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PG&E San Mateo - Martin #4 Conversion Project

Final Initial Study/Mitigated Negative Declaration

California Public Utilities Commission
Energy Division

Pacific Gas & Electric Company's
Application for a Permit to Construct

San Mateo - San Martin #4
Conversion Project
(A.02-11-051)

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California Public Utilities Commission
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Prepared by
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PUBLIC UTILITIES COMMISSION

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September 3, 2003

A. FINAL MITIGATED NEGATIVE DECLARATION

PACIFIC GAS & ELECTRIC COMPANY (PG&E) APPLICATION NO. A.02-11-051 SAN MATEO-MARTIN #4 CONVERSION PROJECT

A.1 INTRODUCTION

Pursuant to the California Public Utilities Commission's (CPUC) General Order 131-D, Pacific Gas and Electric Company (PG&E) has filed an application with the CPUC for a Permit to Construct, for the conversion of power lines and associated substation modifications known as the San Mateo-Martin #4 Conversion Project (A.02-11-051). The Application was filed on November 27, 2002 and includes the Proponent's Environmental Assessment (PEA), prepared by PG&E pursuant to Rules 17.1 and 17.3 of CPUC's Rules of Practice and Procedure. PG&E requests authority to: 1) replace the existing wires ("conductors") and insulators on the San Mateo-Martin #4 60 kV power line with new wires ("reconductoring"); and 2) modify facilities at four substations to accommodate the 115 kV circuit. Under the Commission's General Order 131-D, approval of this project must comply with the California Environmental Quality Act (CEQA).

Pursuant to CEQA, the CPUC must prepare an Initial Study (IS) for discretionary projects, such as the proposed project, to determine whether the project may have a significant adverse effect on the environment. If an IS prepared for a project indicates that such an impact could occur, the CPUC would be required to prepare an Environmental Impact Report (EIR). If the IS does not reveal substantial evidence of such an effect, or if the potential effect can be reduced to a level of insignificance through project revisions, a Negative Declaration can be adopted (Section 21080; CEQA Public Resources Code).

Besides an EIR or a Negative Declaration, CEQA permits preparation of a Mitigated Negative Declaration (MND) as another type of environmental document that can be prepared based on an IS. The statute provides that MNDs are used "when the initial study has identified potentially significant effects on the environment, but (1) revisions in the project plans or proposals made by, or agreed to by, the applicant before the proposed negative declaration and initial study are released for public review would avoid the effects or mitigate the effects to a point where clearly no significant effect on the environment would occur, and (2) there is no substantial evidence in light of the whole record before the public agency that the project, as revised, may have a significant effect on the environment" (Section 21064.5; CEQA Public Resource Code).

Based on the assessment of the Draft IS/MND prepared for the San Mateo-Martin #4 Conversion Project, this Final MND has been prepared. This Final IS/MND consists of the Draft IS/MND along with the modifications that were made to the Draft IS/MND in response to comments received on the document. Response to comments on the Draft IS/MND as well as the resultant text modifications are presented in this document.

A.2 PROJECT DESCRIPTION

The following is a summary of the project that PG&E has proposed; the Draft IS/MND on pages B-8 through B-58 presents more detail on the proposed project.

The proposed project would convert an existing 60 kV line to a 115 kV line on an approximately 12 mile stretch between the San Mateo and Martin Substations. The proposed project would reduce potential service interruptions in the event of overloading of the existing electrical transmission system serving San Francisco and northern San Mateo County. The project includes replacing the existing wires and insulators on the existing San Mateo-Martin #4 60 kV power line with new wires as well as modifications at the existing San Mateo, Burlingame, Millbrae, and Martin Substations.

Power Line Conversion. The proposed project would involve the replacement of conductors and insulators on the #4 circuit. The proposed power line conversion would also involve new crossarm installations and minor reinforcement work, such as steel bracing, on three of the towers. No new or replacement towers or new access roads would be required as part of this project. Additionally, temporary guard structures would be installed where needed along the transmission line to prevent the circuits from falling onto other lines, the BART tracks, and roadways. Furthermore, the proposed project would remove two wood poles supporting the existing San Mateo-Martin #4 60 kV line just outside of the Millbrae Substation in the West of Bayshore parcel, on the west side of US 101 opposite San Francisco International Airport.

The reconductoring process would be done in two segments in order to allow most of the work in the West of Bayshore parcel to take place at a time when existing sensitive wildlife species and habitat would not be disturbed. The first segment would run from the Burlingame Substation to the San Martin Substation for approximately 9 miles in a north-south direction. The second segment would run from the Burlingame Substation to the San Mateo Substation for approximately 3 miles in an east-west direction.

San Mateo Substation. A new 115 kV breaker would be installed at the San Mateo Substation. Two 115 kV breaker disconnects, one bypass, and two bus selector switches would also be installed. In addition, two new 55- to 65-foot steel poles would be installed. These poles would be used for mounting terminal connections to bring the new 115 kV circuit into the substation switchyards. Minor modifications to the control panels within the substation control room would also be required to accommodate the newly converted line and breaker. Construction would take approximately five to six month to complete.

Burlingame Substation. Converting the existing Burlingame Substation to operate at 115/4 kV would require replacing the four existing 60/4 kV transformers with one 115/21 kV transformer and two 21/4 kV three-phase transformers. In addition, minor alterations, replacement, or rearrangement could occur to several breakers, switches, and breaker disconnects that exist in the substation area. The existing control building would be replaced with a larger control building with a battery room to the southeast of the existing building. Construction would take approximately five to eight months to complete.

Millbrae Substation. The proposed project would require building a short line from the 115 kV yard to a new 115/60 kV transformer bank at the 60 kV yard. Additionally, two new tubular steep poles would be installed on the southwest side of the station. Minor alteration, replacement, or rearrangement to several breakers, switches, and breaker disconnects that exist in the substation area could also occur. Construction would take approximately five to six months to complete.

Martin Substation. To accommodate the new line, a new 115 kV breaker would be installed. The existing bay would be modified to terminate and protect the #5 line by adding steel crossarms, two 115 kV breaker disconnects, one 115 kV breaker bypass switch, two 115 kV selector switches, and a 115 kV breaker within the existing 115 kV yard. Within the control room, minor modifications to the control panel would also be made to accommodate the newly converted line and breaker. Construction would take approximately five to six months to complete.

A.3 ALTERNATIVES

CEQA does not require that MNDs include a description of and analyses of alternatives. A key purpose of the alternatives analysis is to consider other means of feasibly attaining most of the basic objectives of the project and avoiding or substantially lessening any of the significant effects of the project. Because the IS concludes that, with mitigation, there are no significant impacts resulting from the proposed project, the consideration of alternatives is unnecessary in this IS/MND.

A.4 PURPOSE AND NEED FOR THE PROJECT

All major transmission lines providing power to San Francisco and northern San Mateo County are located in a single corridor along US 101 between the San Mateo and Martin Substations, the latter of which lies just south of the City and County of San Francisco boundary. Transmission facilities in this San Mateo-Martin corridor include one 230 kV underground cable and six overhead circuits on three double-circuit tower lines. The overhead circuits consist of five 115 kV and one 60 kV transmission circuits.

The San Mateo-Martin #4 circuit is the only overhead circuit operating at 60 kV in the corridor. The #4 circuit is located on the same towers as the #3 115 kV circuit, which was reconductored in 2000. As a result, this tower line is already capable of carrying the proposed 115 kV conductors without the need for substantial modifications to the supporting towers.

The proposed project is intended to serve the following PG&E objectives:

- Meet electricity demand — PG&E's transmission planning study indicates that emergency overload conditions may occur on two of the 115 kV circuits between San Mateo and Martin Substations.
- Comply with planning criteria — PG&E seeks to ensure that the San Francisco and the northern San Mateo County area transmission system continues to meet the California Independent System Operator and the North American Electric Reliability Council standards to ensure the safety and reliability of the transmission system.

PG&E states that between 1998 and 2000 peak electric demand in San Francisco and northern San Mateo County increased from 1,130 MW to 1,245 MW (an average of about 57 MW per year). Furthermore, peak electric demand in 2001 dropped by 122 MW to 1,123 MW due to heightened energy conservation during the energy crisis and a general economic downturn. PG&E anticipates that, despite the 2001 decline, electricity demand will grow at or near the previous pace in the longer term with the recovery of the California economy. PG&E examined three different load forecasts (high, medium, and low) to make a determination of demand.

Given these load forecasts, PG&E believes completion of the proposed project would ensure that sufficient electric power from sources outside the area could be transmitted to San Francisco and northern San Mateo County to meet the anticipated demand. PG&E contends that without the proposed project, overloading could occur on the 115 kV circuits between the San Mateo and Martin Substations by the summer of 2004 under the "medium" or "high" load forecasts.

The proposed project would provide PG&E with the capability to transmit approximately 135 MW of additional, imported power, thus addressing an immediate need to provide additional transmission capability by 2004 and to help ensure safe and reliable electric service to San Francisco and northern San Mateo County area customers.

A.5 ENVIRONMENTAL DETERMINATION

The IS/MND has been prepared to identify the potential effects on the environment from implementation of the proposed project and to evaluate the significance of these effects. The IS/MND is based on PG&E's PEA filed on November 27, 2002, site inspections by the CPUC environmental team, and other environmental analyses for the project. Measures addressing potentially significant impacts, proposed by the PG&E in the PEA, are referred to as Applicant Proposed Measures (APMs) and are incorporated into the Project Description section of the IS/MND. Additional mitigation measures are recommended as a result of the analyses conducted for the IS/MND, and PG&E has agreed to implement these measures as well. Some of the additional mitigation measures are supplemental to the APMs; other measures supersede the APMs (see Draft IS/MND).

Based on the IS/MND, the project as proposed by PG&E would be mitigable to less-than-significant effects or have no impacts in the areas of aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use planning, mineral resources, noise, population and housing, recreation, transportation and traffic, and utilities and service systems. Implementation of APMs and additional mitigation measures would avoid all potential impacts or reduce them to less-than-significant levels.

A Mitigation Implementation and Monitoring Plan (attached as section D of this document) has been prepared to ensure that the APMs and the additional mitigation measures are properly implemented. The plan describes specific actions required to implement each measure, including information on the timing of implementation and monitoring requirements.

Robert Ferari, Deputy Director, Energy Division
Manager of Engineering, Environmental
and Customer Services Branch
California Public Utilities Commission

9/03/03
Date

B. RESPONSES TO COMMENTS

B.1 INTRODUCTION

The CPUC released for public review a Draft Initial Study and Mitigated Negative Declaration (IS/MND) for the proposed San Mateo-Martin #4 Conversion Project on July 21, 2003. The public review period for the Draft IS/MND began July 21, 2003 and ended August 19, 2003. During this timeframe, the document was reviewed by various state, regional, and local agencies, as well as by interested organizations and individuals. Written comments were received from one public agency and two private organizations (including PG&E, the project applicant). A public meeting was held in the City of South San Francisco on August 7, 2003 to obtain oral comments on the Draft IS/MND. Comments from four individuals were received during this meeting. No public agency comments were received during this meeting. Two late comment letters were received from private organizations after the close of the review period.

This Responses to Comments section addresses comments on the Draft IS/MND raised during the public review period, and identifies revisions intended to correct, clarify, and amplify the Draft IS/MND. Actual revisions to the Draft IS/MND text are presented in Section C of this document. The responses and revisions in this document substantiate and confirm the analyses contained in the Draft IS/MND. No new substantial environmental impact and no increase in the severity of an earlier identified impact have surfaced in responding to the comments. Together, the previously released Draft IS/MND and this document constitute the Final IS/MND. The CPUC must certify the Final IS/MND before action can be taken on the project. Certification requires that the Lead Agency, the CPUC, make findings that the Final IS/MND complies with CEQA.

B.2 LIST OF COMMENTORS

Individuals submitting comments on the San Mateo-Martin #4 Conversion Project Draft IS/MND are identified below.

Written Comments

1. Denise Tsuji, Unit Chief, Northern California Coastal Cleanup Operations Branch, Department of Toxic Substances Control. Letter dated August 6, 2003.

2. E. W. Paulus and Peter Stender, Paulus and Stender. Letter dated August 11, 2003.

3. Pacific Gas & Electric Company (submitted by Best Best & Krieger, LLP, legal counsel for PG&E). Letter dated August 19, 2003.

Oral Comments

4. Steve Kirby, Sieger Engineering

5. Tim Eggen, Crown Plaza Hotel

6. Edlyn Lao, Randolph Hillside Community

7. Barbara Caputo, Randolph Hillside Community

Late Comments

8. Edlyn Lao, Randolph Hillside Community. Letter was not dated. Letter was postmarked August 21, 2003 and received on August 22, 2003.

9. PG&E (submitted by Best Best & Krieger, LLP, legal counsel for PG&E). E-mail received August 25, 2003.

B.3 RESPONSES TO DRAFT INITIAL STUDY AND MITIGATED NEGATIVE DECLARATION COMMENTS

Appendix II-A contains copies of the comment letters and relevant pages from the public meeting transcript. Specific comments within each comment letter have been bracketed and enumerated in the margin of the letter. Responses to each of these comments are provided below in this section. Response to Comment 2.1 refers to the response for the first comment in Comment Letter #2. For the most part, the responses provide explanation or additional discussion of text in the Draft IS/MND. Additions or revisions to text of the Draft IS/MND are presented in Section C of this document. In some cases, revision to the Draft IS/MND includes modifications to mitigation measures proposed by the CPUC. Section D of this document reproduces the Mitigation Implementation and Monitoring Plan (MIMP) for the project, encompassing all changes to the mitigation measures.

Response to Comment Letters

1. California Department of Toxic Substances Control

1.1 As described on pages B.7-1 to B.7-4 of the Draft IS/MND, hazardous material business plan inventories (HMBPI) for the four substations have been prepared and submitted to the Environmental Health Division of San Mateo County in accordance with Chapter 6.95 of the California Health and Safety Code and Title 22 of the California Code of Regulations. The HMBPI for the San Mateo, Burlingame, and Millbrae substations indicated that the following hazardous materials are present at the sites, as shown in the table on the next page.

Testing of soils at the San Mateo, Burlingame, and Millbrae substations is not considered necessary because no spills have been reported at the substations. Additionally, the San Mateo, Burlingame, and Millbrae substations are not listed on the California Department of Toxic Substances Control (DTSC) Hazardous Waste and Substances Site List (Cortese List). Soils within these substations are thus not anticipated to contain significant amounts of the identified potentially hazardous materials.

San Mateo Substation	Burlingame Substation	Millbrae Substation
Non-polychlorinated biphenyl (PCB) mineral oil	Battery acid	Battery acid
Compressed nitrogen gas	Sulfur hexafluoride gas	Non-PCB insulating oil
Sulfur hexafluoride gas	Non-PCB insulating oil	Nitrogen gas
Sealed lead acid battery	Nitrogen gas	
Open lead acid batteries		
Hydrogen gas		
Diesel fuel		
Battery acid		
Turbine oil		
Compressed argon gas		
Aircraft hydraulic oil		
Argon and carbon dioxide gas		
Compressed air		
Paint thinner		

Source: San Mateo County, 2002.

Areas in the vicinity of the area to be excavated at the Martin Substation have been listed under the Cortese list (see Draft IS/MND, pages B.7-3 and B.7-4 for further information). Accordingly, PG&E has conducted soils testing for the Martin Substation area that would be disturbed as part of the project. The laboratory results for PCBs, petroleum, hydrocarbons, and carcinogenic poly-aromatic hydrocarbons (PAHs) and BTEX compounds (benzene, toluene, ethylbenzene, and xylenes) were all below levels for protection of construction workers established by the U.S. Environmental Protection Agency (EPA). Potential for health impacts related to exposure of persons to hazardous substances at the Martin Substation project area would thus be less than significant.

Spoils from grading and excavation at all substations would be stockpiled at each site and tested for toxicity. After testing, the spoils would be disposed of in accordance with all applicable federal, state, and County of San Mateo Environmental Health Division regulations. Mitigation Measure (MM) HAZ-2, which calls for sampling and direct laboratory testing if field evidence of contamination is observed during grading or excavation, would also be implemented to ensure less-than-significant impacts related to release of hazardous waste. MM HAZ-2 is incorporated into the project's MIMP (see Section D of this document). Given PG&E's ownership of the substations for over 60 years, the approval of Spill Prevention, Control, and Counter-Measure (SPCC) Plans for each substation, and the absence of any reported spill incidents, the likelihood of encountering hazard materials during grading or excavation is not high. Nevertheless, PG&E has agreed to MM HAZ-2. Based on these considerations, potential for exposure of persons to hazardous substances in site soils from ground disturbance activities at the San Mateo, Burlingame, and Millbrae substations is less than significant and pre-construction sampling is unnecessary.

1.2 An assessment of air, noise, and transportation impacts from proposed ground disturbing activities has been provided in the Draft IS/MND. As discussed on pages B.3-7 through B.3-11 of the Draft IS/MND, worst-case air emissions that would be generated during ground-disturbing activities include 0.06 ton per day of particulate matter equal to or less than 10 microns in diameter (PM_{10} or dust), 0.02 ton per day of reactive organic gases (ROGs), 0.41 ton per day of carbon monoxide (CO), 0.15 ton per day of nitrogen dioxide (NO_2), and 0.01 ton per day sulfur dioxide (SO_2). Generated ROGs, CO, NO_2, and SO_2 would not contribute substantially to violations of state or federal air quality standards, which have been adopted and are being enforced by the Bay Area Air Quality Management District (BAAQMD). These standards have been identified in Tables B.3-1 and B.3-2 of the Draft IS/MND. The primary air emission of concern during construction is PM_{10} from ground disturbance and use of ground and air transportation vehicles. The project area has exceeded state and federal standards for PM_{10} a number of times since 1996. The number of project area violations of the State standard for PM_{10} from 1996 to 2001 ranged from zero in 1996 to three days in 1999 and 2001 out of 61 sampling days. The 24-hour national standard for PM_{10} was exceeded in 1997, 1999, 2000, and 2001 in San Mateo County.

PG&E has proposed Applicant Proposed Measures (APMs) 1 through 10 and Best Management Practices (BMPs) to reduce the amount of air emissions, including dust, from construction activities (see Section D of this document). The BAAQMD recommends that all dust control measures that the BAAQMD considers to be feasible, depending on the size of the project, be implemented to reduce the localized impact to the maximum extent. APM-1 through APM-10 and the BMPs that address air quality were compared with the BAAQMD's dust control measures. The analysis determined that the APMs and BMPs are consistent with the measures recommended by the BAAQMD in Table 2, "Feasible Control Measures for Construction Emissions of PM_{10}," of its CEQA Guidelines. The BAAQMD's "Feasible Control Measures for Construction Emissions of PM_{10}" ensure dust generation would be controlled to less-than-significant levels. To further ensure that the project would control dust emissions to less-than-significant levels, MM AQ-1, which encourages helicopter take offs and landings from paved areas or if not possible, watering of the area, and MM AQ-2, which requires watering all active construction areas, would be implemented. MMs AQ-1 and AQ-2 are incorporated into the project's MIMP (see Section D of this document).

With respect to noise, applicable noise emission standards have been identified in the noise impact analysis in Section B.11 of the Draft IS/MND. These standards were extracted from:

- Noise Sensitive Land Use Compatibility Guidelines for Community Noise Environments in the *City of San Mateo General Plan*;
- Land use noise compatibility standards per the *City of Burlingame General Plan*;
- Land Use Compatibility Chart for community noise environments in the *City of Millbrae General Plan*;
- Land use noise compatibility standards per the *San Bruno General Plan* and Section 6.16.303 Ambient Noise Levels of the *San Bruno Municipal Code*;

- Land use noise compatibility standards per the *Municipal Code of South San Francisco*;
- Land use noise compatibility standards per Section 8.28.030 of the *Brisbane Municipal Code*; and
- The *City of Daly City General Plan* Noise Compatibility Guidelines.

Also identified in the noise analysis are standards for human annoyance from groundborne vibration caused by pile driving at the San Mateo Substation. These standards are reported in Tables B.11-4 and B.11-6 of the Draft IS/MND.

