)), or (2) a specific exception applies (Provision E.12.e.(i)). Please explain how the proposed retention basin design meets or is exempt from this requirement.

***PG&E Response:** For substation safety reasons, PG&E's company standard does not allow any vegetation inside an energized substation facility. Therefore, the proposed detention basin is similar to a bioretention basin except with no vegetation. Stormwater is directed to the basin, where it then percolates through the uncompacted base. The basin is not designed to hold a permanent pool of water. However, per the City of Lathrop's design criteria, the detention pond is designed to contain twice the volume of a 10-year storm with a 24-hour storm event. We expect the basin will be less than half full after most of the rain event has occurred, and the stormwater will percolate into ground as designed.*

HYDRO-2 The October 28, 1997 memorandum concerning the Vierra Substation Geotechnical Investigation states that the time expected to drain a 4-foot deep pond, 5 feet from the water table, would be about 9 days. Infiltration based post-construction best management practices identified by the city of Lathrop's Post-Construction Standards Manual require that standing water be infiltrated within 48 hours. Please explain how the proposed retention basin would meet this requirement.

***PG&E Response:** The more recent 2016 Kleinfelder report states that the water table is found at 16 feet below ground based on a boring log performed in April 2016. It is also our understanding that the groundwater table varied between 5.5 feet and 17 feet from 1963 to 1990. Therefore, we may consider 5.5 feet below ground as the worst-case scenario. The proposed site will be mostly graded fill to match the elevation of the existing substation facility. The invert of the new basin (3 feet deep) will essentially*

equal the original grade level. Therefore, the water table will still be at least 5.5 feet below the pond base. As mentioned, the 3-foot-deep basin is expected to be half full, or 18 inches of contained stormwater during a 1-in-10-year storm event. Standing water within the pond will likely infiltrate within 48 hours.

HYDRO-3 The Kleinfelder geotechnical report, dated July 25, 2016, states that “between 1963 and 1990, stabilized groundwater levels were recorded at depths between about 5 to 17 feet in a well adjacent to the project site.” Though the included boring (B-1) showed that groundwater was encountered at 16 feet below ground surface, the report acknowledges that the boring was not left open to allow groundwater level to stabilize. Please explain how shallow groundwater levels could impact performance of the retention basin.

***PG&E Response:** The Kleinfelder report described their procedure to backfill the boring hole, which was dewatered for slurry concrete backfill to achieve compaction. Shallow groundwater, as shallow as 5.5 feet below ground, would reduce the infiltration rate, and can be caused by irrigation of the adjacent farmland and not solely contributed by the rainfall. Complete infiltration would take longer than the expected performance within 48 hours if there is a high water table and a half-full detention base. A PG&E maintenance crew would take prompt action to inspect and test the contained stormwater, and if clean, pump it out of the basin. If not clean, the hazardous handling procedure will be followed to remove contaminated content out of the facility per the Spill Prevention, Control, and Countermeasure (SPCC) plan.*

Noise and Vibration

NOISE-1 Ambient noise data for the project is not provided in the PEA and is not publically available. Please provide existing daytime and nighttime ambient noise data for the project’s noise-sensitive receptors identified in Responses to Deficiency Report #1 dated August 28, 2018.

***PG&E Response:** Publicly available ambient noise data was included in the Draft Environmental Impact Report for the Lathrop Gateway Business Park Specific Plan (June 8, 2010). The northern boundary of the area covered by the specific plan is Vierra Road. Chapter 14, Noise includes an ambient noise study with noise measurements conducted at a residence at 2978 West Yosemite Avenue, approximately 1,000 feet east of the project area. The ambient noise was reported to be 59.4 A-weighted decibels (dBA) L_{dn} at that location at that time. PG&E has not undertaken ambient noise studies in this area, but averages may be difficult to quantify due to variable noise levels associated with other construction projects, heavy truck traffic, the welding shop near one residence, railroad operations, and seasonal farming operations. The area is characterized by an uneven noise environment.*

NOISE-2 Based on project-specific construction activities, please provide daytime and nighttime noise levels for land-based construction equipment and activities associated with the removal, modification, and installation of the transmission towers at the noise sensitive receptors nearest to these activities.

