ENVIRONMENTAL CHECKLIST

1.	Project Title:	PG&E FMC Substation (Application Number: 97-11-024)

2.	Lead Agency Name and Address:	California Public Utilities Commission 505 Van Ness Avenue, Fourth Floor San Francisco, CA 94102-3298

3.	Contact Person and Phone Number:	Moises Chavez (415) 703-1851

4.	Project Location:	City of San Jose (see Figure 1)

5.	Project Sponsor's Name and Address:	Pacific Gas and Electric Company P.O. Box 7442 San Francisco, CA 94120

6.	General Plan Designation:	Heavy Industrial Use	7.	Zoning:	M4 (Heavy Industrial)

8.	Description of Project:

Purpose and Need

Pacific Gas and Electric Company (PG&E) is proposing to build a 115 kV substation and an associated 115 kV power line in San Jose, California. The project is referred to as the FMC Substation project. The substation site is located on the north side of Interstate 880 (I-880) and south of the San Jose International Airport, within the City of San Jose, in Santa Clara County. The purpose of the substation is to reduce the voltage of electricity carried on the 115 kV power line to 12 kV in order to supply the local electricity distribution system that delivers power to users nearby. PG&E has stated that the proposed substation is needed to meet the electrical load growth in the City of San Jose and nearby areas, and to ensure that PG&E can supply the area's future demand for electrical energy. Present normal capacity of the Downtown San Jose 12 kV Distribution Planning Area is approximately 323 MW, while PG&E expects demand to exceed that capacity in 1998, based on load trend increases of 4.73 MW per year. In 1998, the project would provide a net capacity increase of 10 MW, which would be sufficient additional capacity to serve the estimated 1998 demand.

The existing FMC Substation was built in 1981 as a single-customer substation to serve the adjacent FMC Plant. When FMC switched its electric service to the City of Santa Clara in 1989, PG&E reconfigured the FMC Substation to serve the Downtown San Jose 12 k V Distribution Planning Area. The existing FMC Substation includes a 115 kV-12 kV, 20-MVA (Megavolt-Ampere) transformer bank and a 35 MVAR (Megavolt-Ampere Reactive) synchronous condenser / 45 MW gas turbine standby generator which serves to balance projected deficiencies on the transmission system.. Current plans are to remove the existing FMC Substation's 20-MVA transformer bank after the first 30-MVA transformer is in service at the FMC Substation, and to remove the temporary synchronous condenser/stand-by generator after the second 30-MVA transformer bank has been placed in service at the FMC Substation. As the operation, repair and maintenance of the existing substation facilities are exempt from CEQA review under CEQA Guidelines section 15301(b), neither the existing substation transformer bank nor the standby generator is examined by this initial study.

Note that the timing of the installations of the transformer banks at the FMC Substation could be affected by the timing of another, separate project at Substation A. This separate project would replace an existing 20-MVA, 115 kV-4kV transformer bank with a 30-MVA, 115 kV-12kV transformer bank, and make other modifications within the existing Substation A site, in the spring and summer of 1999. That replacement, as a separate project, would be subject to a separate filing under the Commission's General Order 131-D.

PG&E provides electrical power services in the Downtown San Jose Distribution Planning Area (DPA), which serves the downtown, the San Jose International Airport, and surrounding residential areas. In providing these services, PG&E currently operates six substations. Substation A, Substation B, and the FMC Substation serve the immediate downtown San Jose and the area around the Airport; the Maybury, McKee, and Stone substations serve the rest of the DPA, which mainly includes residential customers.

The expected electrical load growth in the DPA would exceed the capacity of the substations within the DPA by the summer of 1998. Initially, the new FMC Substation would provide approximately 25 MW of the load in the downtown and Airport areas. Installation of a second transformer bank in about the year 2000 would also require a second 115 kV power line to provide transmission capacity to serve the load expected at the FMC Substation. Three off-site 12 kV distribution circuits, some aboveground and some underground, would be constructed to distribute power from the FMC Substation.

Project Description

The site of the existing FMC Substation and the proposed project is located northwest of downtown San Jose and south of the San Jose International Airport. The site is on a 4.07 acre block bounded on the south by I-880, on the north by industrial buildings fronting Newhall Street, on the east by Stockton Avenue with residences fronting on the street, and on the west by the Union Pacific Railroad/CalTrain right-of-way (see Figure 1). The proposed site is owned by PG&E and the existing 115 kV power line runs to the operating FMC Substation located on the proposed site.

Other land uses in the vicinity of the project site include residences and small commercial buildings in the area between Stockton Avenue and Coleman Avenue to the northeast, and industrial buildings along and to the north of Newhall Street.

The proposed site is flat. The site includes the existing FMC Substation, located on the southern corner of the site, but is a mostly vacant, paved area. Some temporary structures are located on-site. The portion of the property nearest Stockton Avenue is currently being used for parking and equipment and material storage.

The proposed substation at full build out (see Figure 2) is planned to be a remote-controlled, three- transformer bank, low profile facility occupying an area of approximately 300 by 150 feet. The substation would operate without on-site personnel, but would require maintenance inspections once a month. Development of the project would involve the following phases:

Phase	Development
I	Install the first 30-MVA, 115 kV-12kV transformer bank, an 8-foot-high concrete brick sound wall along Stockton Avenue, and perimeter landscaping between the wall and the street curb. Substation equipment installation and power line modifications at the FMC site include a high-side pull-off structure to bring the 115 kV line into the substation, air disconnect switches, bus structures, 12 kV switchgear assemblies, three 115 kV-12 kV transformers, and a central storage battery facility, as well as underground 12kV distribution circuits.
II	Install the second and third 30-MVA, 115 kV-12kV transformer banks at the FMC Substation. The second bank would be expected to be installed in the spring of 2000, while the third would be expected to be needed in the year 2006 or 2007. Note that the timing of these installations would be dependent on the timing of another, separate project at Substation A, as described in the Introduction, above.
III	When the second 30-MVA, 115 kV-12kV transformer bank is installed at the FMC Substation, install a second circuit of 115 kV power lines between Substation B and the FMC Substation. This power line circuit would run approximately 7,700 feet from a tap at Substation B to the FMC Substation site. Within that length, modifications of the existing 115 kV power line and the addition of new 115 kV segments would involve several actions, as described below: From the tap at Substation B to West Taylor Street, the existing 115 kV power line along Coleman Avenue would be rebuilt by replacing the existing tubular steel poles (TSPs) with new double circuit, 85-foot-high, TSPs (see Figure 1). Along West Taylor Street and along Stockton Avenue, a new 115 kV power line would be added above existing distribution lines. Along West Taylor Street and along Stockton Avenue the new 115 kV power line would use 65-foot-high wood poles (see Figure 1) for linear segments and tubular steel poles for angle structures.

The new 115 kV power line would join as an overhead line the existing line at the south side of I-880, and would cross the freeway and enter the FMC Substation as a double circuit line.

Insert figure 1 – location map

Insert figure 2 – site map

In addition to the FMC Substation and second circuit added to the 115 kV power line that serves the substation, up to twelve 12 kV distribution lines would be constructed.

Overhead 12 kV distribution lines would be constructed on existing wood poles along Hedding Street between Regent Street and San Pedro Street.

Underground 12 kV distribution lines would be placed in trenches along:

Coleman Avenue, between Newhall Street and Asbury Street;
Hedding Street, between Coleman Avenue and Regent Street;
Hamline Street, between Stockton Avenue and Chestnut Street;
Chestnut Street, between Hamline Street and Newhall Street;
Newhall Street, between Chestnut Street and Coleman Avenue; and,
Emory Street, between Bascom Avenue and Chapman Street.

Other 12 kV distribution lines would be constructed as the need arises.

Substation Construction

For construction at the FMC site, all construction equipment, vehicles, personnel, and staging areas would be accommodated within the paved areas on and adjacent to the FMC Substation site. Access to the substation site would be from an existing entrance at the north side of the property along an existing driveway from Newhall Street. Construction of each transformer bank would require approximately two to three months to complete. The following generally describes the construction activity that would take place on site.

As the site has been graded and is paved, no changes other than removal of five existing landscape planters, the construction of foundations for the transformers and other equipment, and the construction of a pond and other parts of the Spill Prevention Control and Countermeasure (SPCC) system would be required. Any temporary structures on the substation site would be removed. Asphalt and soil excavated from the site would be segregated so that the asphalt would be recycled and the soil used as cover in a landfill.

Construction materials would be transported to the site to assemble and install the 115 kV-12 kV, 30 MVA transformer and associated equipment. The SPCC ditch system and containment pond would also be constructed. The SPCC pond would be designed to contain up to 150% of the oil from the largest piece of equipment, or 9,750 gallons. The transformers would be installed on sealed concrete foundations, and a berm built around the three transformers. The area within the berm would be surfaced to direct any oil leaks into the on-site, concrete-lined SPCC pond. A built-in weir system would be designed to segregate oil from the water, providing stormwater spillover and oil retention. The SPCC pond would be equipped with a manually operated isolation valve. An eight-foot-high solid sound wall would be constructed along the easterly boundary of the site along Stockton Avenue, and landscaping would be planted between the sound wall and the curb.

No electrical service interruptions to customers in the area would occur during the construction of the FMC Substation.

Power Line Construction

Power line construction for the new 115 kV circuit would include re-conductoring of certain existing power lines as well as the addition of new conductors in the portions of the

line that would support a double circuit, and installation of new TSP and wood pole support structures.

Five steps would be involved in installing the new 115 kV power line: 1) clearing vegetation and boring foundation holes; 2) installing reinforcing bar foundation cages in the foundation holes; 3) pouring concrete for foundations; 4) delivering and installing the poles, structure arms, insulators, and wire-attaching hardware; and, 5) stringing the wire, completing clean-up of temporary structures and unneeded poles, and then energizing the circuit. The following describes these steps in more detail:

> Boring the foundation holes, ranging from 36 to 60 inches in diameter, to depths of 10 to 25 feet would require use of heavy-duty, three-axle construction trucks with drilling rigs. For each hole, it may take a day to set up and dismantle the drilling equipment. Equipment such as front loaders and dump trucks would remove the excavated material from each site.
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> The preassembled steel reinforcing bar foundation cages would be delivered to each site on low-bed truck trailers. A construction crane would lift each cage from the truck and place it in the foundation hole. Anchor bolts for the pole connection would be attached to each cage.
>
> Concrete mixer trucks would then be used to pour the foundations, using surface forms approximately two feet high, to develop the attachments for the pole base plate.
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> The wood poles and TSPs would arrive at each site on low-bed truck trailers, with TSPs arriving in two or three sections. A large crane would be used to raise the TSP sections or erect the wood poles, and then to raise the structure arms. Insulators and wire-attaching hardware would then be installed on the structure arms.
>
> After all of the poles have been placed, temporary wooden structures would be constructed at road crossings to prevent the conductor wire from touching the ground as the wire is pulled into place. The wire-stringing would require the use of large, specially-equipped, three-axle trucks to feed and pull the wire. After a pulling line has been strung, either by helicopter or manually, and brought up to the correct tension, the aluminum conductor wire would be attached and pulled into place. Linemen at each pole would adjust the sag of the conductor to achieve the design tension and then would clip the wire to the wire-attachment hardware. After the conductors have been installed, all of the temporary road-crossing structures would be removed, as would any poles that were no longer needed, and the new line would be placed in service.