As discussed on pages B.11-7 to B.11-10 of the Draft IS/MND, PG&E has proposed noise control BMPs, including use of noise control equipment. With use of noise control equipment, the maximum noise emitted by earth-moving activities (not including pile-driving) would be 80 dBA L_{eq} at 50 feet from the source or 74 dBA L_{eq} at 100 feet from the source. Potential for exceedances of local standards would occur at the Millbrae and Martin Substations, where there are residences 90 feet and 75 feet away, respectively. However, BMPs proposed by PG&E also include installing portable barriers, directing exhaust stacks/vents away from sensitive receptors, turning off equipment rather than idling, and conformance with municipalities regarding construction hours and noise level limits; these BMPs would reduce noise emissions to the maximum extent practicable. In addition, MM NOI-1 and NOI-2 would ensure that neighboring receptors would be provided advanced notice of the construction activities and would provide means for PG&E to respond to concerns of those receptors. MM NOI-1 and NOI-2 have been incorporated into the MIMP (see Section D of this document). Construction noise would also be sporadic and temporary. Implementation of BMPs and MM NOI-1 and NOI-2 would reduce temporary noise emissions from earth-moving activities (not including pile-driving) to the maximum extent practicable. Pile driving activities at the San Mateo Substation, which would last up to four days over a two-week period, are not expected to exceed annoyance standards because surrounding land use designations are for utility use (see Table B-1 in the Draft IS/MND) and because the nearest sensitive receptor is 0.5 mile away. At this distance, groundborne vibration from the proposed pile driving would be at levels expected from an arterial street. Noise emissions from proposed earth-moving and pile driving activities would thus be less than significant with implementation of the mitigation measures and BMPs.

An analysis of transportation impacts from substation construction, which includes transport of earth-moving equipment and of spoils from grading and excavation, has been provided in the Draft IS/MND, beginning on page B.15-1. The number of truck trips is estimated at 12 to 15 trucks per day for the first month of substation construction per substation. After the first month of substation construction, the number of truck trips would decline to two to three per day per substation. This level of project-related traffic per day is less than 1 percent of the existing daily traffic in the project area. In addition, the increase of up to 15 truck trips for substation work would not exceed an established level of service (LOS) standard because the change in traffic volume would not be enough to change the existing volume-to-capacity ratios. Traffic impacts from substation construction would be less than significant.

Finally, the commentor indicates the Draft IS/MND should address risk of upset. An analysis of risk of upset has been provided on pages B.7-6 through B.7-8 of the Draft IS/MND. In the Draft IS/MND, proposed measures that would minimize risk of upset due to accidents include:

- Designation of emergency/evacuation routes for the project (see page B.7-5).
- Implementation of BMPs for the prevention of spill of hazardous substances (see Appendix C).
- Implementation of a Fire Suppression/Prevention Plan (see Appendix D).
- Implementation of containment measures for gas storage at each substation (see page B.7-7). Containment measures would include a pressure-tested, welded, steel containment vessel, bolted and gasketed at every junction with pressure monitors and low-pressure alarms.
- Toxicity testing of all spoils of grading and excavation, and proper disposal of soils in accordance with federal, state, and County of San Mateo Environmental Health Division regulations (see Section B-8, Description of Project).
- During operation, compliance with San Mateo County's Environmental Health Division regulations, as well as State laws and regulations to comply with federal SPCC Plan requirements, as outlined in Title 40 of the Code of Federal Regulations, Part 112 (page B.7-2).

Additionally, MM HAZ-1 and HAZ-2 would be implemented to reduce risk of upset due to accidents from refueling activities and exposure of persons to contaminated soils. Implementation of the above-identified proposed measures and mitigation measures would limit risk of upset due to accidents to less-than-significant levels.

2. Paulus and Stender

2.1 As explained in the Draft IS/MND (beginning on page B-44), electric and magnetic fields (EMF) are matters of public interest but not regarded as potentially significant physical, environmental effects under CEQA. This determination has been made because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA standards for defining health risk for EMF. The State CEQA Guidelines in Section 15145 states if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. Further, Section 15151 explains that disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. These CEQA Guidelines sections are relevant to EMF, because there is ongoing scientific debate about long-term health risks from EMF exposure, with no definitive evidence that exposure to EMF adversely affects public health. In accordance with CEQA's direction, the Draft IS/MND does provide general EMF information for the benefit of the public and decision makers (see page B-44 et seq. of the Draft IS/MND). Although CEQA does not require the analysis of EMF impacts of a project, an analysis of potential EMF emissions of the proposed San Mateo-Martin #4 Conversion Project is presented

here as a non-mandated response due to concerns expressed by nearby residents and businesses.

The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which is the circuit proposed to be upgraded, has a current load of 60 kV. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco.[1] Electric fields were not calculated because, as discussed on page B-53 of the Draft IS/MND, electric fields are shielded by most objects and would thus not affect people within nearby residences. On the other hand, calculations for magnetic fields were made using the "2D Fields" Version 3.A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004 projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. Results of the calculations made by PG&E are presented in Table 2.1-1 below. EMF emissions presented in Table 2.1-1 are based on peak load forecasts, and thus worst-case scenarios that rarely occur. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Table 2.1-1
Projected Magnetic Field Emissions Before and After San Mateo-Martin #4 Conversion Project

Distance From #4 Circuit	Before Project (in milliGauss)	After Project (in milliGauss)
Directly underneath	20.3	11.4
50 feet west	8.9	3.3
50 feet east	23.2	11.8
100 feet west	4.1	0.9
100 feet east	9.4	7.8

Source: PG&E and Best Best & Krieger, 2003.

[1] Pacific Gas & Electric Company (PG&E). 2003. Pacific Gas & Electric Company's Reply to Petition of Protest by Members of Randolf Hillside Community.

Health effects from EMF emissions have not been determined. As indicated in the Draft IS/MND (see pages B-55 through B-56), much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. In any case, ground-level EMF from the San Mateo-Martin power lines would decrease as a result of the project.

3. Pacific Gas & Electric Company

3.1 The changes in the proposed construction schedule identified by the commentor are incorporated into the Description of the Project (see Section C of this document).

3.2 Text in the Draft IS/MND on page B.4-25 is changed to reflect the fact that the California Department of Fish and Game has issued a Section 1802 Agreement for the project (see Section C of this document). [2]

3.3 There would be pull and tension sites within the Burlingame Lagoon section of the project corridor. These pull and tensions sites would be located within existing parking lots. The text regarding pull and tension sites on page B-32 is revised to acknowledge that there would be pull and tension sites in the Burlingame Lagoon section of the corridor (see Section C of this document).

3.4 Section 15064(b) of the CEQA Guidelines states that determination of a significant effect calls for "careful judgment on the part of the public agency involved." Those impacts that were determined to be significant or potentially significant in the Draft IS/MND have been based on environmental review by the CPUC in accordance with CEQA. The mitigation measures proposed by the CPUC would, as determined by the CPUC, ensure that impacts are reduced to less-than-significant levels. Failure to implement these measures or their equivalent would mean the proposed project could significantly affect the environment. Responses to specific impacts enumerated in Comment 3.4 are provided below.

Air Quality. Page B.3-10 of the Draft IS/MND states, "Construction impacts would be less than significant with the implementation of the proposed BMPs and APM-1 through APM-10, with the exception of potential helicopter-induced dust emissions. Dust generation from helicopter landing and take-off would cause a potentially significant impact if conducted on non-paved areas." Dust-stirring from helicopter use on non-paved areas would cause detrimental effects and a nuisance on nearby human and wildlife receptors that may be nearby. Dust-stirring may potentially exceed standards for PM_{10} on a localized level. This impact is considered significant. MM AQ-1 would mitigate potentially significant dust generation from helicopter use to a less-than-significant level. Also, MM-2 is supplemental to APM-2 and would ensure that applicant-proposed dust watering would be conducted during appropriate times and at required areas. Air impacts would thus be potentially significant without

[2] Agreement by and between Pacific Gas & Electric Company and the California Department of Fish and Game Relating to the San Francisco Garter Snake for San Mateo Martin 60kv Circuit Number 4 Reconductoring Project West of Bayshore Parcel San Mateo County (Reference No. 1802-2003-005-03).

mitigation. The conclusion that project potential for violation of air quality standards or substantial contribution to an existing or projected air quality violation would be "less than significant with mitigation incorporated" is appropriate.

The bottom paragraph on page B.3-8, which states that, "Onsite air pollutant emissions during construction... could contribute substantially to violations of air quality standards," is modified for clarification (see Section C of this document).

Biological Resources. The Description of the Project (beginning on page B-52 of the Draft IS/MND) states that construction staging requirements may vary at different periods. There is a potential for encroachment onto sensitive habitat on San Bruno Mountain during construction if no project-specific habitat protection mechanism is applied. Encroachment on sensitive habitat would be considered a significant impact because it would conflict with Plan objectives of habitat protection and conservation. MM BIO-3 provides a mechanism to ensure encroachment on sensitive habitat would not occur at significant levels.

Cultural Resources. The determination that there is a high potential for Native American sites in the vicinity of the project corridor is from a records search with the California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC; File No. 02-941) requested by EIP Associates in June 2003. Moreover, potential for encountering cultural resources in areas not previously disturbed by PG&E exists because staging areas are currently not determined and may include areas not previously disturbed by PG&E. Discovery of cultural resources may lead to inappropriate disturbance of the resources, which would be a significant effect. The conclusions of less-than-significant impacts with mitigation incorporated for items b and d of Section B.5, Cultural Resources, of the Draft IS/MND are thus appropriate.

Geology and Soils. Personal protection grounds would be installed in the San Bruno Mountain portion of the project area (see page B-34 of the Draft IS/MND). Installation of personal protection grounds would involve driving rods into the ground and removing them after construction is completed. Ground rods would also be used for reel and bullwheel puller trucks, or any equipment near an energized conductor. There would thus be ground disturbance at San Bruno Mountain; however, the extent of the ground disturbance would have a less-than-significant on landslide potential. Text on page B.6-7 of the Draft IS/MND is revised to reflect ground disturbance at San Bruno Mountain (see Section C of this document). The conclusion of less than significant for item a.iv. of Section B.6, Geology and Soils, of the Draft IS/MND is thus appropriate.

Hazards and Hazardous Materials. Although Nerli Lane is not a thoroughfare, it is a route that may be used in times of emergency. The project would thus have a potential affect, albeit limited, on roadways that may be utilized for evacuation in that area, as was concluded for item g of Section B.7, Hazards and Hazardous Materials, of the Draft IS/MND.

Hydrology and Water Quality. The project would have potential for ground disturbance to result in erosion or sedimentation, and thus result in water discharge violations particularly in the events of early or unseasonal rains. MM HY-1 would ensure that erosion preventive BMPs to be implemented would be in accordance with state or local standards. The conclusions of less-than-significant impacts with mitigation incorporated for items a and f of Section B.7, Hydrology and Water Quality, of the Draft IS/MND are thus appropriate.

Land Use and Planning. Due to current uncertainties in the project's construction staging requirements, there is potential for violations of the *San Bruno Mountain Habitat Conservation Plan* (SBMHCP). MM BIO-3 would ensure that all staging activities would be reviewed by the HCP Operator as needed, therefore ensuring that there would be no violations of the SBMHCP. The conclusion of a less-than-significant impact with mitigation incorporated for item c of Section B.9, Land Use and Planning, of the Draft IS/MND is thus appropriate.

Noise. Table B.11-2 in the Draft IS/MND shows that earth-moving activities would potentially exceed noise standards within residential uses 90 feet and 75 feet away from Millbrae and Martin substations, respectively. As a result, the commentor's recommendation to declare no noise impacts would not be appropriate. MM NOI-1 and NOI-2, in addition to BMPs, ensure noise impacts are less than significant, and thus, the Draft IS/MND conclusion of a less-than-significant impact with mitigation incorporated is justified.

The analyses under items 11a and b indicate that the project would not result in significant permanent increases in ambient noise. Accordingly, the conclusion in item c of Section B.11 in the Draft IS/MND is changed from Less-than-Significant with Mitigation Incorporated to Less-than-Significant Impact (see Section C of this document).

Transportation and Traffic. Although the level of service standards would not be exceeded during project construction, there would be up to a 27-vehicle increase during the construction period (thus, there would be some effect). This increase constitutes a less-than-significant impact to level of service standards, as concluded for item b for Section B.15, Transportation and Traffic, of the Draft IS/MND.

Partial closure of roads and use of traffic control procedures may affect emergency access. MM TR-1 (see Draft IS/MND) would ensure that coordination with local emergency personnel is implemented and that impacts on emergency access are less than significant. The conclusion of less than significant with mitigation incorporated for item e of Section B.15, Transportation and Traffic, of the Draft IS/MND is thus appropriate.

3.5-3.9 The mitigation measures for the project have been formulated and proposed by the CPUC to reduce potentially significant impacts to less-than-significant levels. The commentor has recommended revisions to five of the biological mitigation measures. Changes to the mitigation measures have been made if they further clarify the measures, if they provide for equivalent or more effective mitigation, and if they would not cause any potentially significant effects in the environment. MM BIO-9, -14, -15 are revised as proposed by the commentor.

MM BIO-1 and –13 are not revised. See Section C of this document for the revised mitigation measures.

3.10 Text is revised on page B.4-1 to more accurately describe sensitive biological areas (see Section C of this document).

Response to Public Meeting Comments

4. Steve Kirby, Sieger Engineering

4.1 As explained in the Draft IS/MND (beginning on page B-44), electric and magnetic fields (EMF) are matters of public interest but not regarded as potentially significant physical, environmental effects under CEQA. This determination has been made because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA standards for defining health risk for EMF. The CEQA Guidelines in Section 15145 states if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. Further, Section 15151 explains that disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. These CEQA Guidelines sections are relevant to EMF, because there is ongoing scientific debate about long-term health risks from EMF exposure, with no definitive evidence that exposure to EMF adversely affects public health. In accordance with CEQA's direction, the Draft IS/MND does provide general EMF information for the benefit of the public and decision makers (see page B-44 et seq. of the Draft IS/MND). Although CEQA does not require the analysis of EMF impacts of a project, an analysis of potential EMF emissions of the proposed San Mateo-Martin #4 Conversion Project is presented here as a non-mandated response due to concerns expressed by nearby residents and businesses.

The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which is the circuit proposed to be upgraded, has a current load of 60 kV. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco. Electric fields were not calculated because, as discussed on page B-53 of the Draft IS/MND, electric fields are shielded by most objects and would thus not affect people within nearby residences. On the other hand, calculations of magnetic fields were made using the "2D Fields" Version 3-A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004 projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By

increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. Results of the calculations made by PG&E are presented in Table 4.1-1 below. EMF emissions presented in Table 4.1-1 are based on peak load forecasts, and thus worst-case scenarios that rarely occur. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Table 4.1-1
Projected Magnetic Field Emissions Before and After San Mateo-Martin #4 Conversion Project

Distance From #4 Circuit	Before Project (in milliGauss)	After Project (in milliGauss)
Directly underneath	20.3	11.4
50 feet west	8.9	3.3
50 feet east	23.2	11.8
100 feet west	4.1	0.9
100 feet east	9.4	7.8

Source: PG&E and Best Best & Krieger, 2003.

Health effects from EMF emissions have not been determined. As indicated in the Draft IS/MND (see pages B-55 through B-56), much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. In any case, ground-level EMF from the San Mateo-Martin power lines would decrease as a result of the project; EMF-associated health concerns should thus also decrease.

4.2 PG&E has agreed to take EMF readings at individuals' requests before and after the proposed project to confirm the projected decrease in EMF.

4.3 The popping, buzzing, or crackling noise that is sometimes heard from power lines generally occurs when insulators on the line become dirty and do not have a clean connection. Potential noise from dirty insulators increases during damp or wet weather. If the new 115 kV circuit were installed, the ceramic insulators on the line would be replaced with non-ceramic insulators, which perform better than ceramic insulators and do not require cleaning. Other lines through the same corridor that currently use ceramic insulators are in the process of being converted to non-ceramic insulators within approximately six months. Replacing the ceramic insulators with non-ceramic insulators would eliminate existing noise caused by dirty or damaged insulators on the San Mateo-Martin power lines. The replacement of ceramic insulators with non-ceramic insulators is incorporated into the Description of the Project (see Section C of this document).

4.4 PG&E has not encountered any instances where power line-emitted EMF interfered with wireless data and voice communication systems. Also, EMF levels emitted along the San Mateo-Martin power line corridor would reduce as a result of the project, as discussed in response to Comment 4.1. Therefore, concerns regarding EMF interference with wireless data and voice communication systems in the vicinity of the corridor should also decrease.

5. Tim Eggen, Crown Plaza Hotel

5.1 Although CEQA does not require the analysis of project impacts on television reception, an analysis of potential television reception interference from the proposed San Mateo-Martin #4 Conversion Project is presented here due to concerns expressed by nearby businesses. Power lines do not interfere with cable television reception, which is supplied via shielded coaxial cable.[3] Power lines may interfere with radio (analogue antenna) television reception. This interference occurs when the power line facilities are not operating correctly or are broken. PG&E has agreed to inspect and repair as needed San Mateo-Martin power lines if reports of radio (analogue antenna) television reception interference are received. PG&E has a toll-free telephone number for the members of the public to call for inspection requests. PG&E has stated that such interference occurs rarely, although some television reception interference may occur for very short durations during the construction period. If the new 115 kV circuit were installed, that segment of the corridor would not experience television reception interference, unless the circuits are faulty.

5.2 PG&E has agreed to take EMF readings at individuals' requests before and after the proposed project to confirm the projected decrease in EMF.

6. Edlyn Lao, Randolph Hillside Community

6.1 The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which has a current load of 60 kV, is the circuit proposed to be upgraded to 115 kV.

6.2 The San Mateo-Martin power line corridor is located approximately 225 feet east of the Spruce Avenue-Sister Cities Avenue intersection within the Randolph Hillside Community in South San Francisco. The closest tower is approximately 800 feet southeast of the Spruce Avenue-Sister Cities Avenue intersection.

6.3 As explained in the attached Draft IS/MND (beginning on page B-44), electric and magnetic fields (EMF) are matters of public interest but not regarded as potentially significant physical, environmental effects under CEQA. This determination has been made because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA standards for defining health risk for EMF. The CEQA Guidelines in Section 15145 states if, after thorough investigation, a lead agency finds that a particular

[3] Herz, Michael. 2003. EMF Consultant, PG&E. Response to public comments during August 7, 2003 public participation meeting for the San Mateo-Martin #4 Conversion Project.

impact is too speculative for evaluation, the agency should note its conclusion and termination discussion of the impact. Further, Section 15151 explains that disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. These CEQA Guidelines sections are relevant to EMF, because there is ongoing scientific debate about long-term health risks from EMF exposure, with no definitive evidence that exposure to EMF adversely affects public health. In accordance with CEQA's direction, the Draft IS/MND does provide general EMF information for the benefit of the public and decision makers (see page B-44 et seq. of the Draft IS/MND). Although CEQA does not require the analysis of EMF impacts of a project, an analysis of potential EMF emissions of the proposed San Mateo-Martin #4 Conversion Project is presented here as a non-mandated response due to concerns expressed by nearby residents and businesses.

The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which is the circuit proposed to be upgraded, has a current load of 60 kV. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco. Electric fields were not calculated because, as discussed on page B-53 of the Draft IS/MND, electric fields are shielded by most objects and would thus not affect people within nearby residences. On the other hand, calculations of magnetic fields were made using the "2D Fields" Version 3-A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004 projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. Results of the calculations made by PG&E are presented in Table 6.3-1 below. EMF emissions presented in Table 6.3-1 are based on peak load forecasts, and thus worst-case scenarios that rarely occur. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Table 6.3-1
Projected Magnetic Field Emissions Before and After San Mateo-Martin #4 Conversion Project

Distance From #4 Circuit	Before Project (in milliGauss)	After Project (in milliGauss)
Directly underneath	20.3	11.4
50 feet west	8.9	3.3
50 feet east	23.2	11.8
100 feet west	4.1	0.9
100 feet east	9.4	7.8

Source: PG&E and Best Best & Krieger, 2003.

Health effects from EMF emissions have not been determined. As indicated in the Draft IS/MND (see pages B-55 through B-56), much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. In any case, ground-level EMF from the San Mateo-Martin power lines would decrease as a result of the project; EMF-associated health concerns should thus also decrease.

The California Department of Health Services (CDHS) has acknowledged that there may be health risks associated with EMF and has thus established policies regarding locating new school near transmission line facilities. However, as stated on page B-55 of the Draft IS/MND, there is no scientific basis to conclude that EMF would have negative implications on public health. The policies established by the CDHS only apply to the construction of a new school that the state Department of Education has jurisdiction over and that are in the vicinity of power line facilities. The policies vary with distance between the power lines and the new school and with voltages along the power line. The CDHS policies do not prohibit a utility in California from building power lines in the vicinity of a school.