***PG&E Response:** The nearest sensitive receptor to any project work area is a residence located along the south side of Vierra Road, approximately 80 feet from transmission tower removal activities. The two tables below—Table 1: Noise Levels from Common Construction Equipment and Table 2: Standard*

Construction Equipment Aggregate Noise Emission Values—provide examples of typical noise levels during construction that are considered representative of the land-based construction equipment to be used for the project during transmission tower removal activities. As indicated below in Table 3: Sensitive Receptor (Residential) Near Proposed Project Area, the loudest potential noise at the nearest sensitive receptor is a maximum of approximately 85 dbA during aggregate equipment usage associated with excavation activities for removal of a transmission tower. This maximum construction noise level would only occur intermittently throughout a typical construction work day and would not last long at a single location. And although local noise requirements are not applicable and this project is located in an industrial zone, PG&E will be limiting construction hours to those specified for construction in residential zones under Section 8.20.110 of the Lathrop Municipal Code (APM NOI-1) unless otherwise required for safety or clearance reasons. Additionally, PG&E will be implementing APMs NOI-2 through NOI-6 to further minimize temporary impacts related to construction equipment noise.

Table 1: Noise Levels from Common Construction Equipment

Equipment	Typical Sound Pressure Level (L_{max}) at 50 Feet (dBA)
Crane, Excavator, Dozer	85
Truck (Dump, Water)	84
Backhoe	80
Pickup Truck	75

Source: Federal Highway Administration 2006.

Table 2: Standard Construction Equipment Aggregate Noise Emission Values

Typical Construction Phase	Aggregate Equipment Sound Pressure Level at 50 Feet (dBA)
Site clearing	84
Excavation	89
Foundation	77
Building	84
Finishing	89

Source: U.S. Environmental Protection Agency 1971.

Table 3: Sensitive Receptor (Residential) Near Proposed Project Area

Sensitive Receptor ID	Nearest Project Component	Approximate Distance from the Project Component (feet)	Estimated Maximum Aggregate Equipment Noise (dBA)
Residence	Work Area	80	85

References:

U.S. Environmental Protection Agency 1971. Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances. December 31, 1971. Prepared by Bolt, Beranek and Newman under Contract 68-04-0047.

Project Description

PD-1 PEA Section 2.7.13 describes the construction schedule in a piecemeal manner, but does not aggregate the duration of construction or provide an estimated construction begin and end timing. The only date provided is the expected operational year of 2023. Construction length is quantified based on what portion of the project is constructed (e.g., substation expansion). Based on the description provided in the PEA, the substation expansion would take approximately 12 to 18 months, power line construction (occurring before substation expansion) would take approximately 3 to 4 months, and pole installation would take approximately 3 days for one foundation and pole installation. The conductor would be installed over a five-week period. We need to know an estimated start and end date of construction and the estimated duration. Please clarify the construction timing and duration so that staff can more fully analyze the project's impacts and their potential cumulative impact. Section 3.13.4.3 of the Population and Housing section of the PEA notes a construction period of 18-22 months. Please clarify the correct construction timing and duration.

***PG&E Response:** As stated in section 2.7.13, the total estimated duration of construction, including the substation expansion and power line installation, is approximately 12 to 18 months. Power line construction will commence after work on the substation expansion has been initiated and timed so that the new line can be connected into the substation expansion upon completion. While the substation expansion could be completed in 12 months, the scheduling of clearances will determine the overall schedule of the project. The earliest substation expansion is estimated to commence in spring 2020, pending issuance of project approvals and acquisition of land rights. This could result in the project being operational by the end of 2021.*

PD-2 PEA Section 2.7.2.5 states that the helicopter landing zone would be approximately 0.5 acre in size, within a designated staging area on the west side of Vierra Substation or the north side of South Howland Road, east of D'Arcy Parkway. Based on a review of the Project Route Map in Appendix A of the PEA, two proposed helicopter landing zones appear to be marked SA-2 and SA-1, respectively. Is this the correct location for the helicopter landing zones? If not the correct location, please provide a figure with the proposed landing zone(s) marked.

***PG&E Response:** Only one helicopter landing zone is required. SA-1 is the preferred location. If SA-1 is not available at the time of construction, SA-2 will be used.*

PD-3 While helicopter use for the project appears limited, staff would like to know whether any refueling would be necessary and if so, where the refueling would

take place. If any refueling would occur in the project area, what environmental protection would be in-place to ensure that no potentially significant impacts occur from possible spills or leaks?