Use of heavy equipment along the roadways for installation of new poles, for pulling wire or for trenching operations, may require the temporary closure of single lanes of traffic. Based on a construction time of about two days for each of about 20 poles over the 7,700-foot length of the power line, about 40 days of lane closures would be required for the construction of the power line. PG&E would coordinate the dates and times for construction closures of traffic lanes with the City of San Jose, and to the extent feasible, lane closures would occur during off-peak traffic periods, between the

hours of 9:30 am and 2:30 pm on weekdays. Actual marking -- signage and cone marking -- of the lane closures would be in accordance with the requirements of the "Work Area Protection and Traffic Control Manual" (California Joint Utility Traffic Control Committee, April, 1996), as well as the requirements of the City of San Jose Utility Excavation Permit.

Where the power line would cross over a secondary roadway, pulling the wires may require brief interruptions to traffic, with delays estimated to take no more than 10 minutes per wire pulling operation. Traffic could resume between wire pulling operations. Such installations would occur on the weekend, with construction hours coordinated with the City of San Jose.

Wire pulling over CalTrain tracks and the I-880 Freeway would not require stopping train or freeway traffic. Wire pulling would be done by two crews on either side of the tracks or freeway, or by helicopter. The Caltrans Encroachment Permit would regulate Work within the I-880 right-of-way; work within the CalTrain right-of-way would be performed in accordance with the CalTrain Standards Manual (1994).

Construction of the 115 kV power line would not cause service interruptions to customers.

Distribution Line Construction

As the poles already exist, construction of the new 12 kV overhead distribution lines would involve only the wire-stringing activities, as described above.

Construction of the new 12 kV underground distribution lines would require excavation of trenches in the street right-of-way, placing and connecting the new distribution lines to the existing lines and backfilling and repaving the excavation areas.

Similar to the construction of the power line, construction of the 12 kV distribution lines would require the temporary closure of single lanes of traffic either for pulling overhead wire or for trenching and installation of underground lines. Construction lane closures would be coordinated with the City of San Jose. Signing and coning of the lane closures would be in accordance with the requirements of the "Work Area Protection and Traffic Control Manual" and the City of San Jose Utility Excavation Permit.

Fewer than 10 customers would be out of service, for intervals of less than 4 hours, when the 12 kV distribution lines are connected. Service interruptions would be scheduled in advance, with at least 72 hours notice given to affected customers.

9.	Surrounding Land Uses and Setting:

The proposed substation site is adjacent to the existing FMC Substation. The site is bounded on the south by I-880, on the north by industrial buildings fronting and to the north of Newhall Street, on the east by Stockton Avenue and a mixed residential/ commercial neighborhood, and on the west by the Union Pacific Railroad/CalTrain right-of-way.

10.	Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement)

Pursuant to State Law, the California Public Utilities Commission is the permitting authority for the project.

Grading permits or "Notice of Exemption" would be obtained from the City of San Jose Department of Public Works.

Utility Excavation Permits would be obtained from the City of San Jose for all construction work, including trenching, along the roadways in the city.

Activity within the right-of-way of California highways (such as pulling wires across I-880) would require an encroachment permit from Caltrans.

Work over and along train facilities of CalTrain and AMTRAK would require compliance with the 1994 Standards Manual of the Peninsula Corridor Joint Powers Board.

Power line construction would be on right-of-way easements on private property. Such easements would be obtained by negotiation with landowners.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

[ ] Land Use and Planning	[ ] Transportation/Circulation	[ ] Public Services
[ ] Population and Housing	[ ] Biological Resources	[ ] Utilities and Service Systems
[X] Geological Problems	[ ] Energy and Mineral Resources	[ ] Aesthetics
[X] Water	[ ] Hazards	[ ] Cultural Resources
[X] Air Quality	[X] Noise	[ ] Recreation
	[ ] Mandatory Findings of Significance	

DETERMINATION

(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. [ ]

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. [X]

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. [ ]

I find that the proposed project MAY have a significant effect(s) on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed. [ ]

I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project.

☐

Natalie Walsh, Program Manager
Analysis Branch
Energy Division
California Public Utilities Commission

Date

I. LAND USE AND PLANNING

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with general plan designation or zoning?	☐	☐	☐	☒
b) Conflict with applicable environmental plans or policies adopted by agencies with jurisdiction over the project?	☐	☐	☐	☒
c) Be incompatible with existing land uses in the vicinity?	☐	☐	☒	☐
d) Affect agricultural resources or operations (e.g., impacts to soils or farmlands, or impacts from incompatible land uses)?	☐	☐	☐	☒
e) Disrupt or divide the physical arrangement of an established community (including a low-income or minority community)?	☐	☐	☐	☒

a) The project site (including the FMC Substation and the proposed power line) is located in the City of San Jose and is characterized by industrial and commercial uses interspersed with some residential uses. The *San Jose 2020 General Plan* land use map and the zoning ordinance designate the FMC Substation site as Heavy Industrial. The *General Plan* defines the Heavy Industrial designation as being appropriate for "industrial uses with nuisance or hazardous characteristics which for reason of health, safety, environmental effects, or welfare are best segregated from other uses." The zoning ordinance does not specifically address utility facilities. Nevertheless, because it is industrial in nature, an electrical substation is considered to be compatible with the Heavy Industrial land use and zoning. Therefore, the project at the FMC Substation would not conflict with land use or zoning designations (PG&E, 1997).

The majority of the lands along the proposed power line are designated in the *San Jose 2020 General Plan* as Light Industrial. The Bellarmine College Preparatory School site is designated Public/Quasi-Public, and other areas are designated combined industrial/ commercial and general commercial. The proposed power line crosses the Guadalupe River corridor, which is designated as Public Park/Open Space. Zoning along the proposed power line is predominately industrial; the zoning code does not regulate the

placement of power lines. Because the proposed power line would be constructed primarily by rebuilding existing power and distribution lines, land uses would not be changed. New power lines would be added (along W. Taylor Street) where the primary land uses are industrial. The project would therefore have no impact with respect to compatibility of the proposed project to general plan and zoning designations.

b) Discretionary approval of the project is held solely by the CPUC. The proposed substation improvements would not be under the jurisdiction of the City of San Jose (PG&E, 1998).

Portions of the power line route lie adjacent to the Julian-Stockton Redevelopment Project area. Item "G" in the Summary of Proposed Actions from the Julian-Stockton Redevelopment Plan states that the Redevelopment Agency will remedy, as necessary, conditions causing blight by installation and relocation of certain necessary site improvements, utilities, and facilities (PG&E, 1997, p. 99). The section of the project area within the jurisdiction of the Redevelopment Plan is not identified as blighted, and project implementation is unlikely to create blight since the power line route follows an existing power line corridor. The project would not change the land use within the redevelopment area, and therefore, the project would have no impact with respect to the future redevelopment plans.

It also should be noted that the City of San Jose has not designated the aerial lines along Coleman Avenue for undergrounding under Rule 20, the CPUC rule that provides a mechanism for the replacement of overhead with underground electric facilities, nor has the City of San Jose requested that PG&E continue its feasibility studies for undergrounding the proposed lines to FMC. As mentioned above, discretionary approval of the project is held solely by the CPUC; undergrounding of power lines is not required by the CPUC (PG&E, 1998). No conflict with existing policy will result.

Because there is already an existing substation and power line right-of-way, the proposed project would be as compatible as the existing substation and power line is with other applicable policies or plans such as those related to the Airport Approach Zone of the San Jose International Airport, and the San Jose Redevelopment Agency's Downtown Strategy Plan 2010. No conflict with policy will result.

c) The FMC Substation site is located south of San Jose International Airport. To the west is the U.P.R.R./CalTrain right-of-way; bordering Newhall Street to the north are heavy industrial uses; commercial and residential uses border the site on the east; and to the south is the I-880 freeway. Medium density residential uses are mixed with light industrial uses in the vicinity. The proposed substation facilities would be compatible with adjacent industrial, commercial, and transportation land uses since it would be constructed in a Heavy Industrial zone, and would not interfere with normal activities expected in those use areas.

Residential uses are considered sensitive receptors and would be affected in the short-term by project construction, as well as by visual and noise effects from long-term operation. These are indirect effects to land use as they potentially affect existing activities associated with residential uses. The project would not directly alter existing residential uses; e.g., would not require moving or destroying any residences. Thus, the impacts to land uses would be less than significant. In addition, the following project proposed mitigation measures would be implemented to further reduce potential indirect impacts of noise and visual conditions on existing land use activities: 1) construct an eight-foot sound wall along Stockton Avenue, which would reduce transformer noise at adjacent residences to levels that would be inaudible during the daytime and evening hours and faintly audible during the quieter nighttime hours; and 2) landscape the portion of the substation site facing Stockton Avenue to reduce visual impacts. In addition to the proposed measures, dust control measures would be implemented to reduce air emissions during construction activities. Expansion of the FMC Substation, as mitigated, would therefore have a less than significant impact on adjacent residential land uses.