The CPUC has, in recognizing that there is a great deal of public interest and concern over potential health effects from EMF from power lines, issued its EMF Decision (D.93-11-013), which requires incorporation of "no cost" and "low cost" magnetic field reduction steps in the design of proposed transmission and substation facilities.

With regards to the 1979 discovery of cases of Denver children with leukemia and the corresponding 1979 study by Dr. Giles Theriault about that issue, the study found an association between power lines and childhood leukemia. However, the study focused on lower-voltage lines on wood poles and underground lines. The study did not focus on high-voltage power transmission lines that are associated with the proposed project. The 1979 study has little or no bearing on the proposed 115 kV circuit, because the study focused on a different, lower-voltage type power line rather than the same as the proposed circuit.

6.4 Inability to sell an occupied house is not considered a significant environmental impact, per Section 15064(e) of the CEQA Guidelines. The popping, buzzing, or crackling noise that is sometimes heard from power lines generally occurs when insulators on the line become dirty and do not have a clean connection. Potential noise from dirty insulators increases during damp or wet weather. If the new 115 kV circuit were installed, the ceramic insulators on the

line would be replaced with non-ceramic insulators, which perform better than ceramic insulators and do not require cleaning. Other lines through the same corridor that currently use ceramic insulators are in the process of being converted to non-ceramic insulators within approximately six months. Replacing the ceramic insulators with non-ceramic insulators would eliminate existing noise caused by dirty or damaged insulators on the San Mateo-Martin power lines. The replacement of ceramic insulators with non-ceramic insulators is incorporated into the Description of the Project (see Section C of this document).

6.5 The schedule of replacement of ceramic insulators with non-ceramic insulators within PG&E's service area is dependent on which area needs the replacement most urgently. Insulator replacement related to the San Mateo-Martin #4 Conversion project would begin in September 2003.

6.6 In response to the Petition of Protest by Members of the Randolph Hillside Community, PG&E inspected the power lines in the vicinity of the Randolph Hillside Community on January 3, 2003 for noise emissions.[4] At the time of inspection, the power line facilities were not emitting audible noise. However, audible noise was observed from a nearby Sprint Cellular Antenna site, which contained remotely-controlled motors and generators that were emitting noise audible above freeway noise. Also refer to response to Comment 6.4.

6.7 Although CEQA does not require the analysis of project impacts on television reception, an analysis of potential television reception of the proposed San Mateo-Martin #4 Conversion Project is presented here due to concerns expressed by nearby businesses. Power lines do not interfere with cable television reception, which is supplied via shielded coaxial cable.[5] Power lines may interfere with radio (analogue antenna) television reception. This interference occurs when the power line facilities are not operating correctly or are broken. PG&E has agreed to inspect and repair as needed San Mateo-Martin power lines if reports of radio (analogue antenna) television reception interference are received. PG&E has a toll-free telephone number for the members of the public to call for inspection requests. PG&E has stated that such interference occurs rarely, although some television reception interference may occur for very short durations during the construction period. If the new 115 kV circuit were installed, that segment of the corridor would not experience television reception interference, unless the circuits are faulty.

6.8 Conducting optimal phasing on all the San Mateo-Martin power lines to reduce EMF is not part of the proposed project, which involves upgrading only the #4 circuit within the San Mateo-Martin corridor. PG&E will employ optimal phasing as part of the #4 conversion project. This technique is one of several low-cost, no-cost strategies to reduce EMF and consideration of these techniques occurs only when PG&E files an application with the CPUC.

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[4] Pacific Gas & Electric Company (PG&E). 2003. Pacific Gas & Electric Company's Reply to Petition of Protest by Members of Randolph Hillside Community.

[5] Herz, Michael. 2003. EMF Consultant, PG&E. Response to public comments during August 7, 2003 public participation meeting for the San Mateo-Martin #4 Conversion Project.

6.9 It is assumed in this response that the comment refers to radon, not rayon. EMF from power lines does not involve radon, which is a gaseous radioactive element that is derived from the radioactive decay of radium. As stated on page B-53 of the Draft IS/MND, electric and magnetic fields are created when (1) power lines are energized, with the strength of the field dependent directly on the voltage of the line creating it, and (2) when current flows through power lines at any voltage, respectively.

6.10 See response to Comment 6.3.

6.11 PG&E has agreed to take EMF readings at individuals' requests before and after the proposed project to confirm the projected decrease in EMF.

6.12 It is possible for the CPUC to require PG&E to hire an independent party to take EMF readings for the project as part of a mitigation measure. However, CEQA requires mitigation for substantial changes to baseline conditions. EMF emissions are already present at the project site; thus, current EMF emissions are considered as part of baseline conditions. As stated in response to Comment 6.3, current EMF emissions would decrease as a result of the project due to optimal phasing. Also, there is no scientific basis to conclude that EMF would have negative implications on public health. Mitigation to hire an independent party to take EMF readings for the project is thus not warranted for the project. The CPUC has proposed appropriate mitigation measures that would reduce other impacts determined in the Draft IS/MND to be potentially significant without mitigation (see Section D of this document).

6.13 See response to Comment 6.3.

6.14 As stated on page B-55 of the Draft IS/MND, there is no scientific basis to conclude that EMF would have negative implications on public health. Also, current EMF emissions would decrease as a result of the project due to optimal phasing. See responses to Comments 6.3 and 6.11.

Crackling or buzzing noise caused by dirty ceramic insulators would be eliminated by the proposed replacement of the ceramic insulators by non-ceramic insulators. See response to Comment 6.4.

6.15 See responses to Comments 6.3 and 6.11.

6.16 As stated in the Draft IS/MND on page B-44, electric fields are shielded by most objects or materials. Magnetic fields are not easily shielded by objects or materials. Both electric and magnetic fields attenuate rapidly with distance from the source. Therefore, installing the new 115kV circuit underground would increase strength of magnetic fields at ground level compared to installing the new circuit at the current height of approximately 200 feet above ground level. Nonetheless, consideration of burying the new circuit underground as a project alternative is not necessary for two reasons: (1) current EMF emissions would be reduced as a result of the project (see response to Comment 6.3); and (2) as stated on page A-2 of the Draft IS/MND, CEQA does not require that MNDs include an alternatives analysis because the IS

concludes that, with mitigation, there would be no significant impacts resulting from the proposed project.

6.17 Burying the #4 circuit underground is not proposed as part of the project. This CEQA analysis pertains to impacts of actions proposed as part of the project; therefore, impacts of burying the circuit underground are not provided in this document. Also, impacts on property values and the sale of houses are not considered a significant environmental impact, per Section 15064(e) of the CEQA Guidelines.

6.18 The purpose of CEQA is not to enhance property values, but to disclose and mitigate significant impacts per CEQA Guidelines. As stated in response to Comment 6.17, impacts on property values and the sale of houses are not considered a significant environmental impact, per Section 15064(e) of the CEQA Guidelines. Impacts of EMF-related concerns on house sales and property values are thus not provided in this document.

6.19 CEQA analyses address project-induced changes to baseline conditions. The towers and power lines are currently existing within the project area and are thus part of baseline conditions. Impacts of these towers and most of the power lines along the corridor are thus not a consequence of the proposed project.

As presented on pages A-2 and A-3 of the Draft IS/MND, the project has been proposed by PG&E to meet forecasted demand in both San Francisco and northern San Mateo County to ensure that the San Francisco and northern San Mateo County area transmission system continues to meet the California Independent System Operator and the North American Electric Reliability Council Standards to ensure the safety and reliability of the transmission system. Therefore, the project would include power supply and safety benefits to northern San Mateo County.

6.20 In accordance with CEQA regulations, an IS has been prepared for the proposed project. Section 15063 of the CEQA Guidelines states that an IS serves to determine if a proposed project would have significant environmental impacts. If, based on the IS, a project is determined to have significant impacts, then an Environmental Impact Report (EIR) shall be prepared for the proposed project. If significant impacts of the project may completely be mitigated to less-than-significant levels, then a Mitigated Negative Declaration shall be prepared for the proposed project. The IS prepared for the San Mateo-Martin #4 Conversion project has resulted in a determination that potentially significant impacts of the project may be completely mitigated to less-than-significant levels. As part of the IS analysis, mitigation measures have been prepared and incorporated into an MIMP for the project (see Section D of this document). PG&E has agreed to implement these mitigation measures. Therefore, an MND, not an EIR, has been prepared for the proposed project. Per CEQA Guidelines Section 15063, IS/MNDs are not required to have an alternatives analysis; by contrast, EIRs must consider alternatives.

As part of the CEQA process, a minimum public review period of 30 days is required for proposed IS/MNDs when submitted to the State Clearinghouse for review by state agencies. During this public review period, agencies and public stakeholders may submit comments on the IS/MND in writing. The IS/MND review period for the proposed project ran from July 21, 2003 to August 19, 2003. A public participation meeting for the project was held on August 7, 2003. The public meeting provided agencies and public stakeholders an opportunity to verbally comment on the IS/MND during this meeting. Therefore, agencies and public stakeholders have been provided the opportunity to submit written comments during the 30-day review period or express verbal comments during the public meeting or do both, in accordance with CEQA regulations. Also, see responses to Comments 6.16 and 6.17.

6.21 See responses to Comments 6.16 and 6.17.

6.22 An EIR would not be prepared for the proposed project, unless the CPUC determines on the basis of evidence in the record that a potentially significant effect of the project has not been addressed or that the mitigation in this Final IS/MND would not reduce identified significant effects to less than significant.

6.23 This IS/MND has been prepared entirely by the CPUC with assistance from EIP Associates environmental consulting team, inclusive of Marcus H. Bole & Associates and R. Villasenor & Associates (see Appendix A of the Draft IS/MND). The IS/MND is based on PG&E's Proponent's Environmental Assessment (PEA) filed on November 27, 2002 in accordance with Rules 17.1 and 17.3 of the CPUC's Rules of Practice and Procedure, site inspections by the CPUC's contracted environmental consulting team, consultation with local and state resource agencies, and other environmental analyses for the project.

6.24 The IS/MND prepared for the project contains an analysis of potential aesthetics, agricultural resources, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation and traffic, and utilities and service systems impacts of the proposed project. Potential impacts have been categorized into levels of significance based on significance criteria, which were extracted from Appendix G of the CEQA Guidelines. For those impacts that have been categorized as significant or potentially significant, mitigation measures have been identified that would reduce those impacts to less-than-significant levels. PG&E has agreed to implement these measures, which have been incorporated into an Mitigation Implementation and Monitoring Plan (MIMP) for the project (see Section D of this document). These measures, in accordance with CEQA, have been required for the protection of the physical environment from adverse project impacts. The public comment period provided agencies and public stakeholders the opportunity to comment on the environmental analysis for the project, including suggesting additional environmental protective measures that may have possibly been overlooked in preparing the IS/MND. Therefore, the proposed project has and is currently undergoing appropriate environmental review as mandated by state law. The determination that project impacts would be mitigable to less-than-significant levels was made in accordance with state

law requirements. This environmental review document shall serve as one aspect of consideration in final deliberation of the proposed project.

6.25 See response to Comment 6.18.

6.26 No studies regarding the San Mateo-Martin #4 Conversion project's impacts on property value have been prepared for the CPUC.

6.27 Dust emissions resulting from project construction and maintenance have been addressed in the Draft IS/MND. As stated on pages B.3-8 to B.3-12 of the Draft IS/MND, potentially significant impacts on air quality may result from construction activities, and no potentially significant impacts would result from maintenance of the proposed facilities. Construction activities would include truck and helicopter use. PG&E has proposed APM-1 through APM-10 and BMPs to reduce air emissions from the proposed construction. The CPUC has proposed MM AQ-1 and AQ-2 (see Section D of this document) that would ensure that air emissions from the proposed project would be at less-than-significant levels.

Dust emissions from maintenance of existing facilities along the San Mateo-Martin corridor that would not be altered as part of the project have not been addressed in the Draft IS/MND because those maintenance activities are not part of the proposed project.

6.28 See response to Comment 6.20, first paragraph.

6.29 See responses to Comments 6.20 and 6.24.

6.30 See responses to Comments 6.20 and 6.22.

6.31 See responses to Comments 6.3, 6.4, 6.19, 6.20, and 6.22. Also, lowering the voltage along the #4 circuit is not proposed as part of the project. This CEQA analysis pertains to impacts of actions proposed as part of the project; therefore, lowering the voltage along the #4 circuit is not addressed in this document.

7. Barbara Caputo, Randolph Hillside Community

7.1 As explained in the Draft IS/MND (beginning on page B-44), electric and magnetic fields (EMF) are matters of public interest but not regarded as potentially significant physical, environmental effects under CEQA. This determination has been made because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA standards for defining health risk for EMF. The State CEQA Guidelines in Section 15145 states if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. Further, Section 15151 explains that disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. These CEQA Guidelines sections are relevant to EMF, because there is ongoing scientific debate about long-term health risks from EMF exposure, with no definitive evidence that exposure to EMF adversely affects public health. In

accordance with CEQA's direction, the Draft IS/MND does provide general EMF information for the benefit of the public and decision makers (see page B-44 et seq. of the Draft IS/MND). Although CEQA does not require the analysis of EMF impacts of a project, an analysis of potential EMF emissions of the proposed San Mateo-Martin #4 Conversion Project is presented here as a non-mandated response due to concerns expressed by nearby residents and businesses.

The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which is the circuit proposed to be upgraded, has a current load of 60 kV. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco. Electric fields were not calculated because, as discussed on page B-53 of the Draft IS/MND, electric fields are shielded by most objects and would thus not affect people within nearby residences. On the other hand, calculations of magnetic fields were made using the "2D Fields" Version 3-A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004 projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. Results of the calculations made by PG&E are presented in Table 7.1-1 below. EMF emissions presented in Table 7.1-1 are based on peak load forecasts, and thus worst-case scenarios that rarely occur. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Table 7.1-1
Projected Magnetic Field Emissions Before and After San Mateo-Martin #4 Conversion Project

Distance From #4 Circuit	Before Project (in milliGauss)	After Project (in milliGauss)
Directly underneath	20.3	11.4
50 feet west	8.9	3.3
50 feet east	23.2	11.8
100 feet west	4.1	0.9
100 feet east	9.4	7.8

Source: PG&E and Best Best & Krieger, 2003.

Health effects from EMF emissions have not been determined. As indicated in the Draft IS/MND (see pages B-55 through B-56), much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. In any case, ground-level EMF from the San Mateo-Martin power lines would decrease as a result of the project; EMF-associated health concerns should thus also decrease.

The Randolph Hillside community is part of the first segment of reconductoring for the project, which includes corridor areas from Burlingame to Brisbane. The duration for reconductoring within Segment 1 is eight weeks.

7.2 Recovery of project cost through rate increases would be subject to Federal Energy Regulatory Commission approval. Rate increases cannot be accurately determined at this time; however, individuals' increases in energy costs resulting from the project would be minimal because costs would be distributed over the wide service territory. This notwithstanding issue of rate increases and cost recovery are not within the purview of a CEQA document. CEQA was enacted to identify significant effects on the environment, referring to the physical conditions such as land, air, water, minerals, flora, fauna, noise, or objects of historic or aesthetic significance (Public Resource Code, Section 21060.5).

7.3 The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which has a current load of 60 kV, is the circuit proposed to be upgraded to 115 kV.

7.4 The popping, buzzing, or crackling noise that is sometimes heard from power lines generally occurs when insulators on the line become dirty and do not have a clean connection. Potential noise from dirty insulators increases during damp or wet weather. If the new 115 kV circuit were installed, the ceramic insulators on the line would be replaced with non-ceramic insulators, which perform better than ceramic insulators and do not require cleaning. Other lines through the same corridor that currently use ceramic insulators are in the process of being converted to non-ceramic insulators within approximately six months. Replacing the ceramic insulators with non-ceramic insulators would eliminate existing noise caused by dirty or damaged insulators on the San Mateo-Martin power lines. The replacement of ceramic insulators with non-ceramic insulators is incorporated into the Description of the Project (see Section C of this document). The replacement non-ceramic insulators would not need periodic cleaning with helicopter use. Noise emitted by helicopter use during insulator cleaning activities would thus be eliminated as a result of the insulator replacement.

7.5 General maintenance activities for all facilities within the San Mateo-Martin corridor are not considered part of the proposed project. However, the effects of maintenance operations for the new facilities to be installed as part of the project are addressed in the Draft IS/MND. The Draft IS/MND provides an analysis of air emissions, including dust, during operation and maintenance of the proposed facilities (see page B.3-12). The quantitative discussion provided in the Draft IS/MND states that air emissions during operation and maintenance of the proposed facilities would be less than significant because they would not contribute

substantially to an existing or projected air quality violation. On the other hand, construction activities would generate more dust and the Draft IS/MND reports that PG&E has incorporated APMs and BMPs to address these emissions and the CPUC has proposed additional measures (see pages B.3-10 and B.3-11).

Response to Late Comment Letters

The 30-day public review and comment period for the San Mateo-Martin #4 Conversion Project ended on August 19, 2003. The review period was identified in the Notice of Intent to Adopt a Mitigated Negative Declaration, which was circulated together with the Draft IS/MND for the project. Two late comment letters were sent after the end of the review period. Responses to these comment letters are thus not required; nonetheless, as a courtesy to these commentors, responses are provided below.

8. Edlyn Lao, Randolph Hillside Community

8.1 An environmental analysis of potential project impacts to biological resources within environmentally sensitive areas has been conducted in accordance with CEQA and in consultation with local state and federal resource agencies charged with protection of the sensitive species and habitats. The Draft IS/MND has concluded that the project, without mitigation measures, would have potentially significant impacts to biological resources within environmentally sensitive areas. The CPUC has recommended 15 mitigation measures to reduce these impacts to less than significant. These measures incorporate experience gained from the recent BART-SFO construction activities, conditions imposed by the California Department of Fish and Game in the permit to PG&E for reconductoring the #3 circuit in 2000, and discussions with applicable agencies such as the U.S. Fish and Wildlife Service and the San Bruno Mountain Habitat Conservation Plan Operator. PG&E has agreed to implement these measures during project construction. The measures (MM BIO-1 to BIO-15) have been incorporated into the project's Mitigation Implementation and Monitoring Plan (MIMP), included in Section D of this document. The MIMP outlines implementation methods, timing of implementation, and monitoring and reporting requirements of the imposed mitigation measures to ensure that they would be carried out effectively during project construction. The MIMP would serve as a means for the CPUC and other agencies as appropriate to ensure that project impacts are maintained at less-than-significant levels. With implementation of MM BIO-1 to BIO-15, the project would not disrupt the habitat and wildlife in the path of the proposed project.

Comment 8.1 states that, "Past procedures for habitat preservation have been inadequate to preserve wildlife in the proposed areas." No evidence or documentation of the failure of past efforts has been provided to support Comment 8.1, so that a response to this comment cannot be prepared. As stated above, the MIMP would serve as a means for the CPUC and other agencies as appropriate in ensuring that project impacts are maintained at less-than-significant levels.

8.2 PG&E's proposed actions are described in the Description of the Project (see Draft IS/MND) and include Applicant Proposed Measures (APMs) and Best Management Practices (BMPs). The commentor is correct that none of these measures include coordination with neighbors or district wildlife organizations. However, PG&E has proposed coordination with or reporting to public agencies that have direct jurisdiction over the natural resources at San Bruno Mountain, and include noise impact BMPs and APM-38, -39, -44, -45, -46, -47, -48, -52, -53, -54, -55, 56, and –63. All mitigation measures imposed by the CPUC involve coordination with agencies through agency monitoring (see Section D of this document).