PG&E Response: Refueling will take place at the helicopter landing zone. The helicopter company provides the fuel truck, which is equipped with a spill kit. Fuel is not stored on site.

PD-4 What certifications, safety precautions, and training would be required for construction workers using the helicopters?

PG&E Response: All employees involved with helicopter work methods are required to have formal training and carry a card that the pilot of the helicopter reviews prior to performing work. PG&E has a manual for helicopter procedures.

PD-5 PEA Section 2.5 states that the proposed project would require single-circuit towers/poles on the west side of the Vierra Substation. Please provide single-circuit tower/pole structure configurations and measurements.

PG&E Response: Single-circuit pole structure configuration and measurements figures are attached at the end of this document.

PD-6 PEA Section 2.5.2 discusses a modification that would be required in the Vierra Substation. Please provide pre-modification and post-modification one-line diagrams of the Vierra Substation. Show bay arrangements and breaker ratings.

PG&E Response: This information is forthcoming.

PD-7 PEA Section 2.1 states that four temporary shoo-fly structures would be installed to support the transmission line relocation. Please provide shoo-fly structure configuration and dimensions in a viewable figure.

PG&E Response: This information is forthcoming.

Transportation and Traffic

T-1 Regarding PG&E's responses to CPUC's Deficiency Report #1. For the peak construction period when trucks would be hauling fill for the substation pad, please provide: the expected duration of this peak period; the month/s of construction (i.e., Month 1) during which the peak period would occur; and the time/s of days during which the truck trips would occur (i.e., the number of truck trips that would occur during peak AM and PM traffic hours).

PG&E Response: The expected duration of the peak period of hauling fill for the substation pad is approximately four weeks, likely May or June. Trucks will typically start to arrive at the site around 8 a.m. and continue to arrive periodically throughout the day. Based on an approximate volume of 10,000 cubic yards, using belly dump trucks that have a capacity of 25 cubic yards, and hauling occurring Monday through Friday, this equates to approximately 20 truckloads a day, of which it is estimated that 10 percent of the truck trips would coincide with peak AM traffic, and 10 percent of the truck trips would coincide with peak PM traffic.

T-2 Regarding PEA Section 3.16.4.3a. Please provide the average number of daily trips, including both worker and truck trips, for project construction. Please also state

approximately how many of these trips would be expected to occur during peak AM and PM traffic hours.

PG&E Response: *The highest number of trips will occur during hauling of fill to the substation site. As noted in response T-2, it is estimated there will be 20 truckloads per day (40 one-way trips), 10 percent of which will occur at peak AM hours, and 10 percent of which will occur at peak PM hours. Coinciding with this phase of work, it is estimated there will be approximately 10 worker trips per day, all of which would occur at peak AM and PM traffic hours.*

As indicated in section 2.7.12, the power line crew and the electrical crew will each consist of approximately 5 to 20 construction workers. Work being performed by the power line and electrical crews is not scheduled to occur at the same time as the hauling of fill to the substation site. The size of the power line and electric crews will vary depending on the task being performed and schedule.

T-3 Regarding PEA Section 3.16.4.3d. Please provide information on activities involved and agency coordination associated with the power line crossing the Union Pacific Railroad tracks and private spur rail. Please indicate specific measures that will be implemented as part of **APM TRA-3** that would minimize rail service interruption.

PG&E Response: *There will be no interruption of rail services. PG&E will obtain the rail schedule from UPRR and the Crossroads Association and work around the rail schedule. This coordination will occur immediately prior to construction (typically a month before the work at the crossing is to occur) so that the rail schedule is accurate. PG&E is required to obtain a permit from UPRR, and UPRR always has a flagger on site while PG&E is working to provide updates on train activity. PG&E stops work when the train goes by, and the flagger informs PG&E when work can continue. Rail traffic on the spur is significantly less than the UPRR tracks. PG&E was informed by the Crossroads Association that typically there is one train every one to two weeks on the spur.*

T-4 Regarding PEA Sections 2.7.2.5, 3.16.4.3c, and 3.16.4.3e. In addition to the anticipated road closures due to helicopter activity, please also provide the location, duration, and timing of other anticipated project lane closures (if any).