For the proposed power line, the land uses along Stockton Avenue are commercial, light industrial, and residential. Between I-880 and W. Taylor Street, land uses are predominantly commercial and light industrial, with some scattered detached, single-family residential uses. On the west side of Stockton Avenue, between Emory Street and W. Taylor Street, the land uses are mostly residential. Bellarmine College Preparatory School is bound by W. Hedding Street on the north, Elm Street on the west, and industrial uses on the east. Residential and public land uses are considered sensitive land uses. The project would not cause any direct change in land use in these areas. Project construction would temporarily increase noise and air pollutant emissions, which would have an indirect impact on land use by potentially affecting (temporarily) activities at those use areas. Long-term changes would also occur along the 115 kV power line alignment along W. Taylor Street and on Stockton Avenue between Taylor Street and University Avenue, where no power line currently exists. Project mitigation measures identified above would also reduce impacts to a less-than significant level.

d) The land uses surrounding the project site are industrial, commercial, and residential. The industrial uses were constructed primarily in the post-World War II years, and the commercial and residential uses were constructed primarily between the 1920s and 1950s. No agricultural areas exist at or surrounding the substation site or along the power line alignment. Therefore, there are no impacts to agricultural resources or operations.

e) The substation site has existed in its current parcel configuration and industrial use since 1981, when the existing FMC Substation was built. The proposed project would be constructed in the existing FMC site and primarily within the existing power line alignment. Therefore, it would not disrupt the established uses and arrangement of the neighborhood. The new power line segment is in a predominantly industrial area with

mixed residential uses that are mostly lower- and lower-middle income properties. Areas within the Julian Stockton Redevelopment Area are planned for future development as high-tech industrial or business parks. The proposed new power line would not create a physical feature that would disrupt or divide the area, or induce changes in land use that would be expected to have this result. Therefore, the project would not disrupt or divide the physical arrangement of an established community.

II. POPULATION AND HOUSING

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cumulatively exceed official regional or local population projections?	☐	☐	☐	☒
b) Induce substantial growth in an area either directly or indirectly (e.g., through projects in an undeveloped area or extension of major infrastructure)?	☐	☐	☐	☒
c) Displace existing housing, especially affordable housing?	☐	☐	☐	☒

a,b) The project would not directly increase population within the community. The project is designed to accommodate projected and planned growth of demand in the downtown San Jose area of Santa Clara County, as well as the San Jose International Airport area and surrounding residential areas, by providing additional electrical power to a system where the existing electrical capacity cannot meet projected needs. While substantial development is planned under approved plans for the area by the City, no new public or private projects are anticipated to be directly initiated as a result of construction and operation of the substation. Therefore, no impact would occur because the project would not exceed population projections or induce substantial growth in an area.

c) No housing units are located on the proposed substation site. Most of the corridor for the proposed power line is industrial or commercial. For the corridor segments that run along streets in residential districts, the power line right-of-way would be negotiated with the landowners. As no residences would need to be demolished or moved, no impacts to housing are anticipated. Therefore, the project would have no impact on existing housing.

III. GEOLOGIC PROBLEMS

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fault rupture?	☐	☐	☒	☐
b) Seismic ground shaking?	☐	☒	☐	☐
c) Seismic ground failure, including liquefaction?	☐	☒	☐	☐
d) Seiche, tsunami, or volcanic hazard?	☐	☐	☐	☒
e) Landslides or mudflows?	☐	☐	☐	☒
f) Erosion, changes in topography, or unstable soil conditions from excavation, grading, or fill?	☐	☐	☒	☐
g) Subsidence of the land?	☐	☐	☐	☒
h) Expansive soils?	☐	☐	☒	☐
i) Unique geologic or physical features?	☐	☐	☐	☒

The project site is located in the Santa Clara Valley, approximately 6 miles south of the southern margin of the San Francisco Bay. Geologically, the Santa Clara Valley is characterized by a deep structural depression filled with sediment derived from the erosion of adjacent uplands and marine deposition. The substation site is essentially flat and the overall project area for the power line ranges in elevation from 60 and 70 feet above mean sea level.

a) The active (surface displacement within the last 11,000 years) Hayward Fault is located approximately 6 miles east of the project site and the active San Andreas Fault lies approximately 12 miles west. Three miles further to the east lies the active Calaveras Fault. The active San Gregario Fault is located approximately 25 miles to the west. Potentially active (surface displacement within the last 1.6 million years) traces of the Silver Creek and San Jose faults are located 3 miles and 4 miles, respectively, from the project site.

The Alquist-Priolo Earthquake Fault Zoning Act requires the delineation of zones along sufficiently active and well-defined faults. The purpose of the Act is to restrict construction of structures intended for human occupancy along traces of active faults, thus

reducing the hazards associated with fault rupture. There is no evidence of the presence of an active fault at the site. The project site is not located within an Alquist-Priolo Earthquake Fault Zone established for the active faults in this region. The presence of a concealed fault, e.g., a low angle thrust fault, buried at great depth under the thick sediments of the area is a potential hazard that cannot be determined with available information. (An undiscovered concealed fault of this type was the source of the 1994 Northridge Earthquake in the Los Angeles area that damaged substation and transmission facilities.) While the possibility for a concealed fault cannot be entirely discounted, given the seismic history of the Santa Clara Valley, the potential hazard posed by a concealed undetected fault is considered speculative and a less than significant hazard.

b) The main potential project-related hazard to structures and people in the project area would be from seismic activity. The project site is located in the Coast Range Geomorphic Province, which is an area of relatively high seismic activity. Several major northwest-trending fault zones are anticipated to generate major earthquakes that could induce significant ground shaking at the site, including the San Andreas Fault Zone (the dominant fault zone in California), and a number of smaller fault zones are located within 40 miles of the project site. In addition to the San Andreas and Hayward faults, other potentially active faults are listed in Table III-1. A major earthquake on any of the faults listed in Table III-1 could produce strong groundshaking at the site, affecting the proposed facilities (see discussion under [a], above). Shaking amplification is rated as "very high"(7 on a scale of 1 to 8, with 8 rating the highest amplification) and the modified Mercalli intensity is rated as high as IX-Heavy (9 on a scale of 1 to 10, with 10 rating as extreme) for a major 7.3 earthquake on the entire Hayward Fault (ABAG, 1995). In an earthquake of that magnitude, damage to structures, roads and infrastructure would be heavy throughout the project area.

Because the substation site would be fenced and locked, direct public access would be prevented. Therefore, unless workers were present onsite, no injuries to people on the site would occur during earthquakes. The earthquake hazards are potentially significant only for the substation facilities themselves. To the extent that these would be rendered inoperable by an earthquake, the result could be a loss of power in the service area. However, a major earthquake that could affect the site is also likely to affect a wide area in the South Bay. By providing better linkage of power transmission in the area, the project would likely result in a net improvement to system reliability during and following a major earthquake.

PG&E, in conjunction with other utilities and equipment vendors throughout the country, have revised IEEE 693, "Recommended Practices for Seismic Design of Substations," to address equipment and voltage-specific seismic qualification requirements. These requirements are generally more stringent than the Uniform Building Code (PG&E, 1998). Equipment for the FMC Substation will be procured using the seismic qualification

requirements of IEEE 693. Following these requirements, it is anticipated that no structural damage would occur if the substation were subjected to peak ground accelerations levels approaching 1 g (gravitational acceleration). Compliance with the

TABLE III-1
FAULTS IN THE PROJECT VICINITY, THEIR MAXIMUM CREDIBLE EARTHQUAKE MAGNITUDE, FAULT ACTIVITY CLASSIFICATION, AND DISTANCE FROM PROJECT AREA

Fault	Activity[3]	Distance (miles)	MCE[1]	Shaking Intensity[2]
Hayward (southern segment)	Holocene (Active) (1836, 1868)	6	7.5	VIII
San Andreas	Holocene (Active)	12	8.3	VII
Calaveras (southern segment)	Holocene (Active)	9	7.3	VII
San Gregorio	Holocene (Active)	25	7.7	VI
San Jose	Quaternary (Potentially Active)	5	NA	NA
Silver Creek	Quaternary (Potentially Active)	3	NA	NA

N/A = Accurate Estimates Not Available

1. MCE is the Maximum Credible Earthquake, Richter Magnitude, an estimate of the largest earthquake that is judged by geologic studies to be capable of occurring on a fault or segment of a fault.
2. The Modified Mercalli Scale is one of several scales used to qualitatively rate earthquake effects on people, objects, structures and the ground surface. The modified Mercalli Scale has been the accepted standard in North America since 1931.
3. Age is the period of recorded or most recent geologic evidence of earthquake displacement on a fault.

SOURCE: PG&E, March 9, 1998

IEEE 693 and, where applicable, the Uniform Building Code, would reduce groundshaking effects to levels of acceptable risk and result in a less than significant impact from seismic hazard.

Groundshaking, and in some project areas liquefaction, could result in damage to power lines. The conductor wires are strung with sufficient length and catenary (sag) to accommodate vibratory motions and tensions set up by ground motions in earthquakes or high winds. In other words, it is considered a remote hazard that the power lines would "snap" because of earthquake groundshaking. On the other hand, earthquake induced vibratory motions in power lines have resulted in "wrapping" of the lines in which the separate conductor lines come into physical contact with each other. For example, wrapping was recorded as an effect of the 1989 Loma Prieta Earthquake. Wrapping is a potentially hazardous situation because the "hot wires" come into contact, although it

would not likely cause the lines to break and fall. PG&E's design and spacing requirements would be expected to be in conformance with requirements and industry standards for conductor separation.

The primary potential cause of failure of power lines would result from the failure of one or more of the poles supporting the conductors. Tubular steel poles are structurally extremely strong and able to resist earthquake induced vibratory motions (or high winds) without failure, as evidenced by their performance in the Loma Prieta Earthquake, the 1994 Northridge Earthquake, and other earthquakes. Bending or breaking of the poles would be a remote hazard. The failure of poles is more likely potentially related to a failure of the foundation support as a result of liquefaction and/or lateral spreading (or landsliding, which is not a hazard present in the project area). See the discussion under item III.c, below.

c) Earthquakes or aftershocks may cause secondary ground failures. Ground failures are caused by soil losing its structural integrity. Examples of seismically induced ground failures are liquefaction, lateral spreading, ground lurching, and subsidence. *Liquefaction* (the rapid transformation of soil to a fluid-like state) affects loose saturated sands. Earthquake ground shaking induces a rapid rise in excess pore pressure and the soil loses its bearing strength, and it may spread laterally, undergo settlement and form fissures and sand boils (upwellings of sand at the surface). *Lateral spreading* is the horizontal movement of loose, unconfined sedimentary and fills deposits during seismic activity. *Ground lurching* is the horizontal movement of soil, sediments, or fills located on relatively steep embankments or scarps as a result of seismic activity, forming irregular ground surface cracks. The potential for lateral spreading or lurching is highest in areas underlain by soft, saturated materials, especially where bordered by steep banks or adjacent hard ground. *Subsidence* is vertical downward movement of the ground surface.