An analysis of the reliability of the San Bruno Mountain Habitat Conservation Plan (SBMHCP) to preserve wildlife species and habitats, as requested by the commentor, is not provided in this document because enforcement of the SBMHCP is not part of the proposed project nor is the role of this environmental document to discuss successes or shortcomings of the HCP's effectiveness. The commentor alleges that this is contradictory data and testimony regarding the ability of the HCP to protect sensitive biological resources. The CPUC is unable to comment on this observation, since no supporting evidence is offered to substantiate the HCP's ineffectiveness. Regardless, the proposed project involves PG&E's proposed actions for upgrading the existing #4 circuit within the San Mateo-Martin corridor (see Description of Project in Draft IS/MND). Enforcement of the SBMHCP is performed by San Mateo County and not PG&E. However, compliance of the project with the SBMHCP is required in order for the project to have less-than-significant impacts within the environmentally sensitive San Bruno Mountain. Section B.4 of the Draft IS/MND states that PG&E will adhere to all applicable policies and provisions of the SBMHCP during project construction and operation and must obtain a permit (from the SBMHCP Operator) before undertaking any work. MM BIO-3 has been proposed by the CPUC to ensure that the project would not conflict with the SBMHCP. MM BIO-3 includes documentation of project activities and review of the documentation by the SBMHCP's appropriate governing agency.

In conducting the environmental review for the proposed project, stakeholder public agencies were consulted as appropriate for potential permitting requirements of the project. Appendix G to the Draft IS/MND documents the agency correspondence for the project, which includes letters to the US Army Corps of Engineers (USACOE), the California Department of Fish and Game (CDFG), and the US Fish and Wildlife Service (USFWS). These agencies have jurisdiction over the biologically sensitive areas that the project corridor would traverse. Also, the Draft IS/MND has been distributed among stakeholder agencies for their review and comment.

8.3 Some vegetation may need to be cleared in the West of Bayshore parcel as part of the project. Regrowth of vegetation to be cleared as part of the project is anticipated to be successful because vegetation clearance would be in accordance with stipulations in PG&E's Take Avoidance Agreement with the CDFG (see Appendix II-B). Stipulations in the Agreement include cutting vegetation no closer than 4 to 6 inches from the ground. As stated in APM-42 and stipulation 4.5.5 in the CDFG Agreement, use of herbicides would be prohibited. Also, a

Revegetation Plan has been proposed by PG&E in the event that unexpected ground damage would occur from construction (see Appendix F to the Draft IS/MND). The proposed Revegetation Plan for the project describes replanting methods. MM BIO-14, as revised, requires appropriate agency approval of the Revegetation Plan prior to implementation.

An analysis of potential project impacts related to wildlife movement is provided on page B.4-13 of the IS. As stated in the Draft IS/MND, the project would not significantly interfere with native resident wildlife movement or with established wildlife movement corridors or nursery sites because project construction would occur within an existing power line right-of-way on existing towers and at existing substations where day-to-day operations already occur. Severe penalties and agency involvement are noted for any disturbance to rare, threatened, or endangered wildlife species. Pages B.4-23 through B.4-29 documents the "cause and effect" evaluation of the proposed project on sensitive species. The analysis concludes that without mitigation measures, the project would have a significant impact on endangered species. Fifteen biological mitigation measures are proposed in the Draft IS/MND to avoid irreparable damage to the ecosystems, habitats, and wildlife.

8.4 As discussed in the Draft IS/MND (beginning on page B.1-17), post-construction aesthetic impacts of the project would be less than significant because visual changes to the power line and towers would not be readily noticeable and because visual changes within the substations would either fill in existing facilities or expand facilities into immediately adjacent undeveloped areas with facilities of a similar character. It is important to realize that a change in the visual setting does not necessarily constitute a significant impact; the magnitude of the change must be substantial enough to exceed the significance criteria (see pages B.1-15) in order for a significant impact to be identified and mitigation measures proposed. Against the existing visual landscape, which already includes the towers and double circuits, the proposed project would consist of changing the voltage of one circuit and the supporting structures on several towers. This incremental change, as explained on page B.1-18, would not substantially detract from the scenic attractiveness of the existing landscape.

8.5 As explained in the Draft IS/MND (beginning on page B-44), electric and magnetic fields (EMF) are matters of public interest but not regarded as potentially significant physical, environmental effects under CEQA. This determination has been made because (a) there is no agreement among scientists that EMF does create a potential health risk, and (b) there are no defined or adopted CEQA standards for defining health risk for EMF. The State CEQA Guidelines in Section 15145 states if, after thorough investigation, a lead agency finds that a particular impact is too speculative for evaluation, the agency should note its conclusion and terminate discussion of the impact. Further, Section 15151 explains that disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. These CEQA Guidelines sections are relevant to EMF, because there is ongoing scientific debate about long-term health risks from EMF exposure, with no definitive evidence that exposure to EMF adversely affects public health. Furthermore, Section 15064(f)(4) states that the existence of public controversy over the

environmental effects of a project will not require preparation of an EIR if there is no substantial evidence before the agency that the project may have a significant effect on the environment. The evidence before the CPUC is that PG&E's proposal to optimally phase the wires could result in an up to 40 percent reduction in ground-level EMF levels (see discussion below). In accordance with CEQA's direction, the Draft IS/MND does provide general EMF information for the benefit of the public and decision makers (see page B-44 et seq. of the Draft IS/MND). Although CEQA does not require the analysis of EMF impacts of a project, an analysis of potential EMF emissions of the proposed San Mateo-Martin #4 Conversion Project is presented here as a non-mandated response due to concerns expressed by nearby residents and businesses.

The San Mateo-Martin transmission line corridor holds six overhead circuits (power lines) on three double-circuit tower lines. Five of the circuits have a load of 115 kilovolts (kV). The #4 circuit, which is the circuit proposed to be upgraded, has a current load of 60 kV. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco. Electric fields were not calculated because, as discussed on page B-53 of the Draft IS/MND, electric fields are shielded by most objects and would thus not affect people within nearby residences. On the other hand, calculations of magnetic fields were made using the "2D Fields" Version 3-A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004 projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. Results of the calculations made by PG&E are presented in Table 8.5-1. EMF emissions presented in Table 8.5-1 are based on peak load forecasts, and thus worst-case scenarios that rarely occur. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Health effects from EMF emissions have not been determined. As indicated in the Draft IS/MND (see pages B-55 through B-56), much of the body of national and international research regarding EMF and public health risks remains contradictory or inconclusive. In any case, ground-level EMF from the San Mateo-Martin power lines would decrease as a result of the project; EMF-associated health concerns should thus also decrease.

Table 8.5-1
Projected Magnetic Field Emissions Before and After San Mateo-Martin #4 Conversion Project

Distance From #4 Circuit	Before Project (in milliGauss)	After Project (in milliGauss)
Directly underneath	20.3	11.4
50 feet west	8.9	3.3
50 feet east	23.2	11.8
100 feet west	4.1	0.9
100 feet east	9.4	7.8

Source: PG&E and Best Best & Krieger, 2003.

8.6 This document has been prepared in accordance with CEQA regulations, which do not require environmental justice analyses in IS/MNDs. Nonetheless, for informational purpose, the project would not disproportionately affect a minority population through increased EMF exposure while benefiting other populations. The project would decrease current EMF emissions as described in response to Comment 8.5. The project would also benefit the area along and within its footprint because it would serve projected power needs both in San Francisco and northern San Mateo County. Thus, no disproportionate impacts on a minority population through increased EMF exposure would occur while other populations would benefit from project objectives.

8.7 The Draft IS/MND has determined that post-construction activities would result in less-than-significant impacts to San Bruno Mountain as defined by CEQA. Post-construction activities would be essentially the same as occur now (i.e. occasional maintenance). Thus, the proposed project would not result in a noticeable increase post-construction activities on San Bruno Mountain and mitigation measures are not necessary for these activities of the proposed project.

8.8 The APMs identified within the MIMP have been proposed by PG&E. The APMs do not include agency monitoring. The mitigation measures, identified with the prefix "MM," supplement or supersede the APMs as needed to reduce impacts to less-than-significant levels. As indicated in the MIMP, all mitigation measures imposed by the CPUC include monitoring by agency personnel, and in most cases, this would be a CPUC representative.

8.9 In accordance with CEQA regulations, an IS has been prepared for the proposed project. Section 15063 of the CEQA Guidelines states that an IS serves to determine if a proposed project would have significant environmental impacts. If, based on the IS, a project is determined to have significant impacts, then an Environmental Impact Report (EIR) shall be prepared for the proposed project. If it is possible to completely mitigate the impacts to a less-than-significant level, then a Mitigated Negative Declaration shall be prepared for the proposed project. The IS prepared for the San Mateo-Martin #4 Conversion project has resulted in a determination that potentially significant impacts of the project will be completely mitigated to less-than-significant levels. As part of the IS analysis, mitigation measures have been prepared and incorporated into an MIMP for the project (see Section D of this document). PG&E has

agreed to implement these mitigation measures. Therefore, an MND, not an EIR, has been prepared for the proposed project. Per CEQA Guidelines Section 15063, Initial Studies and Mitigated Negative Declarations (IS/MNDs) are not required to have an alternatives analysis; by contrast, EIRs must consider alternatives.

An EIR would only be prepared if the Lead Agency determined on the basis of evidence in the record that a potentially significant effect of the project had not been addressed or that the mitigation in the Final IS/MND would not reduce identified significant effects to less than significant.

8.10 The comment provides no explanation or supporting information as to why the analysis is erroneous, incomplete, and requires further data. Evaluations in the IS/MND have been based on PG&E's Proponent's Environmental Assessment (PEA) filed on November 27, 2002 in accordance with Rules 17.1 and 17.3 of the CPUC's Rules of Practice and Procedure, site inspections by the CPUC's contracted environmental consulting team, and other environmental analyses for the project. Section D of this document reports the mitigation measures proposed by the CPUC to reduce potentially significant effects to less than significant. This IS/MND has been prepared in accordance with CEQA regulations. Per CEQA Guidelines Section 15063, IS/MNDs are not required to have an alternatives analysis.

8.11 See response to Comments 8.6, 8.9, and 8.10.

9. Pacific Gas & Electric Company

9.1 MM HAZ-3 is revised to reflect Comment 9.1 (see Section C of this document).

C. REVISIONS TO DRAFT INITIAL STUDY

This section presents changes to the Draft Initial Study and Mitigated Negative Declaration (IS/MND) that resulted from comments made on this document. Responses to comments are presented in Section C, Responses to Comments. The following text changes are made in response to the Response to Comments and additional staff initiated text changes. None of these changes result in a substantial change in the project description or analysis. The text that has been removed from the Draft IS/MND has been indicated by a ~~strikeout~~. New text to be added is indicated with double underlines. A final Mitigation Implementation and Monitoring Plan (MIMP), with revised mitigation measures incorporated, is found in Section D of this document.

Page B-8, Draft Initial Study, Description of Project (response to Comments 4.3, 6.4, 6.14, and 7.4)

The following text changes are made on page B-8, fifth paragraph, second line:

> **Power Line Conversion Work.** The conductors and ceramic insulators on the #4 circuit would be replaced with higher-capacity conductors and non-ceramic insulators on approximately 12 miles of existing overhead power lines.

Page B-30, Draft Initial Study, Description of Project (response to Comment 3.1)

The following text changes are made to page B-30, first paragraph:

> PG&E has developed a reconductoring work sequence in ~~three~~ two main segments, which would allow completion of essentially all reconductoring work in the West of Bayshore ~~work and the project as a whole~~ in a non-critical environmental time period~~:~~. Under this schedule, one day of construction on the West of Bayshore parcel would occur outside of the environmentally-preferred construction season. This one day construction would be within Segment 1 but would occur outside the Segment 1 construction period.
>
> - **Segment 1, ~~Millbrae~~ Burlingame Substation to Martin Substation.** Reconductoring would be done from Tower ~~4/37~~ 2/20 outside the ~~Millbrae~~ Burlingame Substation to Tower 11/87 at the Martin Substation. The estimated duration for work along Segment 1 would be ~~six~~ eight weeks.
> - **Segment 2, Burlingame Substation to San Mateo Substation.** Reconductoring would be done from Tower 0/2 outside the San Mateo Substation to Tower 2/19A outside the Burlingame Substation. The estimated duration for work along Segment 2 is ~~six~~ four weeks.
> - ~~**Segment 3, Millbrae Substation to Burlingame Substation.**~~ **Splicing Between Towers 4/36 and 4/37.** Upon the completion of work at the Millbrae Substation, the line would be spliced between Towers 4/36 and 4/37 (in West of Bayshore) in early 2004. The estimated duration for work between Towers 4/36 and 4/37 would be one day. PG&E would contact California Department of Fish and Game (CDFG) to receive the agency's approval to complete this work in early 2004. ~~Reconductoring would be done from Tower 2/19B~~

~~outside the Burlingame Substation to Tower 4/37 outside the Millbrae Substation. The estimated duration for work along Segment 3 is six weeks.~~

Page B-32, Draft Initial Study, Description of Project (response to Comment 3.3)

The following text changes are made on page B-32, fourth paragraph, fourth line:

~~There would be no pull or tension sites within the~~ All pull and tension sites near Burlingame Lagoon/San Francisco Bay section of the project would be located in parking lots. Within the rest of the project area, ~~T~~there would be ~~16~~ 17 pull and tension sites. ~~within the rest of the project area. there would be 16 pull and tension sites.~~

Page B-43, Draft Initial Study, Description of Project (response to Comment 3.1)

The following text changes are made to page B-43, third paragraph:

The construction schedule would depend on CPUC completion of the CEQA review process and approval of the project. Assuming a construction season starting in the fall of 2003, operation would start in the fall of 2004. As stated above, reconductoring would be completed in ~~three~~ two main segments. The estimated duration for reconductoring at each segment is ~~up to six~~ four and eight weeks. In the West of Bayshore parcel, the line would be spliced between Towers 4/36 and 4/37 in early 2004. The estimated duration for work between Towers 4/36 and 4/37 would be one day. PG&E has proposed to restrict construction activities ~~to the period from August 1 to about November 1, or the first heavy rainfall,~~ to avoid disturbance to sensitive species. PG&E would contact the California Department of Fish and Game (CDFG) to receive the agency's approval to complete the one-day line splicing in the West of Bayshore parcel in early 2004, outside the environmentally-preferred season. ~~For the same reason, PG&E has proposed to conduct construction activities on San Bruno Mountain from September 1 to approximately February 28, and at Navigable Slough from September 1 to January 15. It would take from 60 to 90 days to install, pull, and tension the new conductor along the entire length of the line.~~ Construction at each substation would generally take between five to eight months to complete.

Page B-58, Draft Initial Study, Description of Project (response to Comment 2.1)

The following text is added after the last paragraph on page B-58:

Optimal Phasing. PG&E has calculated magnetic field levels at peak load (that is, the maximum projected normal load on all six circuits within the San Mateo-Martin corridor) with and without the proposed project for a segment of the power line corridor that runs through the Randolph Hillside Community in South San Francisco. Electric fields were not calculated because, as previously discussed, electric fields are shielded by most objects and would thus not effect people within nearby residences. On the other hand, calculations of magnetic fields were made using the "2D Fields" Version 3-A computer program, developed by Southern California Edison. Estimated peak load used for the calculations was based on PG&E's 2004

projections. The calculations indicate that magnetic field levels would decrease as a result of the project because PG&E would apply "optimal phasing" in reconductoring the #4 circuit and achieve better load balancing. Optimal phasing involves inverting the phasing of one circuit on the same towers so that the magnetic fields emitted by the circuits cancel each other out more effectively. By increasing the load of the #4 circuit to similar loading levels as the other circuits on the San Mateo-Martin towers, the magnetic fields levels are lower through optimization of the cross-phase cancellation. The magnetic field levels on the ground would decrease with the resulting cross-phasing and load balancing. PG&E has stated that they have experienced an up to 40% reduction in power line generated magnetic field as a result of optimal phasing. The optimal phasing that would be undertaken by PG&E would be in compliance with the CPUC's EMF Decision (D.93-11-013) and PG&E's Transmission EMF Design Guidelines prepared in the accordance with that decision.

Page B.3-8, Draft Initial Study, Air Quality (response to Comment 3.4)

The following text is deleted from page B.3-8, last paragraph, last line:

Onsite air pollutant emissions during construction would principally consist of minor, localized, and short term duration, emissions from vehicle and equipment use. ~~and would not contribute substantially to violations of air quality standards, as explained below.~~

Page B.4-1, Draft Initial Study, Biological Resources (response to Comment 3.10)

The following text is revised on page B.4-1, first paragraph, second sentence:

Three stretches contain sensitive ~~plant species~~ biological resources: Burlingame Lagoon, the West of Bayshore parcel, and San Bruno Mountain.

Page B.4-12, Table B.4-2, Draft Initial Study, Biological Resources (staff-initiated change)

In the row of Calippe Silverspot Butterfly, under the columns "Habitat Present" and "Observed," ~~No~~ is changed to Yes.

Page B.4-15, Table B.4-2, Draft Initial Study, Biological Resources (staff-initiated change)

The following revisions are made the to the California Clapper Rail row in Table B.4-2 on page B.4-15:

Moderate. The minimal brackish marsh present at the ~~Burlington Lagoon Parcel~~ Navigable Slough area represents potential habitat, although no clapper rails have been sighted where the project footprint crosses Navigable Slough.

Page B.4-25, Draft Initial Study, Biological Resources (response to Comment 3.1)

The following text is added as the last sentence of the third paragraph on page B.4-25:

> Additionally, PG&E would request CDFG approval to complete the work at the West of Bayshore Towers 4/36 and 4/37 in early 2004.

Page B.4-25, Draft Initial Study, Biological Resources (response to Comment 3.2)

The following text changes are made on page B.4-25, third paragraph, last line:

> ~~The CDFG is in the process of reviewing the project for a Section 1802 Agreement and expects to provide PG&E a draft of this agreement in the very near future.~~ The Endangered Species Act Section 1802 Agreement between PG&E and CDFG has been executed and is included as Appendix II-B of the Final IS/MND.

Page B.4-27, Draft Initial Study, Biological Resources (staff-initiated change)

The following text is added at the end of MM BIO-3 on page B.4-27:

> (This measure supplements APM-35. This measure applies to activities within all environmentally sensitive areas.)

The following text is added at the end of MM BIO-4 on page B.4-27:

> (This measure applies to activities within the West of Bayshore Parcel.)

The following text is added at the end of MM BIO-5 on page B.4-27:

> (MM BIO-5 expands upon and supplements APM-20, -33, -34, -39, and –43. This measure applies to activities within the West of Bayshore parcel.)

The following text is added at the end of MM BIO-6 on page B.4-27:

> (This measure applies to activities within all environmentally sensitive areas.)

Page B.4-28, Draft Initial Study, Biological Resources and page C-11, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (response to Comment 3.5)

Mitigation Measure BIO – 9 is revised as follows:

> Prior to driving the ground rods into the ground, a biological monitor shall inspect an area defined by a six-foot radius from the selected location for the hole and identify all rodent burrows. Each rodent burrow shall be hand dug and cleared of any San Francisco garter snakes by a monitoring biologist under the supervision of a permitted biologist. Alternatively, a biological monitor or other person under the supervision of a biological monitor may clear

the sites for driving ground rods without the supervision of a permitted biologist if the method is approved by the CDFG and USFWS.

Page B.4-29, Draft Initial Study, Biological Resources (staff-initiated change)

The following text is added at the end of MM BIO-13 on page B.4-29:

(This measure supplements APM-31, -37, -56, and -58. This measure applies to activities within the West of Bayshore parcel and San Bruno Mountain.)

Page B.4-29, Draft Initial Study, Biological Resources and page C-14, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (response to Comment 3.5)

Mitigation Measure BIO – 14 is revised as follows:

PG&E's Revegetation Plan (see Appendix F) shall be submitted for review and approval to the HCP operator for San Bruno Mountain and to the CDFG for the West of Bayshore property. ~~before a~~Any revegetation or site restoration efforts ~~may~~ shall be initiated only after reviews and approvals are completed.

Page B.4-30, Draft Initial Study, Biological Resources (staff-initiated change)

The following revision is made to the fourth paragraph on page B.4-30 as follows:

During construction, PG&E would avoid disturbing large areas that support patches of valley needlegrass habitat by implementing MM ~~BIO-12 and -13~~ BIO-13 and –14 above, BIO-15 below, and APMs 55 through 61.

Page B.4-30, Draft Initial Study, Biological Resources and page C-14, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (response to Comment 3.5)

Mitigation Measure BIO – 15 is revised as follows:

PG&E shall consult with the HCP Habitat Manager to discuss ~~obtain mapped locations of~~ needlegrass habitat on San Bruno Mountain. All work areas (such as staging areas and access roads) shall be flagged or staked and reviewed in the field by the HCP Habitat Manager. If needlegrass habitat is in proximity to an equipment staging area, the use of this area shall be approved by the Habitat Manager prior to any construction staging.