PG&E Response: *Road closures will be limited to helicopter activities during stringing, and are estimated to be less than 5 minutes at each road crossing and will occur approximately three times within a 2-hour period. Lane closures will occur when ground crews are working at pole locations along Nestle Way, Christopher Way, and Vierra Road. However, the roads are of sufficient width to cone off an area and still maintain two-way traffic. The duration of work along these roads will be 2 to 3 days for the foundation and pole installation, and up to 6 additional days per pole location for wire installation.*

Utilities and Service Systems

USS-1 Neither the PEA nor PG&E's response to CPUC's Data Deficiency letter provided any information on the sources of construction wastewater such as wash down of concrete equipment, dewatering of foundation excavations, or excess bentonite slurry. There is also no discussion of how the various sources of wastewater would be managed. Please provide details about the sources and quality of construction wastewater and how the wastewater would be managed.

PG&E Response: *If bentonite is used, the spent slurry is collected in a vacuum truck or tanker and hauled off site to an approved disposal area. Bentonite may be disposed on site as clean fill.*

Generation of wastewater will be associated with pouring concrete foundations. The amount of wastewater generated is estimated to be 3 to 4 gallons each time the concrete shoot is washed down. This minimal amount of water associated with cleaning the shoot will infiltrate the ground where the foundation is poured; no runoff will occur. A concrete washout station may be used when pouring foundations within the substation.

Should dewatering of TSP foundations' excavations be necessary, it will be discharged in accordance with APM HM-4. At the substation site, water may be pumped into the existing SPCC pond, pumped into a baker tank, or discharged overland if determined to be clean. Testing of discharged water will occur in accordance with APM-HM-4:

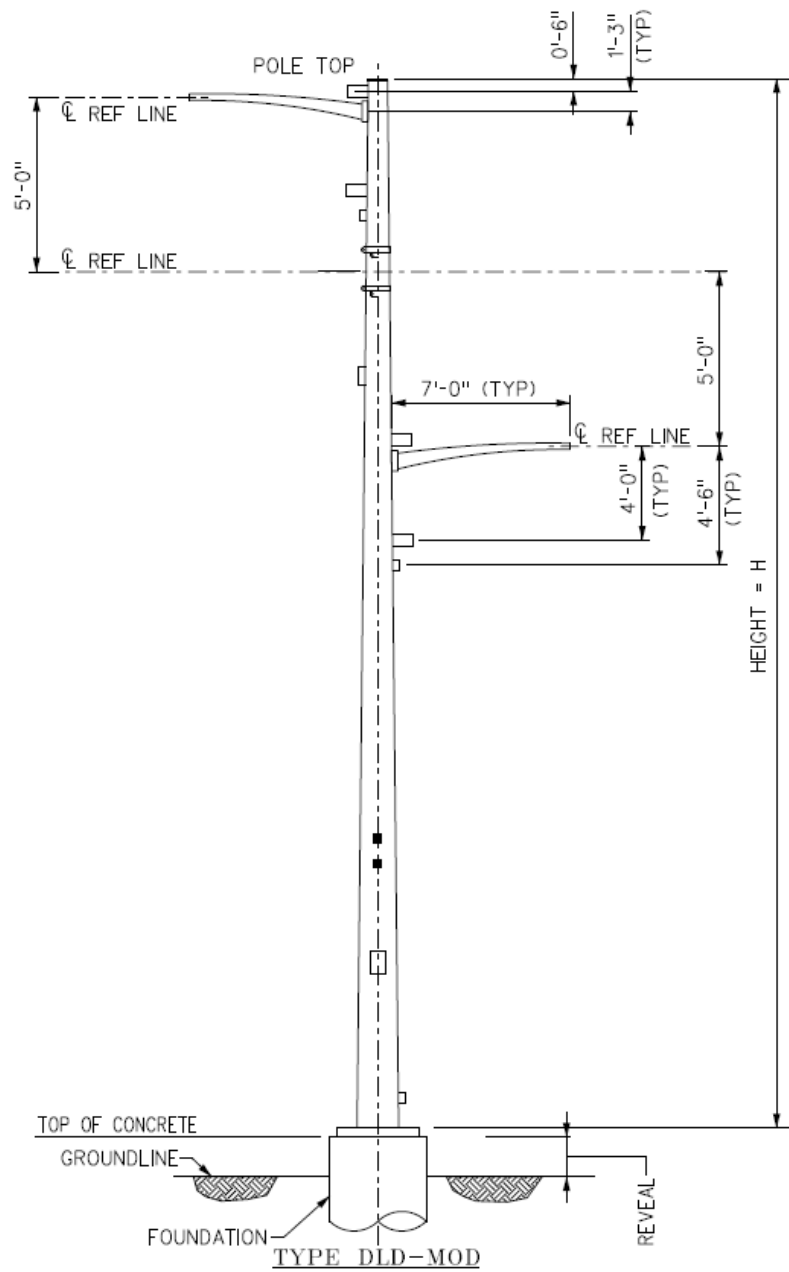
APM HM-4: Soil and Groundwater Testing and Disposal

In the event soils suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during site grading or excavation activities, the excavated soil will be tested, and if measured above hazardous waste levels, will be contained and disposed 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.