Previous geotechnical studies determined the soil stratigraphy beneath the project site consists of stiff clays and dense sands and gravels (Dames and Moore, 1997). The FMC Substation site is located in an area considered to have a low to moderate liquefaction potential. Analyses show that the probabilities for liquefaction in areas with groundwater elevations similar to those in the project area are 1% to 1.5 % annually and 40 % to 50 % in a 50-year period. Soils in the vicinity of Substation "B" have a high potential for liquefaction (PG&E, 1998). Secondary hazards from seismic activity that could affect the site are lateral spreading and ground settlement (subsidence). The potential for liquefaction causing extensive soil deformation (lateral spreading and subsidence) is less than that of liquefaction resulting in small surface deformations (PG&E, 1998). Lateral spreading or lurching could occur along the banks of the Guadalupe River, threatening the integrity of the proposed transmission poles. The hazard would be greatest for poles in the area nearest to Substation B, where liquefaction and lateral spreading are possible hazards. A loss of foundation support for the poles could cause them to tip or collapse, bringing down the

conductors. If the wires were energized at the moment of tipping or collapse, the "hot" wire would pose a potential hazard to people in the area and could ignite fires. While the potential for earthquake induced hazards are unavoidable, conformance with industry standard design requirements for the poles and their foundations would reduce the hazard to an acceptable level of risk. Therefore, the impact, with mitigation, is considered less than significant.

Mitigation

The following mitigation measure would reduce the potential impact of earthquake hazards to an acceptable level of risk, and therefore, to a less-than-significant level.

Mitigation Measure III.c.1. PG&E shall undertake geotechnical studies for the sites of all new power line poles to determine the hazards of liquefaction, lateral spreading, lurching, weak soils subject to settlement, or other forms of failure under design forces for a maximum credible earthquake (MCE) in the area. The report shall summarize findings about the hazards and provide the recommendations of the certified engineering geologist to ensure that the foundations of power line poles will be designed to prevent their failure under MCE ground motions and coseismic hazards. PG&E will implement the recommendations of the engineering geologist as requirements in the design and construction of the poles. A copy of the report shall be filled with the CPUC.

d) Earthquakes can cause tsunami ("tidal waves"), seiches (oscillating waves in enclosed water bodies), and landslide splash waves in enclosed water bodies such as lakes and reservoirs. The project site is not located near a tsunami run-up area or near an enclosed body of water such as a reservoir or lake. Therefore, this is considered a less than significant impact.

e.) The project site is essentially flat, and is not located in the vicinity of uplands characterized by unstable slopes; therefore, hazards associated with landsliding are not considered a hazard on the project site.

f) Unstable soil conditions include settlement and failure from low strength. Substation site soils are not of the types characterized by low strength. Settlement can occur either uniformly or differentially. Uniform settlement of a structure can cause poor drainage. Differential settlement can damage foundations and cause mechanical and structural problems within a structure. The magnitude of settlement of a fill or native clay material will depend on their properties, the manner in which the fills are placed, the thickness of the material, the type of underlying subsurface soil, and the load placed on the material. Settlement beneath the proposed transformer bank foundations is expected to occur due to compressibility of native, near-surface "Adobe-clay". Total settlement is expected to range between 1.5 and 2 inches. This could be accommodated within the project design. As

standard engineering, design, and construction practices are proposed in conformance with PG&E construction guidelines, impacts resulting from settlement would be minor and the hazard would be less than significant.

The project site would require minimal additional grading of the flat site to construct the proposed substation and would not result in any changes in topography. Construction of the substation foundation and a cement block wall along the eastern perimeter of the site would disturb site soils: temporarily exposed site soils may be subject to erosion by rain splash and overland flow of stormwater for the duration of the construction activities. Site preparation would entail minor regrading, resurfacing, and paving of portions of the site, eliminating any long-term hazard. Because the site is flat and the soils have a high clay content, soil erosion from construction activities would not result in significant hazards of gully formation. Runoff from the site could entrain loose soil and discharge it into storm drains. While the hazard is deemed less than significant, the impacts from erosion and sediment discharges could be eliminated by implementation of standard best construction management practices, as contained in Mitigation Measure IV.c.1, below.

g) Historic land subsidence due to extraction of groundwater from the underlying Santa Clara Formation has been recorded in this portion of the Santa Clara Valley. However, subsidence was virtually halted by 1971 due groundwater recharge and importation of water. The project would not require the removal of groundwater or any change in groundwater use; therefore, there would be no impact related to ground subsidence.

h) Expansivity, or shrink-swell, is the cyclic change in volume that occurs in fine-grained sediments because of expansion and contraction of clay caused by wetting and drying. Soils that are expansive (have shrink-swell potential) can damage foundations and other structures. This problem can be overcome with proper foundation engineering (Helley, 1979). Soils on the project site were observed to be clay mixtures with varying degrees of expansive potential. Foundation designs were based on assumptions of groundwater depth. A rise in groundwater following construction at the facility could cause the lean clays (encountered at depths between 5 and 20 feet) to swell. The near-surface Adobe-clay is expected to have high swell potential under no load and marginal swell potential under a load of 2,000 pounds per square foot.

Mitigation

The following mitigation measure would reduce the potential impact of soil expansivity to a less-than-significant level.

Mitigation Measure III.h.1. Foundation engineering design and construction practices should consider the impact of shallow groundwater affecting swell potential of the lean clay. This may entail removal of expansive clays and their replacement with engineered

fill, or alternative foundation systems and moisture barriers, which eliminate the shrink-swell effects on the load-bearing foundations. Recommendations of a foundation engineer should be implemented to eliminate or reduce any impacts resulting from expansive soils to a less than significant level. A copy of the recommendations shall be filed with the CPUC.

i) The project area is essentially flat and has no unusual or unique geological features; therefore, there would be no impacts related to unique geologic or physical features.

IV. WATER

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	☐	☐	☒	☐
b) Exposure of people or property to water-related hazards such as flooding?	☐	☐	☒	☐
c) Discharge into surface waters or other alteration of surface water quality (e.g., temperature, dissolved oxygen, or turbidity)?	☐	☒	☐	☐
d) Changes in the amount of surface water in any water body?	☐	☐	☐	☒
e) Changes in currents, or the course or direction of water movements?	☐	☐	☐	☒
f) Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations, or through substantial loss of groundwater recharge capability?	☐	☐	☒	☐
g) Altered direction or rate of flow of groundwater?	☐	☐	☐	☒
h) Impacts to groundwater quality?	☐	☐	☐	☒
i) Substantial reduction in the amount of groundwater otherwise available for public water supplies?	☐	☐	☐	☒

a) The proposed project would require paving an added portion of the substation site, which would reduce infiltration and slightly increase the amount and rate of runoff. Because the existing site is partially paved and the soils are compacted, a slight increase in runoff at the site could result from the project. Stormwater collected in the Spill Prevention Control and Countermeasure system and pond would contain some of the site runoff and regulate the peak discharge offsite, compared to the current conditions. The impact would be less than significant.

Storm water runoff from other portions of the yard would be directed separately and be discharged to a storm drainage pipe system. This storm drainage pipe system would discharge to the existing 48" city storm pipe located adjacent to Interstate 880. The proposed mitigations would be adequate to reduce operational impacts related to storm water discharge to a less than significant level. Additional mitigation is not required.

b) The project area is not within a zone of flood hazard as defined by the Federal Emergency Management Agency, Flood Insurance Program. A large earthquake potentially could result in dam failures at reservoirs upstream of the project area. According to dam failure inundation maps (ABAG, 1980) the project site could be impacted by flooding in a dam failure of the Lexington and Vasona Reservoirs, the latter located approximately 8 miles to the southwest. Considering the distance of the two reservoirs from the FMC Substation, topography, and flood control structures currently in place on Los Gatos Creek and Guadalupe River, and the protection created by the Interstate 880 embankment, inundation in this area is likely to be shallow and the quantity of flood water and entrained debris from a dam failure flood would not impair operations at the substation. Therefore, this is considered to have a less than significant impact.

c) Stormwater discharges during construction might contain high concentrations of pollutants from spills of hazardous substances and total suspended solids. Since this project includes proposed construction activity that would disturb less than five acres (less than 0.2 acre per year) of land, the project is not subject to regulation by the state General Storm Water National Pollution Discharge Elimination System (NPDES) permit. The project would discharge into the city storm drains, that in turn empty into surface waters (Guadalupe River) and San Francisco Bay. Construction of foundations for poles would require borings to a depth of 10-25 feet. If rain occurs during the construction period, some of the removed soil could be discharged in runoff into storm drains, clogging or reducing their capacity. Mitigation included in this Initial Study would result in a less than significant effect on surface waters.

Surface water runoff from the substation site after construction is expected to contain minor concentrations of a variety of pollutants typical of electrical substations (e.g.,

automobile fluids, suspended solids, metals, and organics), but is not expected to be substantially different than the pollutants currently released from the project site, which is now a parking and storage area. It is not expected that surface water runoff pollutants from long-term operations would occur in concentrations that would be acutely toxic to aquatic life.

Each of the three proposed electrical transformer banks would contain up to 6,500 gallons of inert mineral oil. The transformer would be installed on sealed concrete foundations, and the substation would be surfaced to direct any leaks into an on-site, concrete-lined SPCC pond, to be designed in accordance with PG&E DCS Guideline D-G0052 (January, 1998). The SPCC pond would be designed to contain up to 150% of the oil from the largest piece of equipment. A built-in weir system with a skimmer to collect oil would be constructed to segregate oil from the water, providing stormwater spillover and oil retention. The DCS Guideline requires that the skimmer weir accommodate discharge for a 25-year design storm in combination with no oil. In heavy storm periods, the SPCC pond would be monitored for operational effectiveness of the containment system and proper release of storm discharge. Oil released from a transformer would be directed to the SPCC pond through bermed surface drainage or through underground piping. The SPCC pond would be equipped with a manually operated isolation valve. Pursuant to Environmental Protection Agency requirements, the equipment and spill containment area are inspected on a monthly basis. Operators would not release accumulated rainwater until the SPCC pond is inspected for oil or sheen. This should be adequate to prevent unplanned releases and overflows.

Mitigation

The following mitigation measure would reduce the potential impact of surface water discharge to a less-than-significant level.