Page B.4-31 of the Draft IS/MND, Biological Resources (staff-initiated change)

The following text is added to page B.4-31, last paragraph:

The construction phase of the project is planned to occur during the time of year when movements of the San Francisco garter snake and California red-legged frog are typically at a minimum and outside of their breeding season. Pursuant to APM 18, PG&E would obtain

approval from the CDFG for the proposed one-day line splicing activities between Towers 4/36 and 4/37 in the West of Bayshore parcel. As a result, there would be no impact of substantial interference with wildlife movements.

Page B.6-7, Draft Initial Study, Geology and Soils (response to Comment 3.4)

The following revisions are made on page B.6-7, second paragraph:

~~Because no ground disturbance would occur on San Bruno Mountain, the only portion of the project area susceptible to landslides, the potential for landslides would not increase as a result of project construction or operation~~.

Personal protection grounds would be installed in the San Bruno Mountain portion of the project area. Installation of personal protection grounds would involve driving rods into the ground and removing them after construction is completed. Ground rods would also be used for reel and bullwheel puller trucks, or any equipment near an energized conductor. This extent of ground disturbance would have a less-than-significant effect on landslide potential.

Item a.iv. of Section B.6, Geology and Soils of the Environmental Checklist Form on page B.6-7 is modified to indicate that the project would result in a less-than-significant impact rather than a less-than-significant impact with mitigation incorporated.

Page B.7-10, Draft Initial Study, Hazards and Hazardous Materials and page C-19, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (response to Comment 9.1)

Mitigation Measure HAZ–3 is revised as follows:

All gasoline powered ~~light duty trucks and mobile equipment~~ vehicles and equipment requiring infield refueling shall be re-fueled no less than 200 feet lateral separation from the area directly beneath transmission lines or shall be grounded to prevent electrical discharge during fueling.

Pages B.11-1 and B.11-15, Draft Initial Study, Noise (response to Comment 3.4)

Item c of the Environmental Checklist Form on pages B.11-1 and B.11-15 is modified to indicate that the project would result in a less-than-significant impact rather than a less-than-significant impact with mitigation incorporated.

Page B.11-11, Draft Initial Study, Noise (response to Comments 4.3, 6.4, 6.14, and 7.4)

The following text is added as a new third paragraph on page B.11-11:

Furthermore, the popping, buzzing, or crackling noise that is sometimes heard from power lines generally occurs when insulators on the line become dirty and do not have a clean connection. If the new 115 kV circuit were installed, the ceramic insulators on the line would be replaced with non-ceramic insulators, which perform better than ceramic insulators and do

not require cleaning. Replacing the ceramic insulators with non-ceramic insulators would eliminate existing noise caused by dirty or damaged insulators on the San Mateo-Martin power lines. Thus, the project would have a beneficial impact on ambient noise during periods when crackling noises are emitted by dirty ceramic insulators, usually during wet or damp weather.

Pages C-7 and C-9, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (staff-initiated change)

The following text is added at the beginning of MM BIO-3 on page C-7 and MM BIO-6 on page C-9:

This measure applies to activities within all environmentally sensitive areas.

Page C-8, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (staff-initiated change)

The following text is added at the beginning of MM BIO-4 and BIO-5 on page C-8:

This measure applies to activities within the West of Bayshore parcel.

Page C-13, Draft Mitigation Implementation and Monitoring Plan, Table C-1 (staff-initiated change)

The following text is added at the beginning of MM BIO-13 on page C-1:

This measure applies to activities within the West of Bayshore Parcel and San Bruno Mountain.

Appendices, Draft Initial Study

Appendix II-B, Agreement by and between Pacific Gas & Electric Company and the California Department of Fish and Game Relating to the San Francisco Garter Snake for San Mateo Martin 60kv Circuit Number 4 Reconductoring Project West of Bayshore Parcel San Mateo County (Reference No. 1802-2003-005-03), is added to the Draft IS/MND.

D. FINAL MITIGATION IMPLEMENTATION AND MONITORING PLAN PACIFIC GAS & ELECTRIC (PG&E) SAN MATEO-MARTIN #4 CONVERSION PROJECT

Pacific Gas and Electric Company (PG&E) has proposed the San Mateo-Martin #4 Conversion Project, an upgrade to an existing 60-kV transmission line in northern San Mateo County (referred to as San Mateo-Martin #4) by converting it to 115 kV operation in order to reduce potential electrical service interruptions in the event of overloading of the existing electrical transmission system serving San Francisco and northern San Mateo County (see Figures B-1 and B-2 of the Initial Study). The primary components of the project include power line conversion (reconductoring) work and modifications at four substations along the 12-mile long corridor. The construction schedule would depend on CPUC completion of the CEQA review process and approval of the project. Assuming a construction season starting in the fall of 2003, operation would start in the late winter of 2004. PG&E has developed a work sequence in two segments (see Section C of this document), which would allow completion of most work in the West of Bayshore and the project as a whole in a non-critical environmental time period. Under this schedule, one day of construction would occur in January, outside of the environmentally-preferred construction season. PG&E would contact the California Department of Fish and Game (CDFG) to receive the agency's approval to complete this work. It would take from 60 to 90 days to install, pull, and tension the new conductor for the entire length of the line. Construction at each substation would take between five and eight months to complete.

An Initial Study was prepared to assess the potential effects on the environment from the various components of the proposed project. The Initial Study was prepared based on information in the Proponent's Environmental Assessment (PEA), project site visits, and supplemental research. The majority of the proposed project's impacts would occur during project construction, as a result of disturbance caused by construction activity. Within PG&E's Application, Applicant Proposed Measures (APMs) addressing potentially significant impacts were proposed to reduce potentially adverse impacts related to project construction.

The purpose of this Mitigation Implementation and Monitoring Plan is to ensure that the Applicant Proposed Measures, as well as the Agency Mitigation Measures (MMs) that PG&E has agreed to are adequately implemented. This plan includes specific actions to be taken to implement each measure, information on monitoring requirements, and the timing of implementation (see Table D-1). This plan includes:

- The Agency Mitigation Measures, which PG&E must implement as part of the proposed project, followed by the Applicant Proposed Measures that PG&E has made part of the proposed project and is responsible for implementing (as indicated in Table D-1, APM-1 through APM–17 and APM-60 through APM-64 apply to the entire project site, APM-18 through APM-54 apply to the West of Bayshore parcel, and APM-55 through APM-59 apply to San Bruno Mountain);

- The actions required to implement these measures;
- Monitoring requirements; and
- Timing of implementation for each measure.

Construction field monitoring shall be carried out by a CPUC-designated environmental monitor as well as a PG&E-designated monitor to ensure that the measures are implemented. In all instances where non-compliance occurs, the CPUC's designated environmental monitor shall issue a warning to the construction foreman and PG&E's project manager. Continued non-compliance shall be reported to the CPUC's designated project manager. Any decisions to halt work due to non-compliance shall be made by the CPUC's designated project manager, except where noted in the mitigation measures or as required by other agencies. The CPUC's designated environmental monitor shall keep a record of any incidents of non-compliance with mitigation measures. Copies of these documents shall be supplied to PG&E and the CPUC.

Table D-1
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
Aesthetics					
Light and glare from nighttime construction.	AES-1	All night lighting during construction shall be directed, to the maximum extent possible, vertically towards the work area and shall be shielded to prevent receptors along US 101 and residents in the vicinity of substations from experiencing glare from the lights. Nighttime lighting specification shall be based on consultation with Caltrans. Nighttime lighting for work to be performed at the Martin Substation shall be shielded and directed away from Guadalupe Canyon Parkway.	PG&E to direct and shield lighting as defined.	CPUC to inspect lighting during nighttime activities.	During nighttime construction.
Light and glare from permanent lighting fixtures at the substations.	AES-2	Lighting fixtures shall be located and designed (e.g., using non-glare bulbs) to illuminate the substation property at the minimum level to ensure work safety while also avoiding casting light or glare on off-site locations beyond the substation fence lines at the nearest residents.	PG&E to install lighting fixtures as defined.	CPUC to inspect lighting upon installation.	Upon installation of lighting fixtures.
Air Quality					
Dust generation from helicopter staging.	AQ-1	This measure supplements APM-1. Helicopter staging shall be conducted, to the maximum extent possible, on paved surfaces to reduce potential for fugitive dust to occur during take off and landing.	PG&E to conduct helicopter staging as defined.	CPUC to inspect periodically.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Air Quality Continued)		In areas where helicopter staging would occur on non-paved surfaces, PG&E shall water the staging area as needed prior to take off to reduce potential for significant dust-stirring.			
Dust generation from construction.	AQ-2	All active construction areas, access roads, and staging areas shall be watered at least twice daily from May through October as needed to control dust, unless it affects endangered species.	PG&E to implement measures as defined.	CPUC to inspect periodically	During construction
Biology					
Direct or indirect adverse effects on sensitive or special status species or their habitats.	BIO-1	This measure supplements APM-20, -21, -31, -44, -45 and –61. PG&E shall retain qualified biologists and other qualified resource specialists, as necessary, to monitor project construction within the West of Bayshore parcel, and the San Bruno Mountain segments. Monitors shall be hired and trained prior to construction and shall be responsible for pre-construction surveys, work area delineations (i.e., staking, flagging, etc.), onsite monitoring, documentation of violations and compliance, coordination with construction inspectors, and post-construction documentation. The PG&E on-site biological monitors shall prepare weekly reports and send them to the CPUC and the CPUC monitors. The PG&E on-site biological	PG&E to retain and train biological monitor(s); Monitor(s) to complete variance forms and obtain clearance as defined.	CPUC to review monitoring reports and variances (as appropriate), review possible deviations from proposed mitigation, periodically audit monitoring program to insure compliance with requirements, permits and clearances.	Prior to and during construction

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		monitors shall prepare a post-construction compliance report for the West of Bayshore parcel within 60 days of end of construction and send it to the CPUC, CDFG, and USFWS. PG&E's monitors shall be responsible for completing a CPUC Construction Staging Plan Form and obtaining clearance from the CPUC and, if necessary, resource agencies for variances. All variances will be documented and no variances will be allowed with verbal approval only. Variances that are considered minor with little risk to sensitive resources by the PG&E on-site biological monitors and the CPUC biological monitors may be approved on the site but will be documented with a Construction Staging Plan Form. Variances that could affect sensitive resources but are required to ensure the health and safety of work crews shall also be documented in a Construction Staging Plan Form.			
Same as above.	BIO-2	This measure supplements APM-38 and APM-60. PG&E shall conduct Worker Environmental Awareness Program (WEAP) training for construction crews (primarily crew and construction foremen) before construction activities begin within any of the sensitive habitat areas. The WEAP shall include a	PG&E to prepare WEAP and conduct training.	CPUC to review WEAP and list of personnel who attend training.	Prior to construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		brief review of the special status species and other sensitive resources that could occur in the proposed project area (including their life history and habitat requirements and an identification of portions of the project corridor where they might be found) and their legal status and protection. The program shall cover all mitigation measures, environmental permits and proposed project plans, such as BMPs, erosion control and sediment plan, reclamation plan, and any other required plans. The designated biological monitor shall be responsible for ensuring that construction personnel adhere to the guidelines and restrictions. WEAP training sessions shall be conducted as needed for new personnel brought onto the job during the construction period. A list of all personnel who have attended the WEAP training shall be kept by the biological monitor and shall be available for CPUC review in the field at all times, and a copy shall be submitted to the CPUC. During WEAP training, construction personnel shall be informed of the importance of avoiding ground-disturbing activities outside of the designated work area.			

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)					
Same as above.	BIO-3	This measure supplements APM-35. This measure applies to activities within all environmentally sensitive areas. All planned work activities and construction access routes at each construction site shall be defined and described in detail in a Construction Staging Plan Form that will be submitted to and approved by the CPUC and, if required, by the CDFG and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. The form or an equivalent version subject to CPUC approval shall be completed and submitted for agency approval if required (see Appendix H to the Initial Study for the form).	PG&E to fill out Construction Staging Plan Form for all construction areas; PG&E project manager and monitor to sign completed Form.	CPUC to review completed Form for all areas; San Bruno Mountain Habitat Conservation Plan Operator or Habitat Manager to review Form for San Bruno Mountain area; CPUC monitor to inspect compliance with Form.	Review of Form prior to construction at each site; Inspection of compliance during construction.
Same as above.	BIO-4	This measure supplements APMs-29,-38, -39, -45, -47, -48, and –49, which all refer to the "approved Mitigation and Monitoring Plan." This measure applies to activities within the West of Bayshore parcel.	PG&E to provide documents to field monitors.	CPUC to review documents to be provided to field monitors;	Provide documents prior to construction;

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		APMs-29, -38, -39, -45, -47, -48, and –49 shall include reference to compliance with the CDFG 1802 Agreement and conditions in the USFWS Biological Opinion. These two additional documents will define the protective measures for each sensitive species and will take precedence over the Mitigation and Monitoring Plan should there be any differences among the documents. PG&E shall ensure that its biological monitors have the defining documents to avoid any confusion or uncertainty in the field.		PG&E and CPUC monitors to inspect for compliance with documents.	Monitor compliance during construction.
Same as above.	BIO-5	This measure supplements APM-20, -33, -34, -39, and -43. This measure applies to activities within the West of Bayshore parcel. At the end of each workday, any open holes shall be fully covered, after they have been inspected by the on-site biologist, with steel plates or other effective coverings to prevent entrapment of wildlife species. If common wildlife species are found in a hole, the designated biological monitor shall immediately be informed and the animal(s) shall be removed. If the animal(s)is/are a sensitive species that requires special handling authorization (e.g., San Francisco garter snake), a qualified biologist (agency-permitted or approved to handle a specific species) shall remove the animal before resumption of work in that immediate area. PG&E shall specify this requirement in	PG&E to cover holes; monitors to inspect that all holes are covered and no wildlife is trapped inside.	CPUC to review agreements with all contractors.	Review contractor agreements prior finalization; Monitor during construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		its agreements with all construction contractors.			
Same as above.	BIO-6	This measure applies to activities within all environmentally sensitive areas. PG&E shall acquire all permits and authorizations required by federal, State, regional, and local jurisdictions to construct near areas with sensitive biological resources. Throughout the life of the project, additional species could be listed or designated as special status, and PG&E shall comply with any new requirements of the USFWS or CDFG for such species. PG&E shall notify the CPUC of any amendments or additions to permits.	PG&E to comply with applicable permits and regulations as defined; PG&E to notify the CPUC of any amendments or additions to permits.	CPUC to review any amendments or additions to permits.	During construction.
Same as above.	BIO-7	This measure supersedes APM-52. If PG&E or any of its employees, contractors, or agents kills or injures an individual San Francisco garter snake or California red-legged frog or finds any such animal dead or injured, project activities shall be halted immediately on the West of Bayshore parcel, and the CDFG, USFWS, and CPUC shall be notified within 30 minutes of PG&E's lead biological monitor confirming the death or injury. PG&E will not allow work to resume until receiving authorization from the USFWS and CDFG.	PG&E to suspend work and notify agencies as defined.	Field monitors to ensure that proper suspension and notification is achieved.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)					
Same as above.	BIO-8	This measure supplements APM-33. In the event that wet weather should occur during project construction to the point that site access and construction activities would result in tire ruts and disturbances to the ground surface or present risks of equipment getting stuck in mud: • Any improvements to temporary access routes or work sites in order to provide a stable and firm base shall be accomplished through the use of removable and temporary structures such as timber mats, wood or steel grating or concrete blocks. Any such improvements shall not include the use of base rock or any other loose fill material unless there is a liner under it. Once work in the area is completed or use of the temporary access route is no longer necessary to support work activities, the temporary materials shall be immediately removed and the site restored to its condition prior to the initiation of work. • In heavily flooded areas or conditions, water from any dewatering work areas or excavation sites shall not be discharged to the surrounding uplands. Direct discharges to adjacent waterways shall not be allowed without a filter bag at the	PG&E to install removable and temporary structures and conduct dewatering as defined.	CPUC to monitor during wet weather.	During construction, if it occurs during wet weather.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		end of the discharge hose. If a waterway is not available, the discharge water shall be placed into a basin consisting of hay bales and filter fabric. Once sediments have dropped to the bottom of the basin, the water shall be collected and discharged to a waterway. The sediment shall be collected and disposed of off-site.			
Same as above.	BIO-9	This measure supersedes APM-22. Prior to driving the ground rods into the ground, a biological monitor shall inspect an area defined by a six-foot radius from the selected location for the hole and identify all rodent burrows. Each rodent burrow shall be hand dug and cleared of any San Francisco garter snakes by a monitoring biologist under the supervision of a permitted biologist. Alternatively, a biological monitor or other person under the supervision of a biological monitor may clear the sites for driving ground rods without the supervision of a permitted biologist if the method is approved by the CDFG and USFWS.	PG&E to provide biologist (monitor), who shall inspect burrows as defined.	CPUC monitor to supervise inspection of burrows.	Prior to driving the ground rods into the ground.
Same as above.	BIO-10	This measure supplements APM-26. A biological monitor shall be continually present during all vegetation clearing on access roads and work sites, and all cut vegetation shall be removed the same day it is cut.	PG&E to remove and clear vegetation as defined	CPUC and PG&E monitor vegetation clearance.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)					
Same as above.	BIO-11	This measure expands upon and supplements APM-15. A functional fire extinguisher shall be required in each PG&E and PG&E contractor vehicle that enters the West of Bayshore property.	PG&E to provide fire extinguishers.	CPUC to inspect vehicles.	During construction.
Same as above.	BIO-12	Construction noise from the proposed pull or tension work site at Towers 7/55 and 7/56 could disrupt clapper rail nesting in Navigable Slough, although none have been observed at this location. Helicopter noise and downdraft would also affect any clapper rail present. To avoid any possible impact to clapper rail in the vicinity, PG&E shall: • Preclude use of helicopters for work on Towers 7/55 and 7/56. AND EITHER • Schedule the construction work at the pull and tension site and on Towers 7/55 and 7/56 between September 1 and January 15 to avoid the clapper rail breeding period. This option would avoid any noise impacts to clapper rail nests. OR • Conduct clapper rail surveys, using USFWS-approved protocols, prior to initiating construction activity at this site. If the surveys indicate clapper	PG&E to implement measure as defined.	CPUC to monitor helicopter use.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		rails are not using the adjacent habitat in Navigable Slough, then work may proceed as planned. However, if clapper rails are found in Navigable Slough, then PG&E shall consult with the USFWS to determine if mitigation measures are required before the work may proceed. A possible mitigation measure would be to erect a sound barrier between the pull or tension site and Navigable Slough.			
Same as above.	BIO-13	This measure supplements APM-31, -37, -56, and -58. This measure applies to activities within the West of Bayshore parcel and San Bruno Mountain. PG&E shall flag or stake the access roads/routes and all work areas in the West of Bayshore and San Bruno Mountain areas to demarcate the minimum area necessary to safely conduct project construction and staging. PG&E and its contractors shall stay within the designated access and work areas. The flagged or staked work areas shall be documented in a Construction Staging Plan Form (see MM BIO-3) to be approved by the CPUC and, if required, the San Bruno Mountain HCP administrator for San Mateo County, the CDFG, and USFWS. The form shall identify, at a minimum, the nature of the work to be performed, the number and type of equipment to be used, the methods	PG&E to complete form (see MM BIO-3 above).	CPUC and/or HCP Administrator to approve plan.	Prior to at each construction site.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Biology Continued)		of accessing the construction area, the duration of construction, the individual in charge of the construction work, and information on the location of sensitive biological resources within or along construction sites. A form that shall be completed and submitted for agency approval is included in Appendix H.			
Same as above.	BIO-14	PG&E's Revegetation Plan (see Appendix F) shall be submitted for review and approval to the HCP operator for San Bruno Mountain and to the CDFG for the West of Bayshore property. Any revegetation or site restoration efforts shall be initiated only after reviews and approvals are completed.	PG&E to submit Revegetation Plan to HCP Operator; PG&E to submit to CPUC documentation on comments of HCP Operator on Revegetation Plan.	CPUC to review comments of HCP Operator on Revegetation Plan.	Prior to revegetation or site restoration efforts.
Degradation of needlegrass habitat.	BIO-15	PG&E shall consult with the HCP Habitat Manager to discuss habitat on San Bruno Mountain. All work areas (such as staging areas and access roads) shall be flagged or staked and reviewed in the field by the HCP Habitat Manager. If needlegrass habitat is in proximity to an equipment staging area, the use of this area shall be approved by the Habitat Manager prior to any construction staging.	PG&E to implement measure as defined.	CPUC and/or HCP Habitat Manager to monitor compliance with requirements for HCP.	Prior to construction.
Cultural Resources					
Discovery of unknown cultural resources.	CR-1	This MM supersedes APM-63. The following provisions shall be incorporated into the grading and construction	PG&E to provide qualified archaeologist; Archaeologist to provide	CPUC and PG&E monitors to ensure work is suspended	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Cultural Resources Continued)		contracts to address the potential to encounter currently unknown cultural resources: a. If potential historical or unique archaeological resources are discovered during construction, all work in the immediate vicinity shall be suspended and alteration of the materials and their context shall be avoided pending site investigation by a qualified archaeological or cultural resources consultant retained by the project applicant. The immediate vicinity wherein work shall be suspended, shall be approximately 50 feet from the discovery or within an appropriate distance to be determined by the retained archaeologist or consultant. Construction work shall not commence again until the archaeological or cultural resources consultant has been given an opportunity to examine the findings, assess their significance, and offer proposals for any additional exploratory measures deemed necessary for the further evaluation of and/or mitigation of adverse impacts to any potential historical resources or unique archaeological resources that have been encountered. b. If the find is determined to be historical or unique archaeological resource, and if	extraction plan to PG&E and CPUC if needed; PG&E to contact County Coroner if human remains are found; Coroner to contact NAHC if appropriate.	upon discovery of resources; CPUC and NAHC to review extraction plan if needed.	