In the event groundwater is encountered during construction, the groundwater will be tested prior to being discharged over land or removed from the site. Testing of groundwater will be supervised by a qualified person, as appropriate, to meet state and federal regulations.

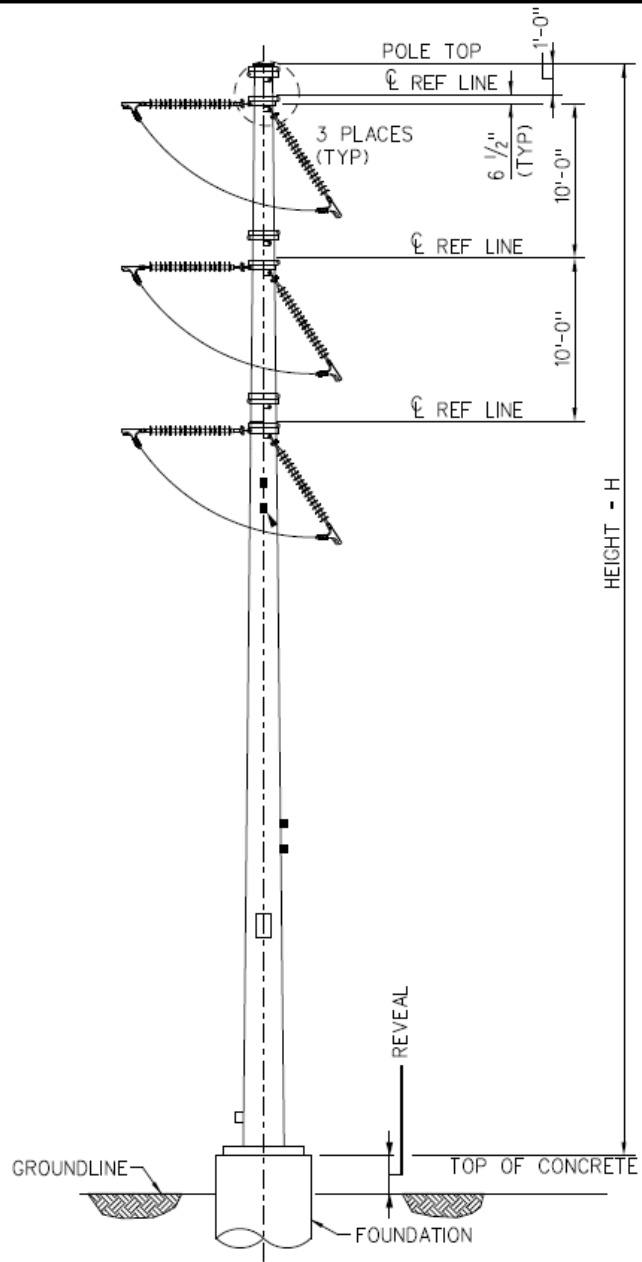
USS-2 The PEA indicates there is sufficient space in the proposed landfill for disposal of project wastes, however there are no estimates of the volume of waste that could be generated by construction and operation of the project. Please provide estimates of the volume of waste that would be generated by construction and operation of the project.

PG&E Response: *Construction waste will be disposed in one or two dumpsters at the substation site. A dumpster typically holds 30 cubic yards. The dumpsters will likely be emptied once or twice a month.*



TSP for Vierra-Howland Rd

Preliminary, Approximate, and Subject to Change	P.G. & E. CO.	DRAWING NO.	REV.
	SHEET OF SHEETS		1
		SCAN	IC



TYPE DVD-3
 (LT LINE ANGLE SHOWN)

Single Circuit TSP

Preliminary, Approximate, and Subject to Change	P.G.& E. CO.	DRAWING NO.	REV.
	SHEET OF SHEETS		1
	SCAN	IC	