Mitigation Measure IV.c.1. If construction is scheduled during the rainy season, PG&E shall employ best construction management practices to prevent discharges of silt and other substances from construction into storm drains. PG&E shall develop and implement a plan to control excavated soils and runoff, specifying practices such as the use of detention basins, straw bales, silt fences or other deterrents, and site clean-up procedures and practices to minimize contact of construction materials with stormwater. PG&E shall file a copy of the plan with the CPUC and shall certify compliance with this measure in progress reports to the CPUC.

d) No water bodies are present at the substation site or in areas of the proposed power line. The Guadalupe River could be spanned by the power line without impact to the river channel. The project would result in no quantifiable change in impervious surface area and

associated storm water runoff. This level of increase would not result in a significant change in the amount of water in any water body.

e) No watercourse is present on the proposed site. The proposed project would have no effect on the course or direction of surface waters. Installation of the new power line spanning the Guadalupe River is not expected to disturb the riverbed within the limits of the floodplain.

f) The proposed project is located in the Santa Clara County Groundwater Basin, which is managed by the Santa Clara Valley Water District. Historic groundwater pumping from the underlying Santa Clara Formation has caused land subsidence in portions of the Santa Clara Valley. However, subsidence was virtually halted by 1971 due groundwater recharge and importation of water (Helley and Lajoie, 1979). The project area is located at an elevation between 60 and 70 feet above sea level and is underlain by two groundwater-bearing aquifers. The shallow, unconfined aquifer, referred to as the A-zone, is encountered at depths between 20 to 50 feet below ground surface (bgs). The B-zone is confined to semi-confined and is encountered at depths ranging from 55 to 90 feet bgs. The regional confined aquifer is encountered below the A- and B-zone aquifers at a depth of at least 250 feet bgs. Groundwater flow direction in the A- and B-zones is to the north-northwest (PG&E, 1997). Groundwater beneath the site was measured at 10.5 feet bgs in April 1997 (Dames and Moore, July 1997). It is likely that groundwater depth fluctuates seasonally with rainfall. Substation construction would not require deep cuts that would intercept shallow groundwater or require significant construction de-watering. Construction of some poles for the power line would require bores to a depth of up to 25 feet, potentially penetrating into the upper unconfined aquifer. The small size of the holes is unlikely to have any identifiable effect on the aquifer. Minor temporary dewatering of the bore hole may be required until the cement foundation is poured. The impact would be less than significant.

The project would result in a negligible increase in impervious surface area and would not create other features that would reduce the potential for groundwater recharge. Therefore, there would be no impact related to any change in the quantity of groundwater.

g) The project would not require removal of substantial amounts of groundwater during construction and none during operation. The project would not include any substantial deep cuts or other features that would intercept or impede the flow of groundwater. The cement foundations to support the power lines poles would have a negligible effect as a barrier to groundwater movement: in most cases they would not intercept the water table at all. Therefore, the project would have no impact on the direction or rate of flow of groundwater.

h) The compacted fills and impervious surface areas would prevent infiltration of contaminants into the soils. The proposed SPCC pond at the substation would be concrete-lined to prevent infiltration of contaminants from the pond into the subsurface soils. Run off or percolation from the proposed project would not be expected to impact groundwater quality in the area (See also the discussion under checklist item IV.c). After constructing the bore holes for the power line poles, the holes would be immediately filled with cement. This would create a seal that would prevent infiltration of surface contaminants into the groundwater. Therefore, the project would have no impact on groundwater quality.

i) The proposed project would not use groundwater or impact a local aquifer. Therefore, the project would have no impact on the availability of groundwater for public water supply.

V. AIR QUALITY

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any air quality standard or contribute to an existing or projected air quality violation?	☐	☒	☐	☐
b) Expose sensitive receptors to pollutants?	☐	☐	☒	☐
c) Alter air movement, moisture, or temperature, or cause any change in climate?	☐	☐	☐	☒
d) Create objectionable odors?	☐	☐	☐	☒

a) Construction activities would temporarily increase particulate concentrations in and around the project sites. The substation site has been previously graded and paved so that it is essentially flat, with existing drainage. Equipment and vehicles would generate dust during excavation of the SPCC pond. Because the site is paved, construction vehicle traffic would not occur on unpaved surfaces, which generate substantial dust. Boring of pole foundation holes, however, would be a minor source of dust emissions.

It is not possible to accurately estimate the particulate concentrations that would occur at or adjacent to the construction sites because such concentrations are very sensitive to local meteorology and topography and to variations in soil, silt, and moisture content.

The Bay Area Air Quality Management District (BAAQMD) considers construction emissions to be significant only if project-appropriate mitigation measures are not implemented. Dust is comprised of large particles (i.e., larger than 10 microns in diameter) which settle out rapidly on nearby horizontal surfaces and are easily filtered by human breathing passages. Much of the dust generated by construction is, therefore, of concern more as a soiling nuisance rather than for its unhealthful impacts. The remaining fraction of small particulate matter might be sufficient to violate the state 24-hour average PM-10 standard in the vicinity of construction. Unless mitigation measures are implemented, elevated levels of PM-10 would occur throughout periods of project construction. Because residences are located immediately downwind of the project site, mitigation measures would be necessary.

The substation itself would generate no emissions. The proposed project would allow for the delivery of electricity that would otherwise not be transmitted. Much of California's electricity is generated by burning fossil fuels, the combustion of which results in air pollutant emissions. Consequently, fuel-combustion power plants within California would increase production to deliver the electricity demand facilitated by the proposed substation. However, these emissions could be generated from any or all of the air districts within California, or even from out of state. The environmental impact of air emissions from the each power plant would be assessed at the time of power plant construction or permit issuance by the local air District. The project itself would not induce demand for generation of additional electricity.

Maintenance of the transformers would require intermittent vehicle trips to the site. Assuming 400 miles per month of light-duty truck trips and 100 miles per month of heavy-duty truck trips, maintenance-related mobile emissions would be less than 2 pounds per day of any criteria pollutant or precursor. This would be less than the BAAQMD recognized significance criteria of 80 pounds per day of reactive organic gases, oxides of nitrogen, or PM-10.

Mitigation

The following mitigation measure would reduce the potential impact of dust generation to a less-than-significant level:

Mitigation Measure V.a-1: PG&E shall require its construction contractors or crews to implement a dust abatement program during construction activities. The dust abatement program should include the following (as adapted from BAAQMD):

- Water exposed soils at all active construction sites at least twice daily on days without measurable rainfall at the site;
- Cover all trucks hauling soil, sand, and other loose materials *or* require all trucks to maintain at least two feet of freeboard;

- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites; and
- Sweep daily (with water sweepers) the paved access road to the substation site, and paved parking and staging areas at the substation site. Sweep each paved street area used to drill foundation holes and pour foundations for power line towers.

PG&E shall certify compliance with this measure in scheduled progress reports to the CPUC.

b) As discussed in the response to item V.a, construction dust emissions could have a temporary impact on nearby residences of the substation fronting on Stockton Avenue. Residences occupied by very young children or the infirm could be considered sensitive receptors. However, the impact to these residences would likely be a nuisance impact of larger particle dust settling and not an impact related to a violation of PM-10 standards. With implementation of the above-cited mitigation measure V.a-1, this impact would be less than significant. Project operations would not have a long-term impact to local air pollutant concentrations because transformers and other substation equipment are not sources of air emissions.

c) The proposed substation would not be a large source of thermal emissions and would not represent the type of operation that could cause alteration of air movement, moisture, or temperature, or cause any change in climate. Therefore, there would be no impacts related to climate change.

d) The proposed substation is not the type of operation identified by the BAAQMD as a typical odor source (BAAQMD, 1996). The project would not result in an odor-related impact.

VI. TRANSPORTATION / CIRCULATION

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increased vehicle trips or traffic congestion?	☐	☐	☒	☐
b) Hazards to safety from design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

c)	Inadequate emergency access or access to nearby uses?	☐	☐	☐	☒
d)	Insufficient parking capacity on site or off site?	☐	☐	☐	☒
e)	Hazards or barriers for pedestrians or bicyclists?	☐	☐	☐	☒
f)	Conflicts with adopted policies supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒
g)	Rail, waterborne, or air traffic impacts?	☐	☐	☒	☐

a) The project site's construction entrance is located on Newhall Street, which connects with I-880 via Coleman Avenue. The substation's operational entrance will be on Stockton Avenue. The project will require only occasional inspection and maintenance by PG&E personnel (once a month); these would have no net change in traffic in the long term.

During construction of the project, the maximum number of workers at the site would be 12. Truck and worker commute trips to and from the site would increase during the four-month construction period. Due to PG&E's proposed scheduling of single lane closures during weekday off-peak hours, the impact on traffic conditions on Newhall Street, Stockton Avenue, University Avenue, Chestnut Street, Asbury Street, and Coleman Avenue would be negligible. During operation, no workers would be permanently located on the project site and a PG&E electrician would inspect the substation once a month (PG&E, 1997). Traffic impacts that would result from the construction would be small and temporary, and operation of the substation would not generate daily traffic from PG&E staff. Therefore, the project would have no net increase to vehicle trips, and a less than significant impact on traffic congestion.

b) No impact related to traffic safety hazards from design features would occur.

c) Single lane closures would be coordinated with the City of San Jose. No impacts related to emergency access would occur.

d) The substation would generate no parking demand as no employees would work at the site on a daily basis. Therefore, no impact related to parking demand would occur.

e) The substation site borders along Stockton Avenue and Newhall Street include a sidewalk. Sidewalks also occur along portions of the power line route. No modification to the sidewalk or to any bike facilities would occur near the substation, but power line construction would affect pedestrians and bicyclists along the power line route. Pedestrian and bicycle safety measures shall comply with the measures implemented under the Work

Area Protection and Traffic Control Manual, which would guide all construction work in the street rights-of-way. Therefore, there would be no impact related to hazards to pedestrians or bicyclists.

f) The project site would not create an appreciable demand for site visits. No conflict with transportation policies would occur; therefore, no impacts are anticipated (City of San Jose, 1994).

g) No waterborne or air traffic is located adjacent to the project site, and the substation project would therefore have no effect on these modes of transportation. However, both the proposed substation and the proposed power lines are located near CalTrain and AMTRAK facilities. Construction and operation of the substation would have no effect on rail facilities, and construction of the power lines would not disrupt rail traffic at the two locations where the proposed power line would cross CalTrain tracks. Work within the right-of-way would be conducted in accordance with the CalTrain Standards Manual (Peninsula Corridor Joint Powers Board, 1994). Construction and operation of the power line would have no impact on rail facilities.