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Cultural Resources Continued)		avoidance of the resource would not be feasible, the archaeological or cultural resources consultant shall prepare a plan for the methodical excavation of those portions of the site that would be adversely affected. The plan shall be designed to result in the extraction of sufficient volumes of non-redundant archaeological data to address important regional research considerations. The work shall be performed by the archaeological or cultural resources consultant, and shall result in detailed technical reports. Such reports shall be submitted to the California Historical Resources Regional Information Center. Construction in the vicinity of the find shall be accomplished in accordance with current professional standards and shall not recommence until this work is completed. c. The project applicant shall assure that project personnel are informed that collecting significant historical or unique archaeological resources discovered during development of the project is prohibited by law. Prehistoric or Native American resources can include chert or obsidian flakes, projectile points, mortars, and pestles as well as dark friable soil containing shell and bone dietary debris, heat-affected rock, or			

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Cultural Resources Continued)		human burials. Historic resources can include nails, bottles, or other items often found in refuse deposits. d. If human remains are discovered, there shall be no further excavation or disturbance of the discovery site or any nearby area reasonably suspected to overlie adjacent human remains until the project applicant has complied with the provisions of State CEQA Guidelines Section 15064.5(e). In general, these provisions require that the County Coroner shall be notified immediately. If the remains are found to be Native American, the County Coroner shall notify the Native American Heritage Commission (Commission or NAHC) within 24 hours. The most likely descendant of the deceased Native American shall be notified by the Commission and given the chance to make recommendations for the remains. If the Commission is unable to identify the most likely descendent, or if no recommendations are made within 24 hours, remains may be reinterred with appropriate dignity elsewhere on the property in a location not subject to further subsurface disturbance. If recommendations are made and not accepted, the Native American Heritage Commission will mediate the problem.			

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
Hazardous Materials					
Soil or groundwater contamination during helicopter refueling.	HAZ-1	Helicopter refueling operations shall be accomplished over graded surfaces with secondary containment in place.	PG&E to implement measure as defined.	CPUC to inspect refueling areas outside of airports before and after refueling.	During construction.
Release of hazardous substances during grading or excavation of contaminated soils.	HAZ-2	If field evidence of contamination is observed during grading or excavation, sampling and direct laboratory testing shall be conducted. Personnel conducting soil sampling and field analysis shall meet the Federal OSHA requirement for 40-Hour Training for Hazardous Waste Operations and Emergency Response (HAZWOPER) and be familiar with the calibration and operation of testing equipment. The monitoring personnel shall have the authority to implement a health and safety plan that complies with applicable OSHA requirements and is approved by a certified industrial hygienist. The health and safety plan shall present specific alternatives for action to be taken in the event contaminated soils are encountered. The plan shall specify procedures for monitoring, identifying, handling, and disposing of hazardous waste.	PG&E to obtain personnel conducting soil sampling and to submit to CPUC personnel's HAZWOPER certification	CPUC to review proof of HAZWOPER certification and to monitor soil testing.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
(Hazardous Materials Continued)					
Increased risk of fire hazard during refueling.	HAZ-3	All gasoline powered vehicles and equipment requiring infield refueling shall be re-fueled no less than 200 feet lateral separation from the area directly beneath transmission lines or shall be grounded to prevent electrical discharge during fueling.	PG&E to implement measure as defined.	CPUC to monitor refueling.	During construction.
Hydrology and Water Quality					
Discharge of polluted runoff from construction.	HY-1	This measure supplements APM-17. PG&E shall implement best management practices (e.g., water bars, silt fences, staked straw bales, and mulching and seeding of all disturbed areas) defined in the California Storm Water Quality Association (Stormwater Best Management Practices Handbook, 2003), the Bay Area Stormwater Agencies Association Start at the Source – Design Guidance Manual, or similar documents. These documents shall be identified by PG&E prior to final project approval.	PG&E to provide additional BMPs based on the identified documents; PG&E to implement additional BMPs.	CPUC to review additional BMPs as defined; CPUC to monitor implementation of additional BMPs.	Provide additional BMPs to CPUC prior to project approval; Monitor implementation during construction.
Noise					
Noise emissions from construction at substations.	NOI-1	PG&E or its construction contractor shall provide advance notice, between two and	PG&E shall conduct public notification as defined.	PG&E to provide CPUC with	Prior to construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
Noise (continued)		four weeks prior to construction, by mail to all sensitive receptors[1] and residences within 300 feet of construction. The announcement shall state specifically where and when construction will occur in the area.		construction notices for review.	
Same as above.	NOI-2	PG&E shall identify and provide a public liaison person before and during construction to respond to concerns of neighborhood receptors, including residents about noise construction disturbance. Procedures for reaching the public liaison officer via telephone or in person shall be included in notices distributed to the public in accordance with MM NOI-1. PG&E shall also establish a toll-free telephone number for receiving questions or complaints during construction and develop procedures for responding to callers (procedures to be approved by the CPUC).	PG&E to provide public liaison officer, procedures for reaching the officer, and toll-free telephone number.	CPUC to review procedures for reaching officer.	Prior to construction.

[1] Note: Examples of sensitive receptors include hospitals, schools, convalescent facilities, and residential areas.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		AGENCY MITIGATION MEASURES (MMs)			
Transportation/Traffic					
Increase in emergency response times due to construction road encroachment.	TR-1	PG&E shall inform local emergency personnel of lane closure activities prior to project commencement to prevent impacts to emergency routes and shall amend its plans, if necessary, based on local agency input.	PG&E to implement measure as defined.	PG&E to notify CPUC when local emergency personnel have been informed of closure activities.	Prior to construction.
Decrease in parking capacity.	TR-2	No material or equipment shall be left or parked overnight along the project right-of-way or on private property; however, in the event pull and/or tension trucks or equipment need to remain on the site more than one day, PG&E shall notify the appropriate representative or landowner.	PG&E to remove equipment from site every night and notify the appropriate representative or landowner if trucks or equipment need to remain on-site more than one day.	PG&E to notify CPUC when equipment needs to stay on-site overnight; CPUC to inspect removal of equipment after construction day is over.	During construction.
Same as above.	TR-3	This measure supplements APM-9. Construction personnel shall park in designated areas and shall be encouraged to carpool to the job site if suitable park-and-ride facilities exist in the project vicinity.	PG&E to implement measure as defined.	CPUC to inspect the construction parking in designated areas.	During construction.
Same as above.	TR-4	PG&E shall post signage 24 hours in advance of the lane closure on Nerli Lane in Burlingame to notify any residents or businesses that might be inconvenienced.	PG&E to implement measure as defined.	CPUC to inspect signage.	Post and inspect signage 24 hours in advance of lane closure.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
		APPLICANT PROPOSED MEASURES (APMs)			
Air Quality					
Fugitive dust emission from construction.	APM-1	This APM is supplemented by MM AQ-1 above. This APM applies to the entire project site. All construction personnel working on the project will be trained prior to starting construction on methods for minimizing air quality impacts during construction.	PG&E to conduct training and provide CPUC with documentation that all workers attended training.	CPUC to review documentation on training.	Prior to construction.
Same as above.	APM-2	This APM is supplemented by MM AQ-2. This APM applies to the entire project site. All active construction areas, access roads, and staging areas will be watered at least twice daily in dry season as needed to control dust, unless it affects endangered species.	PG&E to implement measure as defined.	Applicant-appointed monitor in field; CPUC monitor to review daily reports and to monitor in field periodically, as needed.	During construction.
Same as above.	APM-3	This APM applies to the entire project site. All trucks hauling soil and other loose material will be covered or at least 2 feet of freeboard will be in place.	PG&E to implement measure as defined.	Applicant-appointed monitor in field; CPUC monitor in field periodically.	During construction.
Same as above.	APM-4	This APM applies to the entire project site. Construction vehicles will use paved roads to access the construction site when possible.	PG&E to implement measure as defined.	Applicant-appointed monitor in field. CPUC monitor to review daily reports.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Air Quality Continued)					
Same as above.	APM-5	This APM applies to the entire project site. Streets, paved access roads, and parking lots will be swept daily if visible soil material is carried onto adjacent public streets.	PG&E to implement measure as defined.	Applicant-appointed monitor in field; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-6	This APM applies to the entire project site. Soil stabilizers will be applied to inactive construction areas on an as-needed basis.	PG&E to implement measure as defined.	Applicant-appointed monitor; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-7	This APM applies to the entire project site. Exposed stockpiles of soil and other excavated materials will be enclosed, covered, or watered twice daily or treated with soil binders during the dry season.	PG&E to implement measure as defined.	Applicant-appointed monitor; CPUC monitor to review daily reports.	During construction.
Same as above.	APM-8	This APM applies to the entire project site. Vegetation in disturbed areas will be planted after the completion of construction.	PG&E to implement measure as defined.	Applicant-appointed monitor; CPUC monitor to verify during post-construction site visit.	During and after construction.
Same as above.	APM-9	This APM is supplemented by MM TR-3. This APM applies to the entire project site. Construction workers will carpool when possible.	PG&E to implement measure as defined.	Not applicable	During construction.
Same as above.	APM-10	This APM applies to the entire project site. No equipment will "idle" more than 5 minutes, although some equipment will require extended warm-up time or will remain in use (and running) while stationary (e.g., to power other equipment or when used for repetitive tasks).	PG&E to implement measure as defined.	Applicant-appointed monitor in field; CPUC monitor in field periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
Biological Resources					
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-11	This APM applies to the entire project site. PG&E, its contractors, and agents will restrict all activities to the minimum area necessary to safely conduct project activities.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor in field periodically as needed	During construction.
Same as above.	APM-12	This APM applies to the entire project site. All vehicle travel will be limited to existing access roads or clearly identified construction areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-13	This APM applies to the entire project site. Vehicle speed limits of 10 miles per hour will be monitored and enforced during construction in environmentally sensitive areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-14	This APM applies to the entire project site. Refueling of pick-up trucks will not occur at or adjacent to the construction site or within 100 feet of any wetland area. Containment tarps will be set up under the equipment before refueling to prevent spills. Operators will be required to stay with these vehicles during refueling operations.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-15	This APM is supplemented by MM BIO-11. This APM applies to the entire project site. The following measures will be taken to prevent accidental wildfires: • Herbaceous vegetation will be cleared (by hand or weed whacker) on access roads and spurs, in pull or tension sites, and in work areas in the West of Bayshore parcel. • No campfires or trash burning will be allowed. • Smoking will be restricted to vehicle interiors. All cigarette butts will be disposed of in vehicle ashtrays. • The construction foreman will have a cellular phone on hand to immediately report a fire via 911, if one should occur.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-16	This APM applies to the entire project site. All food-related trash items will be removed from the work area daily.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.
Same as above.	APM-17	This APM is supplemented by MM HY-1. This APM applies to the entire project site. Best management practices to reduce sedimentation and minimize erosion will be employed on all work sites.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC monitor to review daily reports and to monitor in field periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Disturbance of the habitat of the San Francisco garter snake and the California red-legged frog in West of Bayshore parcel (Towers 4/33 to 6/49).	APM-18	This APM applies to the West of Bayshore parcel. To minimize the potential for impacts to the California red-legged frog and San Francisco garter snake, construction of the West of Bayshore parcel will be limited to the period between August 1, 2003 and approximately November 1, 2003, or the first heavy rainfall, subject to extensions approved by the California Department of Fish and Game (CDFG).	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During construction.
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-19	This APM applies to the West of Bayshore parcel. Before initiating the reconductoring activities and installation of guard structures, PG&E will designate a representative responsible for communications with CDFG and for overseeing compliance. The CDFG will be notified in writing of the representative's name, business address, and telephone number, and will be notified in writing if a substitute representative is designated.	PG&E to implement measure as defined.	CDFG to receive notification from PG&E.	Prior to and during construction.
Same as above.	APM-20	This APM is supplemented by MM BIO-1 and MM BIO-5. This APM applies to the West of Bayshore parcel. Knowledgeable and experienced biologists approved by the CDFG will be retained by PG&E as biological monitors and will be present during all project activities within areas of San Francisco garter snake habitat to help avoid mortality or injury of individual San Francisco garter snake and to minimize disturbance to the habitat. A biologist who holds or is named on a valid 10(a)(1)(A)	PG&E to implement measure as defined.	CPUC, CDFG, and USFWS to receive resumes for approval prior to construction; Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	Prior to and during construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		Federal Scientific Collection permit issued by the U.S. Fish and Wildlife Service (USFWS) for handling San Francisco garter snake (hereinafter referred to as "permitted biologist") will be the only biologists allowed to handle San Francisco garter snake. All biological monitors will provide quality control and quality assurance for implementation of the mitigation measures to avoid mortality or injury to San Francisco garter snake. The biological monitors will ensure compliance with the measures provided. The biological monitors will inspect each activity area daily immediately before activities begin and continually monitor in advance of the work crew. If a snake is found, the monitor will call a permitted biologist.			
Same as above.	APM-21	This APM is supplemented by MM BIO-1 and MM BIO-5. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents working on the West of Bayshore parcel will provide biological monitors with the express authority to order any immediate changes in project activities necessary to bring those activities into compliance or to otherwise avert a risk of imminent mortality or injury of San Francisco garter snake, and to stop any activity that cannot be or has not been brought into immediate compliance, provided that the job site foreman or other PG&E authority on-site deems it safe. The CDFG and the USFWS will be notified the same day or within 24 hours of circumstances that led biological monitors to halt work or to take other actions to ensure compliance	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to be notified if work is stopped to avert take of San Francisco garter snake.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		or to otherwise avert threatened mortality or injury of San Francisco garter snake.			
Same as above.	APM-22	This APM is superseded by MM BIO-9.			
Same as above.	APM-23	This APM applies to the West of Bayshore parcel. At the guard structures between Towers 4/36 and 4/37, and at Towers 4/38, 5/43, and 5/44, if no rodent burrows are found, the truck-mounted digger may be used exclusively to excavate the holes for the structure. If rodent burrows are found, the following procedure will apply. • At the guard structures between Towers 4/37 and 4/38, and at Towers 4/38, and 5/43 and 5/44, the holes will be hand dug until the permitted biologist determines that all rodent burrows have been hand excavated or that the soil type or other relevant factors preclude the existence of additional rodent burrows. Once the permitted biologist has made this determination, the truck-mounted digger may be used to complete the holes for the structure.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports.	During construction.
Same as above.	APM-24	This APM applies to the West of Bayshore parcel. Prior to the removal of the two wood poles, PG&E will use the same procedures for inspecting the pole locations as described above for the guard structure poles.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports.	During or after construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-25	This APM applies to the West of Bayshore parcel. A biological monitor will inspect underneath any vehicle that is parked for 30 minutes or more immediately prior to moving the vehicle.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	During construction.
Same as above.	APM-26	This APM is supplemented by MM BIO-10. This APM applies to the West of Bayshore parcel. At least one biological monitor will be continually present during the following activities. • Guard structure installation • Ground rod installation • Removal of the two wood poles • Movement of equipment larger than a pickup truck onto or off the site using access roads. A biological monitor will walk in front of the equipment and watch for snakes. • Movement of any equipment (including but not limited to line trucks, trailers, cranes, pickup trucks) into or off undisturbed areas as necessary to conduct activities adjacent to or in alignment of towers.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-27	This APM applies to the West of Bayshore parcel. A biological monitor will walk in front of all vehicles in the West of Bayshore parcel, except for those using the Millbrae Substation access road, which is an improved and maintained access road.	PG&E to implement measure as defined.	Applicant -appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	During construction.
Same as above.	APM-28	This APM applies to the West of Bayshore parcel. Each biological monitor will be supplied with an operable cellular phone for the purpose of efficient communication on-site.	PG&E to implement measure as defined.	Applicant-appointed lead biological monitor to supply a phone list to CPUC, CDFG, and USFWS.	Prior to construction.
Same as above.	APM-29	This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel. Each biological monitor will be supplied with a copy of the approved *Mitigation Implementation and Monitoring Plan* for the purpose of ready reference in the field.	PG&E to conduct work according to the *Mitigation and Monitoring Plan*.	Applicant-appointed lead biological monitor to verify upon arrival of each biological monitor to the job site.	Prior to and during construction.
Same as above.	APM-30	This APM applies to the West of Bayshore parcel. PG&E will provide the CDFG and USFWS representatives with access to the biological monitors for purposes of discussing implementation of the measures to avoid mortality or injury of San Francisco garter snake.	PG&E to implement measures as defined.	Applicant-appointed lead environmental monitor to supply a phone list to CPUC, CDFG and USFWS prior to construction.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-31	This APM is supplemented by MM BIO-1 and BIO-13. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents will restrict activity areas to the minimum area necessary to transport materials and equipment to towers and work areas.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports; CPUC, CDFG and USFWS to monitor periodically.	Prior to and during construction.
Same as above.	APM-32	This APM applies to the West of Bayshore parcel. Once work begins, all project-related parking and equipment storage will be confined to the established access roads or to areas outside the West of Bayshore parcel. Undisturbed areas will not be used for parking or equipment storage, except at the pull or tension sites and at sites where equipment use is required for multiple days. Project-related vehicle traffic will be restricted to established access roads or work areas adjacent to towers where equipment will be positioned to conduct the necessary tower, guard structure, and grounding activities.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field. CPUC, CDFG, and USFWS to review daily reports; CPUC, CDFG and USFWS to monitor periodically.	During construction.
Same as above.	APM-33	This APM is supplemented by MM BIO-5 and MM BIO-8. This APM applies to the West of Bayshore parcel. When plywood or timber mats or steel plates are required to be placed in the case of wet or unstable ground, the following activities will occur:	PG&E clears burrows prior to the placing of mats or plates.	Applicant-appointed biological monitor in field; CPUC, CDFG and USFWS to review daily reports and monitor periodically.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		• A permitted biologist will inspect the area to be covered by the mats or plates for rodent burrows. • All rodent burrows encountered will be hand dug by the permitted biologist to clear the burrows. A biological monitor may assist in clearing burrows, only under the supervision of the permitted biologist. • If the mats or steel plates must remain in place for more than one day, dirt or sand bags will be used to seal the edges of the mats or plates to prevent snakes from crawling underneath.			
Same as above.	APM-34	This APM is supplemented by MM BIO-5. This APM applies to the West of Bayshore parcel. When plywood or timber mats or steel plates are removed, a biological monitor will inspect underneath the mats or plates.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	During construction.
Same as above.	APM-35	This APM is supplemented by MM BIO-3. This APM applies to the West of Bayshore parcel. Driving off access roads, access spurs, or work areas is prohibited unless it is authorized as part of the Staging Plan or is an emergency subject to the PG&E foreman pre-empting the monitors to maintain minimum safety standards	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC to review daily reports and monitor periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-36	This APM applies to the West of Bayshore parcel. All entry gates to the West of Bayshore parcel that are not used for construction access will be locked at all times. All gates to the West of Bayshore parcel that are used for construction access will be kept closed when not in use during construction hours and will be locked during nonconstruction hours.	PG&E to close all gates during construction areas and lock all gates during nonconstruction areas so that access by vehicles not affiliated with the project is prevented.	Applicant-appointed biological monitor in field; CPUC to review daily reports and monitor periodically as needed	During construction.
Same as above.	APM-37	This APM is supplemented by MM BIO-13. This APM applies to the West of Bayshore parcel. Biological monitors will designate access points to work sites off access roads in undisturbed areas for PG&E, its contractors, and agents.	Construction personnel only use designated access points.	Applicant-appointed biological monitor in field; CPUC to review daily reports and monitor periodically as needed	During construction.
Same as above.	APM-38	This APM is supplemented by MM BIO-2 and MM BIO-4. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents will conduct an orientation program for all persons who will work on the West of Bayshore parcel. The program will consist of a brief presentation given by a permitted biologist knowledgeable about the biology of the San Francisco garter snake and the terms in the approved *Mitigation and Monitoring Plan*. The education program will cover the biology of the San Francisco garter snake, its habitat needs, its status under the California Endangered Species Act	PG&E has documentation that construction workers were trained prior to beginning work.	PG&E to submit documentation to CPUC, CDFG, and USFWS.	Prior to construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		(CESA), and the conservation and mitigation measures in the approved *Mitigation and Monitoring Plan*. A fact sheet containing this information will also be prepared and distributed. Upon completion of the orientation, employees will affix a small sticker to their hardhat and sign a form stating that they attended the training and understand all the conservation and mitigation measures. Those forms will be submitted to the CDFG at the end of construction or upon the agency's request.			
Same as above.	APM-39	This APM is supplemented by MM BIO-4 and MM BIO-5. This APM applies to the West of Bayshore parcel. Personnel who detect any snake on-site will immediately report their finding to a biological monitor, who will determine whether the detected snake is a San Francisco garter snake. Personnel will not attempt to capture or move any snake detected. If the biological monitor determines that the snake is not a San Francisco garter snake, the biological monitor may hand-capture and move the snake in a manner consistent with the approved *Mitigation and Monitoring Plan*. If the biological monitor determines that the detected snake is a San Francisco garter snake, or is unable to positively identify the snake, the biological monitor will notify the permitted biologist for appropriate action.	PG&E to implement measure as defined.	Applicant-appointed Lead biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-40	This APM applies to the West of Bayshore parcel. When overnight parking is necessary for equipment larger than a pickup truck, a containment tarp will be set up under the equipment to catch any leaking fuel or oil. No pickup trucks will be parked overnight on the West of Bayshore parcel.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC to review daily reports.	During construction.
Same as above.	APM-41	This APM applies to the West of Bayshore parcel. All excess excavated material after project construction in Segment 1 is completed will be hauled off-site and disposed of properly. No material will be stockpiled on the West of Bayshore parcel.	PG&E to haul excess and no longer usable excavated material off-site daily.	Applicant-appointed biological monitor in field; CPUC to review daily reports.	During construction.
Same as above.	APM-42	This APM is supplemented by MM BIO-10. This APM applies to the West of Bayshore parcel. Vegetation will not be cut closer than 4 to 6 inches to the ground, whether by hand or weed whacker. All other methods for vegetation removal, including but not limited to discing and herbicide application, will be prohibited.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports and monitor periodically as needed.	During construction.
Same as above.	APM-43	This APM is supplemented by MM BIO-5. This APM applies to the West of Bayshore parcel. All holes created for guard structure poles or ground rod placement will be backfilled with native soil or clean sand.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field.	During and after construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-44	This APM is supplemented by MM BIO-1. This APM applies to the West of Bayshore parcel. PG&E, its contractors, and agents will allow CDFG and USFWS representatives to accompany them to the project site without advance notice, subject to landowner permission and reasonable safety restrictions as PG&E requests.	CDFG and USFWS representatives to inspect construction activities.	Not applicable.	During construction.
Same as above.	APM-45	This APM is supplemented by MM BIO-1 and BIO-4. This APM applies to the West of Bayshore parcel. Within sixty (60) days of completing construction on the West of Bayshore parcel, PG&E will provide the CDFG and the USFWS with a final, postconstruction compliance report. A knowledgeable, experienced biologist will prepare the report, which will include 1) construction dates; 2) verification that measures in the approved *Mitigation and Monitoring Plan* were fully implemented; 3) identification of any measures that were not fully implemented; 4) a description of project effects on San Francisco garter snake, San Francisco garter snake prey and habitat; and 5) other pertinent information.	CDFG and USFWS to receive from PG&E a postconstruction compliance report within 60 days of construction completion.	CPUC, CDFG, and USFWS to receive and review report.	After construction.
Same as above.	APM-46	This APM applies to the West of Bayshore parcel. Daily field monitoring forms will be maintained by the on-site biological monitors to document project implementation. Monitoring forms will describe the progress of the work, any difficulties encountered, observation of San Francisco garter snake, and any	CDFG and USFWS receive weekly submittals of the daily field monitoring forms.	CPUC, CDFG, and USFWS to verify in field as needed; CPUC, CDFG, and USFWS to review daily reports.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		other pertinent information regarding project implementation. These forms will be submitted weekly to the CDFG and USFWS for review.			
Same as above.	APM-47	This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel. PG&E will arrange a preactivity site meeting in consultation with the CDFG to allow its representatives to review the terms of the approved *Mitigation and Monitoring Plan*. The meeting will include: PG&E; its contractors and agents; permitted biologists and biological monitors; and the CDFG. Representatives from the USFWS and the CPUC will be invited. It will be held no more than thirty (30) days before the start of construction on the West of Bayshore parcel.	A preactivity site meeting with the CDFG is held no more than 30 days prior to construction.	Applicant-appointed biological monitor, and CDFG, USFWS and CPUC invited to attend meeting.	Prior to construction.
Same as above.	APM-48	This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel. A postactivity site meeting will be held for PG&E, its contractors, the CDFG, and the USFWS within two weeks after project completion to assess the effectiveness of the terms of the approved *Mitigation and Monitoring Plan*.	A postactivity site meeting with the CDFG and USFWS is held no more than two weeks after construction is complete.	Applicant-appointed biological monitor, CDFG, and USFWS to attend meeting.	After construction.
Same as above.	APM-49	This APM is supplemented by MM BIO-4. This APM applies to the West of Bayshore parcel. To avoid incidental take of San Francisco garter snake resulting from loss or disturbance of habitat, all related construction materials for the project will be removed from the site in a manner consistent with the terms of the approved *Mitigation and Monitoring Plan*.	PG&E to remove construction materials.	Applicant-appointed biological monitor in field; CPUC, CDFG, and USFWS to review daily reports.	During and after construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-50	This APM applies to the West of Bayshore parcel. A biologist or horticulturist will inspect the site within the West of Bayshore parcel and determine whether reseeding is needed. In uplands, areas of bare soil will be reseeded with a commercially available annual grass seed mix similar to that of existing species on the parcel.	If construction activities produce new areas of bare soil, these areas are reseeded and revegetated following construction.	Applicant-appointed biologist	After construction.
Same as above.	APM-51	This APM applies to the West of Bayshore parcel. If necessary, weeds will be pulled, cultivated or sprayed after one full season of growth.	Weed control will be implemented if needed.	USFWS to receive verification from PG&E that weed-control program was implemented	After construction.
Same as above.	APM-52	This APM is superseded by MM BIO-7.			
Same as above.	APM-53	This APM applies to the West of Bayshore parcel. Any dead or injured special-status species will be turned over to the CDFG, the USFWS, or their agents.	Any injured or dead San Francisco garter snake is turned over to the CDFG and USFWS.	CDFG or USFWS to receive dead or injured animal	During construction
Same as above.	APM-54	This APM applies to the West of Bayshore parcel. A written report detailing the date, time, location, and general circumstances under which a dead or injured San Francisco garter snake was found will be submitted to the USFWS no later than three business days after the incident.	The USFWS receives a written report regarding any injured or dead San Francisco garter snakes within three business days of an incident.	CPUC and USFWS to be notified upon discovery; CPUC, CDFG, and USFWS to review daily reports	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Disturbance of the habitat of sensitive butterfly species in San Bruno Mountain (Towers 8/60 to Martin Substation).	APM-55	This APM applies to San Bruno Mountain. To minimize the potential for impacts to sensitive butterfly species, construction activities at San Bruno Mountain will be limited to the period between September 1, 2003 and February 28, 2004, subject to extensions approved by USFWS.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field. CPUC to review daily reports and monitor periodically as needed.	During construction.
Disturbance of habitat for sensitive species and injury or death to a threatened or endangered species.	APM-56	This APM is supplemented by MM BIO-13. This APM applies to San Bruno Mountain. All access in the project area will be restricted to the routes and seasonal timeframes identified above, subject to extensions approved by USFWS.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field CPUC to review daily reports and monitor periodically as needed.	During construction
Same as above.	APM-57	This APM applies to San Bruno Mountain. Helicopters will be used to transport in and out some crews and materials and to assist with the line reconductoring work unless precluded by terrain or safety issues. If helicopters cannot be used, crews will access towers using existing roads, and where access by truck is unavailable, only foot traffic will be allowed.	PG&E to implement measure as defined.	Applicant-appointed Biological monitor in field; CPUC to review daily reports and monitor periodically as needed.	During construction.
Same as above.	APM-58	This APM is supplemented by MM BIO-13. This APM applies to San Bruno Mountain. All access and construction vehicle parking will be restricted to existing roads. Necessary vehicles belonging to the biological monitors and construction supervisors will be parked at the nearest point on existing access roads.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field; CPUC to review daily reports and monitor in the field periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)					
Same as above.	APM-59	This APM applies to San Bruno Mountain. All vehicles will be brought in clean and free of weeds. Vehicles will be thoroughly washed, including under the chassis, prior to entering San Bruno Mountain.	PG&E to implement measure as defined.	Applicant-appointed biological monitor in field. CPUC to review daily reports and monitor periodically as needed.	During construction.
Same as above.	APM-60	This APM is supplemented by MM BIO-2. This APM applies to the entire project site. A qualified biological monitor will train all project staff before the start of construction regarding habitat sensitivity, identification of species of concern, and required practices within the habitat area. A fact sheet or other supporting materials containing this information will be prepared and distributed. Upon completion of training, employees will affix a small sticker to their hardhat and sign a form stating that they attended the training and understand all of the conservation and mitigation measures.	PG&E to provide to CPUC documentation that all project personnel are trained on habitat sensitivity, species of concern, and required practices on San Bruno Mountain.	CPUC to receive documentation from PG&E.	Prior to construction.
Same as above.	APM-61	This APM is supplemented by MM BIO-1. This APM applies to the entire project site. A qualified biologist will monitor all construction activity. The monitor will have the authority, if the job site foreman or other PG&E authority on site deems it safe, to stop and/or redirect project activities to ensure protection of resources and compliance with all environmental permits and conditions of the project. Because any work	A qualified biological monitor is present during construction on San Bruno Mountain. The monitor stops or redirects activities if resources are at risk or if the activity is	Applicant-appointed biological monitor in field. CPUC to review daily reports and monitor periodically as needed.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Biological Resources Continued)		involving high-voltage transmission lines has implications for human safety, health, and property, the decision of the PG&E job foreman will take precedence. Note that it would be unsafe to stop the job during some activities, especially when the conductors are moving.	not in compliance with project permits.		
Cultural Resources					
Discovery of unknown archaeological and historic resources.	APM-62	This APM applies to the entire project site. Prior to the initiation or construction or ground-disturbing activities, PG&E will train all construction personnel to understand the potential for exposing subsurface cultural resources and to recognize possible buried cultural resources. Training shall inform all construction personnel of the anticipated procedures that will be followed upon the discovery or suspected discovery of archaeological materials, including Native American remains and their treatment.	PG&E to conduct training and provide CPUC with documentation that all project personnel are trained on cultural resources.	CPUC to review documentation from PG&E.	Prior to construction.
Same as above.	APM-63	This APM is superseded by MM CR-1.			
Discovery of unknown paleontological resources.	APM-64	This APM applies to the entire project site. Prior to the initiation of construction or ground-disturbing activities, all construction personnel shall receive environmental training. The training will include discussion of the possibility of buried paleontological resources and the procedure to follow if paleontological resources are encountered. If buried paleontological materials are discovered in the project area:	PG&E to conduct training and provide CPUC with documentation that all workers received training; PG&E to suspend activities and inform agencies and paleontologist as needed.	CPUC to receive documentation from PG&E.	During construction.