VII. BIOLOGICAL RESOURCES

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Endangered, threatened or rare species or their habitats (including but not limited to plants, fish, insects, animals, and birds)?	☐	☐	☐	X
b) Locally designated species (e.g., heritage trees)?	☐	☐	☐	X
c) Locally designated natural communities (e.g., oak forest, coastal habitat, etc.)?	☐	☐	☐	X
d) Wetland habitat (e.g., marsh, riparian and vernal pool)?	☐	☐	☐	X
e) Wildlife dispersal or migration corridors?	☐	☐	☐	X

a) The project area is located in an urban environment and supports typical urban plant and wildlife species. Habitat for Central California Coast steelhead and Chinook salmon, both listed species, occurs in the Guadalupe River. Construction activities associated with the proposed project would not affect the river corridor, as poles would be placed in existing pole locations outside the river bed and bank. Construction and operational facilities, including power line installation and maintenance, would not affect habitat for special status species associated with the Guadalupe River. Potential habitat for western burrowing owl, a California species of special concern, was identified on the north side of Coleman Avenue. This species has not been documented at this site, and a heavily-trafficked four-lane street separates this area from the proposed construction zone. Therefore, proposed construction activities would not degrade habitat for burrowing owl or disturb them, if present at all, at this site. No other special status species are expected in the project vicinity.

b) No trees greater than 20 inches in diameter at breast height, or documented heritage trees as defined by the City of San Jose, occur on the proposed alignment or at the FMC Substation. Pursuant to City ordinance, a permit would be obtained from the City for the removal of trees over six-feet tall within the right-of-way of City streets. As a condition of the permit, removed trees would be replaced with trees approved under the City street tree plan.

c) The riparian corridor of the Guadalupe River is a locally designated natural community, but would not be disturbed or indirectly affected by construction or operations of the proposed project facilities.

d) The Guadalupe River provides the only wetland habitat identified in the project vicinity. Wetland habitat in and near the Guadalupe River corridor would not be disturbed or indirectly affected by construction or operation of the proposed project facilities.

e) The only potential wildlife dispersal or migration corridor in the project area is the Guadalupe River. New power poles would replace existing poles along the FMC tap alignment, which crosses over the river west of Coleman Avenue. All construction-related activities would take place outside the banks of the Guadalupe River, and would not inhibit wildlife dispersal or migration corridors.

VIII. ENERGY AND MINERAL RESOURCES

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with adopted energy conservation plans?	☐	☐	☐	☒
b) Use non-renewable resources in a wasteful and inefficient manner?	☐	☐	☐	☒
c) Result in the loss of availability of a known mineral resource that would be of future value to the region and the residents of the State?	☐	☐	☐	☒

a) The project is not energy consumptive. Minor amounts of fuel would be required for construction. Operation of the project would not encourage the use of excessive amounts of electricity by industry, commerce, or residents served by the Substation. The project would have no conflict with energy conservation and no impact would occur.

b) The project would use a variety of widely available non-renewable materials for construction of the facilities including aggregate, asphalt, iron and related minerals used in steel, mineral oil, and fuel to power construction vehicles and equipment. Long term operation would require only a minor amount of fuel for site inspection vehicles. Proposed construction and operation of the facility would not involve the wasteful use of non-renewable resources; no impact would occur.

c) The site has no known mineral, oil, gas, geothermal, or aggregate resources. The project would not affect the availability of these resources, and no impact would occur.

IX. HAZARDS

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) A risk of accidental explosion or release of hazardous substances (including but not limited to oil, pesticides, chemicals or radiation)?	☐	☐	☒	☐
b) Possible interference with an emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
c) The creation of any health hazard or potential health hazard?	☐	☐	☒	☐
d) Exposure of people to existing sources of potential health hazards?	☐	☐	☒	☐
e) Increased fire hazard in areas with flammable brush, grass, or trees?	☐	☐	☒	☐

a) Several hazardous substances would be used in the operation of the proposed FMC Substation. One 115/12 kV, 30-MVA transformer could contain up to 6,500 gallons of mineral oil, which is used as an insulating medium and coolant. The mineral oil would not contain Polychlorinated Biphenyls (PCBs). To prevent the release of mineral oil in the event of damage to the transformer, PG&E proposes that the transformer would be mounted on a sealed pad with drainage directed to a SPCC collection system and pond that could hold 150% of the volume of oil from one transformer. A weir system with a manually operated gate valve would retain any oil in the SPCC pond for collection and disposal at an approved site. Environmental Protection Agency regulations require that the equipment and spill containment area be inspected at least monthly. During heavy storm periods, more frequent monitoring of the transformers and the SPCC pond would be conducted to prevent overflows of the pond. The operator would check the pond for evidence of an oil sheen, and any oil would be cleaned up before the valve would be manually opened by the operator to release rainwater that had accumulated in the pond.

Batteries would be used for emergency back-up power at the substation. Similar to automobile batteries, these batteries would contain sulfuric acid in the electrolyte. The substation's three batteries would have 20 cells each for a total of 60 cells, and would provide an output of 125 volts (in comparison, an automobile battery has 6 cells and provides an output of 12 volts). Release to the environment of material from the batteries in the event of a spill would be prevented by housing them in a building proposed to be constructed with a concrete floor and without drains.

Nitrogen gas (N_2) and Sulfur Hexafluoride gas (SF_6), both inert and non-toxic gases, would be used at the substation. N_2 would be used to slightly pressurize oil-filled equipment, while SF_6 would be used as an insulator and arc suppresser in circuit breakers. SF_6 would not be released under normal conditions; PG&E usually recycles the SF_6 gas in the breakers during maintenance. When SF_6 is exposed to electric arcs, a small quantity of solid residue forms that is highly toxic and must be removed to prevent exposure hazards to PG&E personnel working with the circuit breakers. Vacuuming with a heavy duty shop vacuum and/or cleaning of the equipment surfaces with dry, lint-free rags and proper disposal of the material is adequate to control potential hazards from this residue.

The only potential hazard to the public involved in the use of either the N_2 or SF_6 is a physical hazard involving the high pressure of the gases in the storage cylinders. The likelihood of a cylinder explosion is low; distance between the cylinders and any public access makes the risk of injury remote.

In the long term operation of the substation, and in the operation of the power and distribution lines, there is a finite risk of electrical arcing and short-circuits due to failure of the equipment. The design of the substation, including the placement of the wires, equipment, and the fencing around the substation, as well as the design of the power and distribution lines, is intended to prevent public access to high-voltage equipment and to minimize the risk to the public of shock or injury in the event of equipment failure.

Shallow soil contamination by fuels, metals, volatile organic compounds, and phenol at the site has been documented (Parsons, 1997). If present within the expansion areas, contaminated soils disturbed or excavated during site preparation could pose a health risk to construction workers or the adjacent public. Additionally, contaminated waste soils must be handled and disposed of in accordance with local, state, and federal regulations. Risk-based analysis of on-site contamination indicates that on-site soil contamination is below target levels that would identify further investigation. However, the California Department of Toxic Substances Control (DTSC, the lead agency) has not categorically accepted risk-based assessment, and the case has not been closed. Consequently, the potential exists for site remediation to be required by the regulatory agency (DTSC). Installation of the proposed transformers at the site could potentially impede further investigation or clean-up actions. However, as the placement of the transformers requires a large, continuous concrete pad foundation, the soil would be effectively sealed below the substation. Construction of the foundation would require excavation, which would proceed according to worker safety requirements of the Federal and California Occupational Safety and Health Administrations (OSHA). If DTSC determines that site contamination requires action, OSHA rules then would require a site-specific Health and Safety Plan (HASP) to be prepared and implemented by PG&E and its contractors to minimize exposure of construction workers to potential site contamination and to dispose of construction-derived waste soil in accordance with local, state, and federal regulations.

PG&E's proposed mitigation measures are consistent with those employed at other substations and power lines, and would be adequate to ensure a minimal risk of accidental explosion or release of hazardous substances. Assuming implementation of the mitigation measures proposed as part of the plan, additional mitigation is not required and the hazard would be less than significant.

b) To the extent that the construction and operation of the project would improve the reliability of the local electric power system, the proposed substation would benefit local emergency response capabilities. However, no interference with the City of San Jose's emergency response plan or emergency evacuation plan is evident.

c,d) The project will take high-voltage electricity from the PG&E 115 kV power line, step-down the voltage to 12 kV, and distribute the electricity to local customers. By its nature, the project provides certain benefits and poses certain risks to the public. In addition to the issues discussed elsewhere in this section of the Initial Study, because the project will alter the electric and magnetic fields (EMF) in the vicinity of the site, concerns about potential health-related consequences of the EMF are addressed.

The project is located on the right-of-way of a PG&E 115 kV power line, an operating high-voltage electric power transmission facility. The power line, under peak electrical load conditions, is estimated to generate a magnetic field strength of not more than 150 milliGauss (mG) at the edge of the right-of-way (PG&E, 1997). This value represents, in effect, a maximum baseline condition for the substation site, along the boundaries of the power line right-of-way; directly under the power line, the value would be higher.

PG&E calculated the magnetic field strength that would be created by the operation of the substation at the proposed substation property boundaries. Based on ultimate build-out of the substation with three 30-MVA transformer banks, twelve 12 kV distribution feeders (four from each of the three banks), it was determined that the strength of the magnetic field at the property boundary would range from 0.6 mG to 10.2 mG (PG&E, 1997). The calculations include magnetic field strength contributions from the 115 kV power line, but exclude contributions from the existing 20-MVA transformer bank or the stand-by generator. Although connections to the existing power line are necessary, the existing power line is not a part of the proposed project, while the new circuit is a part of the proposed project.

Under the maximum electrical load conditions, the contribution of the project to the magnetic field strength at the property boundaries would range from 0.6 mG to 10.2 mG, as follows: along the west (railroad property) boundary, 0.6 mG to 0.7 mG; along the northern boundary, 1.1 mG to 6.0 mG; along Stockton Avenue, 1.0 mG to 10.2 mG; and along the southern (I-880) boundary, 0.8 mG to 10.2 mG. Typically, the higher levels of magnetic field strengths at the boundaries of the substation correspond to the locations of

the undergrounded 12 kV distribution lines or the locations of overhead 115 kV power lines. Magnetic field strengths at the residences across Stockton Avenue would be substantially less than the values in the street right-of-way.

Compared to present maximum contributions from the existing substation and 115 kV power line and an undetermined contribution from the 12 kV distribution lines along Stockton Avenue, the project would add a contribution that would be similar to, but larger than, the existing magnetic field strength present at the substation.

Average annual electrical load conditions for the substation would be less than the maximum load, and the contribution of the project to the magnetic field strength at the property boundaries would be about correspondingly decreased. Further, typical magnetic field strengths at the edge of power line rights-of-way would be 10 mG to 90 mG (PG&E, 1997).

Ultimately, up to twelve underground 12 kV distribution circuits would connect the FMC Substation to the existing electric distribution system. While not part of the proposed project, they would contribute to EMF at the site. The undergrounded feeds to the 12 kV distribution lines would all exit the substation site on the Stockton Avenue frontage.

These contributions would occur within the existing rights-of-way of the streets and power lines and not on surrounding residential or commercial properties. Members of the public that would be exposed to these fields include anyone walking within the rights-of-way or along the Stockton Avenue frontage of the project site.

In response to public concern about possible health effects of EMF from electric utility facilities, the CPUC opened an investigation of the hazards. On November 2, 1993, the CPUC issued Decision 93-11-013, which recognized the public concern, but which declined to "adopt any specific numerical standard in association with EMF until we have a firm scientific basis for adopting any particular value." However, in that decision, the CPUC did direct all publicly owned utilities to take "no cost and low-cost" EMF reduction steps on transmission, substation, and distribution facilities to reduce exposure of the public to magnetic fields.

In accordance with that requirement, the proposed design of the FMC Substation includes the following "no cost and low-cost" EMF reduction measures:

1) For structures adjacent to the school and residential areas, raise the 115 kV power line's poles (and conductors) by 5 feet to reduce EMF at ground level;

2) Arrange the phasing of the 115 kV power line and the 12 kV distribution lines so that they create the minimum magnetic field at the edge of the substation right-of-way;

3) Use metal-clad switchgear at the substation to reduce magnetic field contributions from the 12 kV bus; and,

4) Use compact equipment spacing at the substation, which reduces the site area used and allows equipment to be shifted away from the residential and commercial areas across Stockton Avenue. Providing more distance between the equipment and the property lines would reduce magnetic field strength at the property line.

The possible relationships between exposure to EMF and potential health-related effects have been investigated by many organizations, including the U.S. National Academy of Sciences, American Medical Association, American Cancer Society, California Department of Health Services, National Institute of Environmental Health Sciences, U.S. Department of Energy, and the CPUC (PG&E, 1997). The U.S. National Academy of Sciences study (NAS, 1996) is the most recent comprehensive evaluation of the topic; that committee concluded that the current body of evidence does not show that exposure to power-frequency EMF presents a human hazard.

Based on the results of the U.S. National Academy of Science study, there is no evidence that the existing EMF from the substation or the 115 kV power line (and the 12 kV distribution lines) presents a health hazard to those individuals who live and/or work in the vicinity of the site. Further, there is no evidence that the additional EMF contributed by the proposed FMC Substation or the new power line circuit would create a health hazard or potential health hazard. The impact is less than significant and mitigation beyond that proposed as part of the project is not required.

Operation of the proposed FMC Substation would decrease the number of people working on or using the site, so the project would not increase the total exposure of people to any existing sources of potential health hazards.

e) The site is substantially cleared of vegetation, and would be mostly paved with the construction of the substation. The cleared area within the substation would be maintained and kept free of shrubs or trees that might colonize the site; this would prevent any hazard of arcing leading to a fire that would spread to the landscaping trees on the perimeter of the site. There would be no increase in fire hazard on the site or adjacent areas.

Operation of the power line carries a finite risk of electric arcing due to objects contacting the energized power line; that arcing, in turn, could lead to a fire. Given that there are existing power lines over most of the length of the new power line, the incremental increase in fire risk is likely very small. Rigorous maintenance of right-of-way landscaping trees, in accordance with the schedule proposed (PG&E, Response to Deficiency Report, Table 2, FMC Project Area Tree Survey, and Table 3, Alignment

Option "A" Tree Survey, 1998), would be effective in reducing the risk of fire due to tree contact with power lines.

X. NOISE

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increases in existing noise levels?	☐	☒	☐	☐
b) Exposure of people to severe noise levels?	☐	☐	☒	☐

a) The substation site is located adjacent to Interstate 880 and on the 65 dBA, L_{dn} noise contour designated for operations of the San Jose International Airport (SJIA). Construction noise levels at and near locations on the project site would fluctuate depending on the particular type, number, and duration of use of various pieces of construction equipment. The effect of construction noise would depend upon how much noise would be generated by construction, the distance between construction activities and the nearest noise-sensitive uses, and the existing noise levels at those uses. Construction noise would be intermittent, extended over a period of four months at the substation site. Construction of pole foundations, erection of poles, and stringing of lines would also generate noise near residences along the proposed power line alignments.

The noisiest phases of construction would generate approximately 89 L_{eq} at 50 feet (U.S. EPA, 1971). The receptors nearest proposed construction activity would be three existing single-family residences and one multi-family residence on Stockton Avenue, approximately 100 feet from the eastern project site boundary. Consequently, construction noise during construction would generate noise levels up to approximately 83 L_{eq} at the nearest residences during regrading and resurfacing activities.

Given ambient noise levels at these residences, construction noise would be noticeable; however, many residences are less occupied during the daytime. Construction noise would be annoying to residents at home during the daytime, but it would be a short-term effect. During nighttime, temporary construction-related noise could be more noticeable (since background noise is lower) and could annoy the closest residents given the more sensitive nature of the nighttime period. Therefore, without appropriate limitations on allowable hours of construction, this temporary impact could be significant.

Transformers on the substation site would generate operational noise. The potential for noise impacts from the transformers is addressed in a Noise Impact Assessment study prepared for the proposed project (Geier & Geier, 1997). This study found that the three transformers proposed for the site would each generate a noise level of 74 dBA, and a composite noise level of 77 dBA at a distance of ten feet. The report predicts a resultant noise level of 52 dBA at the nearest residences (fronting on Stockton Avenue)**.** This projected noise level at the nearest residences due to the transformers is below the ambient noise level during daytime and evening hours, but substantial enough to be faintly audible during 10 percent of the quieter nighttime hours, which were monitored to be 48 to 51 dBA.

The project design includes construction of an eight-foot high sound barrier. The sound barrier is sufficient to block the line-of-sight between the transformers and single-story residential land uses to the east, and would provide additional noise reduction of approximately 5 to 7 dBA. With appropriate construction of the proposed sound barrier, operating noise from the proposed transformer would be 45 to 47 dBA at the closest residences, which would be below the existing monitored nighttime noise levels. With construction of the sound barrier, transformer-related operational noise is not expected to significantly affect the existing ambient noise environment. The second story of adjacent two-story residences on Stockton Avenue may not experience a benefit from the proposed sound wall. However, increases in noise levels would not be considered substantial in a noise environment dominated by vehicle traffic on the adjacent I-880 freeway.

Long-term noise levels resulting from the transformers is predicted to be 64 dBA, CNEL at the nearest residences, which would not exceed the existing long-term noise levels of 65 to 67 dBA, CNEL. This prediction applies a 5-dBA “penalty” to account for human

sensitivity to the pure tone component of transformer noise. With appropriate construction of the proposed sound barrier, long-term operating noise from the proposed transformers would be 57 to 59 dBA, CNEL at the closest residences. This would result in a one dBA, CNEL increase in existing noise levels, which would not be considered substantial, or perceptible.

Under certain conditions (such as wet weather or dirty insulators), power lines can create corona-generated noise, usually associated with a buzzing or crackling. Given the number of rainy days per year within the Santa Clara Valley, and PG&E's practice of high-pressure washing of insulators, corona-generated noise, while occasionally audible, would not be considered a substantial increase to the typical urban noise environment.

Mitigation

The following mitigation measures would reduce the potential impact to a less than significant level:

Mitigation Measure X.a-1: To reduce the construction noise effects, PG&E shall ensure that noisy construction activities at the substation site and near residences along the power line route shall be limited to the least noise-sensitive times of day and week (e.g., 7:00 a.m. to 6:00 p.m., Monday through Friday).

Mitigation Measure X.a-2: To reduce the construction noise effects, PG&E shall ensure that all construction equipment used on the substation site and for power line construction shall be adequately muffled and maintained.

Mitigation Measure X.a-3: To reduce the construction noise effects, PG&E shall ensure that all stationary construction equipment (i.e., compressors and generators) shall be located as far as practicable from the eastern property line.

PG&E shall certify compliance with these measures in scheduled progress reports to the CPUC.

b) As discussed in the response to Item X.a., the noise levels resulting from project operation would be less than ambient noise levels and would be considered a less than significant impact.

XI. PUBLIC SERVICE

Would the proposal have an effect upon, or result in a need for new or altered, government services in any of the following areas:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?	☐	☐	☐	☒
b) Police protection?	☐	☐	☒	☐
c) Schools?	☐	☐	☐	☒
d) Maintenance of public facilities, including roads?	☐	☐	☐	☒
e) Other governmental services?	☐	☐	☐	☒

a) The proposed substation would not introduce any uses that would generate new building construction or increased population that would typically require additional fire protection services. While not project related, the area is planned for substantial new development under the Julian-Stockton Redevelopment Plan. The project site is already served by the San Jose Fire Protection Department, Station #7, located at 800 Emery Street. The project would not create any new fire hazard or structures likely to require fire suppression service. No impact is anticipated.

b) The City of San Jose Police Department serves the project site. The proposed substation would not introduce any uses that would increase population, which would typically require additional police protection services during operation. The project may require the occasional use of police services during construction. Theft of construction equipment and/or vandalism might occur during the construction period, requiring a police response. The replacement of existing transmission poles may require temporary closure or partial closure of Stockton Avenue, University Avenue, Chestnut Street, Asbury Street, and Coleman Avenue for power line manipulation. Such actions are typically coordinated with the local police and normally take place during off-peak commute hours (Masuoka, 1997). The use of police services would be a temporary construction-related impact and would not be expected to affect police services substantially. In the long term, besides the perimeter wall, PG&E proposes that the substation transformer banks would be fenced and lighted to prevent vandalism and public access. Additional mitigation is not required. The project would have a less than significant effect related to police services.

c) The proposed substation project would not introduce any uses that would increase population, which would typically require additional school services. Therefore, the project would have no impact on school or other community services (also see section II., Population and Housing).

d) The proposed project would not require additional maintenance of public facilities during its operation. The maintenance of the substation facility itself would be handled by PG&E, which has previously planned for the project. Therefore, the project would have no effect related to public facilities.

e) No project impacts to other government services are anticipated in the City of San Jose.