Table D-1 (Continued)
San Mateo – Martin #4 Conversion Project
Mitigation Implementation and Monitoring Plan

Impact	MM and APM #s	Mitigation Measure	Implementation Actions	Monitoring Requirements	Timing of Action
(Cultural Resources Continued)		• work in the immediate area of the find will be halted, • an experienced paleontologist will be notified, and an experienced paleontologist will identify the find and make the necessary plans for treatment of the find.			

APPENDICES

II.A
Comments

II.B
California Department of Fish and Game Agreement

II.A

COMMENTS

Department of Toxic Substances Control

Edwin F. Lowry, Director
700 Heinz Avenue, Suite 200
Berkeley, California 94710-2721

Winston H. Hickox
Agency Secretary
California Environmental
Protection Agency

Gray Davis
Governor

August 6, 2003

Mr. Nicolas Procos
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

San Mateo-San Martin #4 Conversion Project

Dear Mr. Procos:

Thank you for the opportunity to comment on the *San Mateo-San Martin #4 Conversion Project, Mitigated Negative Declaration* [SCH No. 2003072105]. As you may be aware, the California Department of Toxic Substances Control (DTSC) oversees the cleanup of sites where hazardous substances have been released pursuant to the California Health and Safety Code, Division 20, Chapter 6.8. As a potential Responsible Agency, DTSC is submitting comments to ensure that the environmental documentation prepared for this project to address the California Environmental Quality Act (CEQA) adequately addresses any required remediation activities which may be required to address any hazardous substances release.

1.1 As part of the conversion project, grading activities will be conducted at the San Mateo, Burlingame, and Millbrae substations. These substations are known to contain various hazardous materials such as polychlorinated biphenyls (PCBs), diesel fuel, lead-acid batteries, various oils, and paint thinner. Soils on, or in the vicinity of, the substations may be impacted with hazardous materials. DTSC recommends that sampling be conducted in these areas to determine whether hazardous substances have been released and to determine whether exposure to site soils during grading activities creates a possible human health risk. If it is determined that hazardous substances have been released, they will need to be addressed as part of this project.

1.2 For example, if the construction activities include the need for soil excavation, trenching, or removal, the CEQA document should include: (1) an assessment of air impacts and health impacts associated with the excavation activities; (2) identification of any applicable local standards which may be exceeded by the excavation activities, including dust levels and noise; (3) transportation impacts

1.2 from the removal or remedial activities; and (4) risk of upset should be there an accident at the Site.

DTSC can assist your agency in overseeing characterization and cleanup activities through our Voluntary Cleanup Program. A fact sheet describing this program is enclosed. We are aware that projects such as this one are typically on a compressed schedule, and in an effort to use the available review time efficiently, we request that DTSC be included in any meetings where issues relevant to our statutory authority are discussed.

If you have any questions, please call Ed Gillera of my staff at (510) 540-3826 or email him at egillera@dtsc.ca.gov.

Sincerely,

Denise Tsuji, Unit Chief
Northern California - Coastal Cleanup
Operations Branch

Enclosures

August 11, 2003

AUG 14

Nicolas Procos, CPUC
c/o EIP Associates
353 Sacramento Street, Suite 1000
San Francisco, Ca. 94111

Re: PG&E Application #A.02-11-051
San Mateo-Martin No. 4 60KV Conversion Project

Gentlemen:

As owners of a building located at 371-377 Shaw Road, South San Francisco, we are writing in reference to the above captioned application.

Our building is just North of the 280 freeway and, at this point, the PG&E lines are underground, about 10 feet to the rearof our building.

On September 19, 2000, PG&E measured the magnetic field inside our building. At that time it was noted that they
2.1 were high. (A copy of this report is attached.) PG&E reconducted some of these lines later in 2000. They also installed 721 feet of new 50KV lines which run 11 feet from our building on the north side and 13 feet on the west side. There was no environmental impact report on the 2000 re-conductoring or the new 50KV line to the Bart substation.

This letter will serve as notice that we are concerned about the impact this may have on the health of the people who work in the building and we believe the PG&E should take this into consideration.

Very truly yours,

PAULUS and STENDER
881 Almenar
Millbrae, Ca. 94030

E. W. Paulus

Peter Stender

Enc.
Copy Final Environmental Impact Report
Volume I, June 1996
Bart-San Francisco Airport Extension

Copy PG&E 60HZ Magnetic Field Measurement Data Sheet

PS/ho

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August 25, 2003

Nicolas Procos
California Public Utilities Commission
c/o EIP Associates
353 Sacramento Street, Suite 1000
San Francisco, CA 94111

Re: *Comments to Draft Mitigated Negative Declaration and Initial Study,* ***San Mateo-Martin No. 4 60 kV Conversion Project (A.02-11-051)***

Dear Mr. Procos:

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to submit the following comments on the Draft Mitigated Negative Declaration (DMND) and Initial Study for the San Mateo-Martin No. 4 60 kV Conversion Project.

I. GENERAL COMMENTS

Construction Schedule

First, as stated in PG&E's Prehearing Conference Statement, PG&E has revised the construction schedule so that essentially all work can be completed in the West of Bayshore parcel before November 1, 2003. The revised schedule will include the following segments:

- Reconductoring from Burlingame Substation to Martin Substation, except one span between towers 4/36 and 4/37
- Reconductoring from San Mateo Substation to Burlingame Substation
- After Millbrae Substation improvements are completed, splicing of the #4 line between towers 4/36 and 4/37.

3.1

Under the new schedule, only one day of construction will occur outside of the environmentally-preferred construction season. Because the work at Millbrae Substation must be completed before the adjacent reconductoring can be completed, the line will need to be spliced between towers 4/36 and 4/37 in January of 2004. The splicing can be done in one day using a bucket truck from the existing roadway, without impact to sensitive

3.1 species. PG&E will contact California Department of Fish & Game (CDFG) to receive the agency's approval to complete this work in January.

CDFG Agreement

3.2 The DMND observes that the CDFG is "in the process of reviewing the project for a Section 1802 Agreement and expects to provide PG&E a draft of this agreement in the very near future." (DMND, p. B.4-25.) The Agreement has now been executed by both parties, and a copy has been provided to you by separate cover.

II. INITIAL STUDY

Description of the Project

3.3 Page B-32 under "Pull and Tension Sites" contains a statement that "[t]here would be no pull or tension sites within the Burlingame Lagoon/San Francisco Bay section of the project." While all pull and tension sites are in parking lots adjacent to Burlingame Lagoon and San Francisco Bay (as correctly stated on page B-38), there will be pull and tension sites in all sections of the project.

Evaluation of Environmental Impacts

There are a number of categories in the checklist where the project will cause no significant impacts, but PG&E has nevertheless agreed to implement "mitigation" measures that are either part of PG&E's normal construction practices or will reduce insignificant impacts even further. In many of those cases, the boxes for "Less Than Significant With Mitigation Incorporated" have been checked in the various impact categories, apparently because there are "mitigation" measures in those areas.

3.4 This approach is not consistent with CEQA, which reserves the "Less Than Significant With Mitigation Incorporated" category for impacts that would otherwise be significant but for the mitigation measures. (*See* Guidelines for Implementation of the California Environmental Quality Act ("CEQA Guidelines"), § 15070 (b).) When impacts are not significant or nonexistent, the "Less Than Significant Impact" or "No Impact" boxes should be checked—regardless of whether mitigation measures are imposed for that category. Thus, the following changes should be made:

> Air Quality, b. (p. B.3-1, B.3-8): Change to "Less Than Significant Impact." As the analysis on page B.3-8 states, the project will not result in a violation of any air quality standards or contribute substantially to an existing violation due to the limited ground disturbance associated with the project. The proposed measures are required simply to comply with BAAQMD CEQA guidelines.
>
> Biological Resources, f. (p. B.4-1, B.4-32): Change to "No Impact." Since the project does not conflict with the San Bruno Mountain HCP, the project will have no impact.