XII. UTILITIES AND SERVICE SYSTEMS

Would the proposal result in a need for new systems or supplies, or substantial alterations, to the following utilities:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Power or natural gas?	☐	☐	☐	☒
b) Communications systems?	☐	☐	☐	☒
c) Local or regional water treatment or distribution facilities?	☐	☐	☐	☒
d) Sewer or septic tanks?	☐	☐	☐	☒
e) Storm water drainage?	☐	☐	☒	☐
f) Solid waste disposal?	☐	☐	☐	☒
g) Local or regional water supplies?	☐	☐	☐	☒

a) The proposed project is responding to a regional need for electrical utility upgrades and would not in itself be considered a cause for other new or altered power or natural gas utilities. No impact to power or natural gas systems or supplies would occur.

b) Pacific Bell provides communication services and currently serves the project area. The project site currently has telephone lines, and the operation of the expanded substation would not require any new communications infrastructure. The substation would not house any employees but would be connected via telephone lines to PG&E engineering controls for remote operation and alarm systems (Masuoka, 1997). No impact to communication services is anticipated.

c, d) The project site does not have any septic tanks or sewer services. The operation of the substation would not create a demand on water supply or sewer services. No restroom facilities would be required since the substation would be controlled remotely and not house any employees (PG&E, 1997). Water supply for the perimeter landscaping would be maintained without change. No water or sewer lines would have to be moved or modified for construction of the project. Therefore, no impact to water supply and sewer services is anticipated.

e) The area of the project site is approximately 19,000 square feet, and the storm water drainage from the site currently discharges into the City's storm water system. The increase in the amount of impermeable surfaces (that would create additional run-off) is small and would have a less than significant impact on the local storm drainage system (see also item IV.a). Site runoff would not exceed the capacity of the storm drains serving the site. Therefore, the project would have a less than significant impact related to storm water infrastructure.

f) The project would require solid waste disposal service only during the construction phase. PG&E and its contractors for construction would remove all solid wastes from the construction site. In the long term, no solid wastes would be generated regularly at the site (PG&E, 1997). Therefore, no impact to solid waste disposal services would occur.

g) The project would require a minor increase in water use for construction that could be accommodated by available water service and would not have a substantial impact on local or regional water supplies. In the long term, no additional water services would be needed, as the substation would be controlled remotely and not house any employees (PG&E, 1997). Water service would be restricted to that needed for maintaining the landscaping. Therefore, no impact to water services would occur.

XIII. AESTHETICS

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Affect a scenic vista or scenic highway?	☐	☐	☒	☐
b) Have a demonstrable negative aesthetic effect?	☐	☐	☒	☐
c) Create light or glare?	☐	☐	☒	☐

a) There are no scenic routes (streets or highways) designated in the vicinity of the FMC Substation site or power line corridor (City of San Jose, 1994). The Guadalupe River Park is a public scenic area that would have limited views of project power lines from two street level entrances (PG&E, 1997, 1998). Generally, views of the existing power line from within Guadalupe River Park are extremely limited because the line is located below the street level of Coleman Avenue. New power poles would not be installed and existing power poles would not be relocated along Guadalupe River Park. Therefore, visual impacts to Guadalupe River Park would not change and the impacts of the project to visual quality are therefore considered less than significant.

Another area of future scenic value is the planned public park within the San Jose International Airport Approach Zone (east of Coleman Avenue). Portions of the proposed power line alignment are visible from vantage points in the existing open space area. However, the view from the open space area is blocked by existing industrial uses along the entire length of Coleman Avenue (PG&E, 1997). Visual impacts for future park users would be less than significant.

A new power line would be constructed along the west side of Stockton Avenue, adjacent to the Bellarmine College Preparatory School ballfield. The line would be a dominant visual feature from the vantage point of the ballfield. However, because the viewshed is dominated by existing utility poles, railroad tracks, and a neighboring cement plant that are seen through existing landscape screening along the school's eastern fence line, the addition of a new power line would add to the cumulative visual character already present. The effect would be more in degree rather than kind of change, and therefore would not substantially change the existing visual character (PG&E, 1997). This impact would be considered less than significant.

b) Pursuant to CEQA, public views are eligible for protection and/or mitigation from project effects if there is a demonstrable negative aesthetic impact. The proposed substation structure and equipment would have an ultimate height of approximately 35 feet. An eight-foot concrete brick sound wall would be constructed along the east side of the FMC Substation site, adjacent to Stockton Avenue. Wood and Tubular Steel Poles would be installed or would replace the existing poles for the proposed power line. The PEA provides photo renderings of existing conditions and graphical simulations of the proposed substation improvements from public areas surrounding the project site (PG&E, 1997).

Three residences, located on Stockton Avenue, would have close range views of the expansion of the FMC Substation. In order to minimize the visual (and noise) impacts from substation components, an eight-foot, concrete brick soundwall east of the substation would be erected. To screen views of the substation elements that rise above the eight-foot soundwall, PG&E proposes to plant trees along the eastern site boundary. The canopies would screen the substation from those residential views when the trees approach and reach

maturity, which may require seven to ten years. With implementation of project-proposed mitigation measures, the project would have a less than significant visual impact on residents adjacent to the FMC site.

The aesthetic effects of poles and power lines on Guadalupe Park, the future park area south of the airport, and Bellarmine College Preparatory School are discussed in item XIII.a, above. The areas along alignments of the proposed power line are predominantly industrial uses consisting of industrial and commercial businesses, industrial storage areas, an elevated highway, billboards, and existing utility lines and poles. The existing visual quality is generally low; therefore, implementation of the project would not create new features in strong contrast with the surrounding visual character; therefore, the power lines would have a less-than-significant impact.

c) New lights would be installed at the project site. This lighting would be hooded, directed downward, and confined to the FMC Substation site in order to minimize glare. In addition, the lighting level would be reduced from that of the former FMC parking lot. The project would therefore result in a less than significant impact.

XIV. CULTURAL RESOURCES

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Disturb paleontological resources?	☐	☐	☐	X
b) Disturb archaeological resources?	☐	☐	☐	X
c) Affect historical resources?	☐	☐	☐	X
d) Have the potential to cause a physical change that would affect unique ethnic cultural values?	☐	☐	☐	X
e) Restrict existing religious or sacred uses within the potential impact area?	☐	☐	☐	X

a,b,c) The project site has undergone previous grading and is primarily covered by gravel. Site reconnaissance of the project site was performed by PG&E's cultural resource specialist and an information search was performed within a quarter-mile radius of the site by the

Sonoma State University, Cultural Resources Study Center (in November 1996). The examination revealed no evidence of cultural resources in the area of the proposed project and no previous studies or recorded cultural resources sites or artifacts were revealed from the information search (PG&E, 1997). Therefore, the project is not anticipated to have an effect on paleontological, archaeological, or historical resources.

d) No unique ethnic cultural values are attributed to the project site. Therefore, the project would not have an effect on ethnic cultural resources.

e) The project site is not being used for religious or sacred purposes. Therefore, the project would not have an effect on religious or sacred uses.

XV. RECREATION

Would the proposal:	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the demand for neighborhood or regional parks or other recreational facilities?	☐	☐	☐	X
b) Affect existing recreational opportunities?	☐	☐	☐	X

a, b) The substation site has no recreational uses, and no existing or planned recreational uses are located near the site (Brown, 1998). Recreational uses along the power line alignment are predominantly uncontrolled activities such as bicycling, walking, and jogging. There are no bicycle lanes along any of the streets along which power lines would be constructed or altered. Existing recreational opportunities are primarily concentrated at Guadalupe Park. Proposed power line replacement in this area could briefly disrupt recreational activities, but long-term operation of the power line would not interfere with recreation in the park. Therefore, no adverse impacts to recreational uses are anticipated.

XVI. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☐	☒
b) Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals?	☐	☐	☐	☒
c) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☐	☒
d) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

a) As described in sections VII., Biological Resources, and XIV., Cultural Resources, the project is not anticipated to have biological or cultural impacts.

b) The physical changes to the environment in the project area would not establish a disadvantage for long-term goals of the area. The substation, 115 kV power line, and 12 kV transmission lines would be consistent with long term regional and area goals for establishing reliable power to support regional development as well as the industrial and commercial/office development contemplated in the *San Jose 2020 General Plan* for this

area of San Jose. The substation site is an established utility-related use and would not conflict with the City of San Jose's primary goals and policies regarding site development and use. Long-term goals and policies related to energy resources are also included within the *San Jose 2020 General Plan*, Energy Element (City of San Jose, 1994). In general, the Element highlights the need for energy conservation. Project implementation would not conflict with the City's energy-related goals as the substation would not prevent the implementation of energy conservation policies. PG&E, in coordination with the CPUC, also has established programs and incentives for conservation of energy resources. As discussed below under item XVI.c, the availability of electrical supply is considered growth accommodating. Therefore, implementation of the project would have no impact related to the achievement of short-term goals to the disadvantage of long-term environmental goals.

c.) The proposed FMC Substation and new power line circuit are designed to help meet forecast electric power needs in part of PG&E's Downtown San Jose Distribution Planning Area, which encompasses downtown San Jose, San Jose International Airport, and surrounding residential and industrial areas. The forecast electric load growth is due primarily to planned growth and development within that limited geographical service area. The project would accommodate planned growth by providing additional electrical power where the existing electrical capacity cannot meet projected future needs (PG&E, 1997).

Adequate electric service is needed to support already planned economic development and population growth in this area. Lack of electrical power capacity in this service area would cause service to deteriorate, with negative economic effects on industry and a decrease in reliability in residential power service. Adequate electrical capacity, by itself, is not normally sufficient to ensure or encourage local growth. Other factors such as economic conditions, land availability, population trends, and local planning policies have more direct effects on growth than does the availability of electric power. The additional power supplied through the FMC Substation project would accommodate rather than induce growth. No public or private projects are expected to be started solely as a result of construction and operation of the FMC Substation project.

The FMC Substation project is a very small part of the regional electric power transmission system, which in turn is part of the larger statewide and interstate power generation and transmission system in California. Transmission line project planning processes, project CEQA environmental reviews and project approvals for each important element of the power transmission system already have considered these projects' direct impacts and their indirect, growth-inducing and cumulative impacts, which can include regional changes and impacts such as regional population growth and land use changes and basin-wide air and water quality impacts. Substations and distribution lines represent the end-points for electric power transmission lines, and any potential indirect, growth-inducing and/or

cumulative impacts caused by these substations have been implicit in prior environmental reviews for the transmission lines.

The local industrial, commercial and residential land uses in the service area of the FMC Substation were established in the San Jose 2020 General Plan, which defined acceptable future land uses and evaluated the environmental effects, including any potential cumulative effects, of these future land uses. Construction and operation of the FMC Substation project would result in localized environmental effects, as described in Sections I - XV, above, however these effects of the project would not be cumulatively considerable. Therefore, the cumulative impacts of the FMC Substation project would be less-than-significant.

d) As described in Section IX. Hazards, the project is not anticipated to cause substantial adverse effects on human beings, either directly or indirectly. Therefore, the project would have no impact related to adverse effects on human beings.

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