Cultural Resources, b. (p. B.5-1, B.5-3): Change to "No Impact." Work at the temporary parking, laydown and assemply areas and pull sites will not result in any ground disturbance, so no cultural resources will be affected in these areas. The potential for impacts to archaeological resources from installation of the guard structure poles is remote, since ground disturbance will be minor and no resources were identified during a records search or during the work that occureed in 2000 a the same location.

Cultural Resources, d. (p. B.5-4): Change to "No Impact." The DMND states that there is a "high potential for Native American sites in the vicinity of substations." However, research shows that there is only "a locally moderate potential for the unexpected discovery of cultural resources in the immediate and near vicinity of flowing water sources and former lagoons/marshy areas." Archival research on Bay Area shell mounds (see Nels C. Nelson, 1912. Site Location Map for Nelson's San Francisco Bay region) suggests that the substation areas have no previously recorded archaeological sites present within or immediately adjacent to the footprints. No cultural resources were discovered during construction in 2000.

Geology and Soils, a.iv. (p. B.6-1, B.6-5): Change to "No Impact." There will be no ground disturbance at San Bruno Mountain, and there is thus no potential for landslides there.

3.40

Hazards and Hazardous Materials, g. (p. B.7-1, B.7-10): Change to "No Impact." All designated emergency roads will remain open to emergency vehicles at all times during construction. The only street that will be temporarily closed is Nerli Lane in Burlingame, which is not a thoroughfare. The project will have no impact on any city emergency plan.

Hydrology and Water Quality, a. (p. B.8-1, B.8-6): Change to "No Impact." The project will not violate any water quality standards or waste discharge requirements because so little ground disturbance is involved. PG&E will implement the BMPs as standard practice.

Hydrology and Water Quality, f. (p. B.8-1, B.8-7): Change to "No Impact." The project will not substantially degrade water quality because so little ground disturbance is involved. Mitigation measures are not required to ensure that water quality is not substantially degraded.

Land Use and Planning, c. (p. B.9-1, B.9-6): Change to "No Impact." The project does not conflict with (and, in fact, is covered by) the provisions and policies of the San Bruno Mountain HCP.

Noise, a. (p. B.11-1, B.11-7): Change to "No Impact." The project will not exceed any local noise standards. The mitigation measures will be implemented to mitigate the impact described under Noise, c. and d.

Noise, c. (p. B.11-1, B.11-15): Change to "Less Than Significant Impact." Project operation will result in about a 1 dB increase in noise at the Millbrae Substation, which does not "substantially and permanently increase ambient noise levels"; therefore the impact should be less than significant.

3.4

Transportation and Traffic, b. (p. B.15-1, B.15-9): Change to "No Impact." As the MND analysis indicates, there will be no impact to existing level of service standards as a result of project construction traffic.

Transportation and Traffic, e. (p. B.15-1, B.15-9): Change to "No Impact." As noted in Hazards above, the project will not restrict emergency access in any way as access will be maintained on all through roadways throughout construction.

The discussion of Mandatory Findings of Significance, c. (p. B.17-1 – B.17-2) should also be revised to reflect the above comments.

Mitigation Measures
As explained more fully below, PG&E respectfully requests the following revisions to project mitigation measures.

3.5

BIO-1: delete "monitors" and add "project inspectors."
Reason: PG&E monitors can provide the biological information, but other information on the form must be provided by other project personnel. The transmission line and substation project inspectors are in the best position to acquire and provide this information.

3.6

BIO-9: Add "Alternatively, any method of clearing sites for driving ground rods that is approved by CDFG and USFWS shall satisfy this mitigation measure."
Reason: Although the original measure would have worked if project construction had begun as originally planned on August 1, the later start date means that fall classes have begun and the availability of permitted biologists (Dr. Sam McGinnis and several of his students) is limited. Having a regular monitor clear a 6 to12 –inch diameter area to mineral soil, or another method approved by the agencies, would provide the same degree of protection as the proposed measure without the risk of further delaying the project.

3.7

BIO-13: Add "except as directed by the CPUC monitor where access is clearly-defined."
Reason: In some locations, flagging is unnecessary to identify access routes and would cause unnecessary disturbance to species and habitat.

3.8 BIO-14: Add “on San Bruno Mountain.”
Reason: The revegetation plan also covers revegetation in the West of Bayshore parcel.

3.9 BIO-15: Delete “obtain mapped locations of” and add “discuss.”
Reason: PG&E has already contacted the HCP Habitat Manager for San Bruno Mountain, and no mapping information for needlegrass habitat is available. Nevertheless, needlegrass is readily identifiable and flagging or staking will not be difficult. No mapping or other measures to protect needlegrass will be needed when tower sites are accessed directly by helicopter.

Biological Resources

3.10 One suggested revision:
B.4-1, Vegetation Communities, second sentence: delete "plant species" and add "habitats," since there are no known sensitive plants near Burlingame Lagoon or in the West of Bayshore parcel.

Thank you for the opportunity to provide these comments.

Sincerely,

Jo Lynn Lambert
of BEST BEST & KRIEGER LLP

cc: David Kraska, PG&E Law Department

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SOUTH SAN FRANCISCO, CALIFORNIA, AUGUST 7, 2003 - 4:10 P.M.

* * * * *

ADMINISTRATIVE LAW JUDGE MALCOLM: Please come to order.

This is the time and place in Application 02-11-051, which is PG&E's application to construct certain transmission line facilities between the San Martin Substation and -- I'm sorry, the Martin Substation and San Mateo Substation.

This is the prehearing conference. It is a small attendance, so we will get through this as quickly as we can and do most of it off the record.

Jo Lynn Lambert is representing PG&E in this matter, and William Gibson is here for the City and County of San Francisco.

We also already have a service list that we've been using. We will leave the names on it, because I know there are some interested parties who would not want to be taken off that service list.

Let's go off the record.

(Off the record)

ALJ MALCOLM: Let's go on the record.

While we were off the record, I stated my intention to issue a decision with a 10-day publication period before the Commission's meeting, where it may make a decision in this matter, unless I hear a protest from members of the Randolph Hillside Community Group. I will contact them with whether they agree to that waiver.

On the record I haven't heard from any of those parties since the issuance of the draft environmental report, which the Energy Division will present tonight publicly.

There are no other procedural matters, and so we're adjourned.

(Whereupon, at the hour of 4:15 p.m., a recess was taken until 6:00 p.m.)

* * * * *

EVENING SESSION - 6:10 P.M.

* * * * *

ALJ MALCOLM: Good evening. This is the time and place set for a public participation hearing in Application 02-11-051, which is PG&E's application to change its transmission facilities between the San Mateo Substation and the Martin Substation.

My name is Kim Malcolm. I'm the assigned Administrative Law Judge.

I know there are a few of you here from the neighborhood. I don't know how much you know about the process that the Public Utilities Commission uses to review these kinds of applications, we're going to explain that in a little bit. You are certainly welcome to ask questions during the course of the evening.

Let's go off the record for a minute.

(Off the record)

ALJ MALCOLM: Back on the record.

STATEMENT OF MS. MARTELINO

MS. MARTELINO: Good evening. Thank you for coming. We're here tonight to discuss PG&E's application to construct transmission line facilities between the Martin Substation and San Mateo Substation. The project involves operating the existing power line that runs from San Mateo to Brisbane.

We're going to set San Mateo-Martin for construction project to upgrade an existing 60 kilovolt power line to 115 kilovolts. The objective of the project is to meet forecasted demand for San Mateo County and San Francisco

County and to prevent overload in existing power lines.

The project will involve also modifications to four substations along the power line corridor to accommodate the operating lead agency, the California Public Utilities Commission, which has circulated a draft initial study and mitigated negative declaration for the project.

I'll turn it over to Nico now to discuss the background of the PUC and its role.

MR. PROCOS: Thank you, Trixie.

STATEMENT OF MR. PROCOS

MR. PROCOS: Thanks everyone for coming out tonight. As I said earlier, my name is Nico Procos, Project Manager for the Environmental Unit of the CPUC. I wanted to give you folks a little background on the CPUC, why we're involved and the steps that we're following here.

The CPUC, which stands for the California Public Utilities Commission, is a state agency that regulates a whole variety of different things. These include electric, natural gas, water, telecommunications, petroleum and other transportation services as well.

The basic makeup of the CPUC is we have five Commissioners. They are appointed by the Governor, all of them have been appointed by Governor Davis. They serve for six-year staggered terms.

Why do we have authority over this project? Pacific Gas and Electric filed what is called a petition to construct for redirecting activities. This application is 02-11-051. When they file this with us, that triggers a

whole variety of things, one of which is a discretionary trigger, which means the Commission has to vote on it. That trigger is responsible under the California Environmental Quality Act.

When the application is filed, there are two parts to the CPUC review. The first part generally proceeds to consideration of public interest, the Administrative Law Judge presides over that. She'll go into a little more detail in a second. The second part is the environmental review of the project.

The general proceeding and the scope involves the application gets assigned to a Commissioner and to an Administrative Law Judge. It considers a variety of things, including impacts on ratepayers and the environmental aspects of the project and other things, which I'm not an expert on.

So part of the application process is that the Administrative Law Judge oversees everything, and certain parts of the application are sent to certain parts of the CPUC. And they review those in conjunction -- work closely with the Administrative Law Judge through the whole steps. It gets sent to the environmental unit so that we can do an environmental analysis on the project.

So we're the lead agency under CEQA. The lead agency is the agency that has the highest discretionary authority over the project, and we have the highest authority for this project, so we are the lead agency.

The objective for us in the environmental assessment is to assess potential impact and identify ways to

avoid or reduce impacts.

So let me touch a little bit on the history of the application. The application was filed on November 27th, 2002, the PEA, which is the proponent's environmental assessment under our process. PG&E has to file that with their analysis of the project and mitigation measures that they want to include.

We've released a draft mitigated negative declaration and released it on July 21st. This is very important. There is a 30-day comment period. So people are encouraged -- I believe we are in the middle of the comment period right now -- people are encouraged to comment on the document. And actually there is a court reporter here. Any comments that people make, we are required under the California Environmental Quality Act to respond to your comments. So we will respond to everybody's comments based on this document tonight. That will become part of the record.

So moving forward, we will respond to the comments on the draft mitigated negative declaration. Part of that process is we respond to the comments, and then we incorporate that responses of comments and any subsequent changes, based on the comments we received, together with the draft mitigated negative declaration. That will become what is a final mitigated negative declaration.

At that point I will give the final mitigated negative declaration to the Administrative Law Judge, and she will draw a proposed decision, which eventually at some point

will go to the Commission. Our Commission will vote on the application, including the final mitigated negative declaration. They will vote to approve or disapprove it. That is their discretion.

At this point I think if you have any questions, feel free to ask me about the process. And also I would like to open it up for people to comment on the document if they have concerns about it, or if they feel something has been overlooked. That is the whole reason we have this process, for people to participate in that manner.

ALJ MALCOLM: I want to say a couple of more things. I don't know how informed you all are so far with the process that has been used here. There was a protest by the citizens of Randolph Hillside Community, and PG&E filed a response to that protest. And then more recently PG&E filed a prehearing conference statement which tries to address some of the concerns that local citizens have raised. If you don't have a copy of that, if you haven't seen it, you might want to ask Ms. Lambert for a copy.

MS. LAMBERT: I have extras.

ALJ MALCOLM: I don't know if you are aware, but the way -- one of the ways this process works is the Independent System Operator in the State of California works with California utilities and municipal utilities to make sure the entire state's transmission system and generation system is reliable. The ISO has a plan about how to make sure the system is reliable.

San Francisco is kind of a unique location in the

state. It is sort of an island. It doesn't have much in the way of transmission going in and out of it and doesn't interconnect to all portions of the grid within the state. It has a couple of small power plants that are very controversial in Hunters Point that are very old and pollute a lot.

One of the reasons that PG&E's application explains it for this construction is to increase the power going into San Francisco transmissions, power into San Francisco, by 135 megawatts, which is not as much as a normal-sized power plant. It is as much as a small power plant would put out probably. But the idea is to enhance the City of San Francisco's system reliability so that they don't have blackouts or brownouts. The City of San Francisco is very anxious to have this upgrade to local transmission for that reason.

I'm not representing either the City of San Francisco or PG&E. I'm just summarizing what we've heard from them. I know that PG&E has brought their experts here, if you have questions for their technical experts as well.

Would any of you like to speak or ask questions?

STATEMENT OF MR. KIRBY

MR. KIRBY: My name is Steve Kirby, K-I-R-B-Y; Sieger Engineering, S-I-E-G-E-R. We're over on Beacon Street. We have three towers right in our backyard.

And to increase the voltage from 60 kV to 115, is there going to be any health problems to our employees, because we are right underneath the wires all day long?

4.1

MR. PROCOS: I don't know if you got a copy of the reply to the protest of the Citizens of Randolph Hillside. They actually asked that question as well. And that was addressed -- I'm not an EMF expert, but based on our internal review, we concur with their analysis. And actually PG&E has brought with them tonight their EMF expert who can better explain that than I can. Maybe I can turn that over to you right now, just to give us a little background on the cross phasing and all that.

STATEMENT OF MR. HERZ

MR. HERZ: I'm Michael Herz. I'm the EMF program consultant from Pacific Gas and Electric.

The California Public Utilities Commission requires the investor-owned utilities to take the issue of micronic views into account when we do upgrades for a facility. We will be doing that on this project.

One of the mitigations that I have proposed is that we will be doing what we call optimal phasing of lines. Because we have more than one power line, we can actually use the two separate lines on the one tower that we're working on to cancel each other out. And by canceling each other out, we will decrease the magnetic field levels at ground level, so they will be lower.

What is very important is to reduce magnetic field levels at ground level. Believe it or not, we're increasing the amount of current; right now it is a 60 volt. It happens to be very lightly loaded. The other five lines in that right of way are more heavily loaded.

By increasing the current flows in that line and increasing the voltage, we will make it more comparable to the line, the 115 kV line that is on the same towers that we are doing upgrades on, and increase the cancellation. It is actually reducing magnetic field levels because of the -- almost the same level of current in each of the lines versus having one lightly loaded.

We have present some graphs tonight to show what will happen and show the magnetic field levels going down. It is counterintuitive. We think by increasing voltage you get higher levels of magnetic field.

The health question, the health issues haven't determined whether they're safe or unsafe levels of magnetic field exposure. In 1993, the CPUC, understanding that it was a concern of ratepayers in California, came up with specific policies addressing that issue. And the low cost reduction in magnetic levels in new upgraded projects is one of those projects that we have in place, and we follow that.

ALJ MALCOLM: Can you explain a little bit more about how much EMF -- I'm not an engineer -- but how much EMF might be present at the site, how and how much will go out, in percentage terms, or otherwise?

MR. HERZ: I don't have that specific information with me. I think it was in one of the documents that we filed kind of showing under peak conditions, peak load conditions, when people are using the most electricity. We looked at what it would be today under peak conditions versus after the project and there was a reduction in magnetic field levels.

That is the chart.

ALJ MALCOLM: If you would like to see the draft.

MR. HERZ: There is no specific requirement in the CPUC EMF policies. There is no design level to change to, but we do achieve as much as we can for the low- and no-cost policies that are in place.

MR. PROCOS: Jo Lynn, do you have a copy?

MS. LAMBERT: If you want to give me your address. What I gave you summarizes, it doesn't have the detail that was in there.

MR. KIRBY: We were wondering if we could possibly get a reading in our area before you do the project and one right after? 4.2

MR. HERZ: I would be happy to do that.

MR. PROCOS: I think the important thing is that when that line was built, they didn't have those in place. Actually, there are no requirements that have been imposed by the CPUC and that PG&E implements. So they are kind of checking, I guess, that it didn't happen in the past. So that is why it is being done. That is why there is actually improvements in the levels.

Again, we are in the comment period. So if you are not satisfied with that answer, you can let us know and submit a comment either by letter, or speak now, since we've got someone taking down comments; and we will address that as a response to your comments. So it is your option.

MR. KIRBY: We hear the towers. On moist days you can really hear crackle. And we are kind of worried. We don't 4.3

4.3

know what we have now. We don't have any documentation. And later on when you say it is this, we have no way of knowing what it was.

MR. PROCOS: I think part of the crackling problem is that these are old ceramic conductors. They are going to be replaced. If I'm not mistaken, PG&E is replacing some other ceramic conductors on the others. There are three towers and obviously one, two, three, four, five, six phases. So this project is for the fourth one. I think there are a couple of ceramics there. So I think that will improve the noise considerably for you folks.

Anybody else?

STATEMENT OF MR. EGGEN

MR. EGGEN: Tim Eggen, E-G-G-E-N. I'm the Chief Engineer of the Crown Plaza Hotel at 1177 Airport Boulevard in Burlingame. The transmission lines run across the back side of our property.

Like he said, we are also concerned with exposure levels today as opposed to after this happens. The main concern of myself and the upper management was how would this EMF affect reception of our television system or something like that? Because it seems like even in today's world, we don't get good reception as it is. And my boss is concerned with the fact that we're trying to pick up signal off Sutro Towers through transmission lines and it may cause even more interference.

5.1

MR. HERZ: I imagine what you are talking about is radio TV interference?

First of all, it only occurs when our facilities aren't operating correctly, something is broken. If that occurs, we are required by the FCC to fix that.

So if you are having situations where you are encountering radio TV interference from our facilities, contact PG&E and we will come out and try to find the source and fix whatever is operating incorrectly.

Very rarely do we have situations with transmission lines. It might be possible during construction that there might be some very short duration situation where that might occur. For the most part, one in place and operating correctly, you wouldn't have radio TV interference. If you do, please call us. We will work with you on the problem and correct any damage that has happened to our facilities.

ALJ MALCOLM: Can we get these folks someone's name and phone number?

MR. HERZ: The best thing to do is -- you can certainly contact me, but you can also call PG&E's 800 number: 1-800-743-5000. We'll send the appropriate person for the area. You can also contact me and find out that person.

MR. EGGEN: Is it cable television?

MR. HERZ: They have broadcast to TV station.

MR. EGGEN: In today's world, it is fairly primitive, but we are using it in the same place. It is something that they have a concerned with.

You were saying you were increasing the voltage

and the amperage on that?

MR. HERZ: Yes, we are.

MR. EGGEN: If the theory of voltage and amps go down?

MR. HERZ: It depends. You are correct. The amount of power that is provided is equal to the current times, the voltage. If you increase the voltage and keep the power the same, the current is going to go down. In this case, we are serving different loads than what the 60 kV is currently serving. So we are actually serving more power during peak conditions than what the 60 kV is providing right now.

Your current is correct. The power is the same; you would expect the current to go down and voltage up. In this case, increasing -- for the issue of EMFs, it is actually beneficial to reduce the magnetic field levels based on concern that people have.

5.2 MR. EGGEN: So you could do an EMF study at our site before and after?

MR. HERZ: I would be happy to do measurements for you. Give me a phone call and we can set up the time to do that.

STATEMENT OF MS. LAO

MS. LAO: Edlyn Lao, L-A-O, I represent 68 protestors of the Randolph Hillside Community.

I have a question for you. The lines are at 115 KV now, right?

MR. HERZ: Five of the lines are 115,000. We have one line that is 60,000 volts. That is the line we are upgrading.

6.1

MS. LAO: The line in our neighborhood is 115. I think there was a request to upgrade it at two?

MR. PROCOS: The line -- it is misleading because there are three towers, and basically on each side is a line. So it is called -- each tower is double circuit.

MS. LAO: I see.

MR. PROCOS: So basically all the lines are 115, rigged for 115, except for one, that is the No. 4. This is the project that they are going to be pulling out the 60 kV wires, and they are going to be replacing it with wires that will carry 115.

Does that answer your question?

MS. LAMBERT: Are you talking about Jefferson-Martin?

MR. PROCOS: I was in the neighborhood.

MS. LAO: There is three towers, and on each side there is lines on each side. The three towers, you know, the three towers.

MR. PROCOS: The first tower on one side, they are 115; on the other side, 115; on the middle tower they are 115; on the other side, it is 60. A third tower on one side is 115, and the other side is 115. So they will be 115, except for one side, which is what we are analyzing. The conversion of that one side basically pulling on these wires and putting in wires that are rated for 115 kV, that is the project for us.

6.2

MS. LAO: Where are these towers located in the Hillside community? Are you talking about the ones right over our homes, on the back?

MR. PROCOS: The three towers -- there are three towers there that run -- I think there is a diamond corridor, something like that, some cul-da-sac there; and right next to that on top of there is three towers. That is our project, in the middle tower on one side. The lines are rated for 60 kV, and we need -- we are bumping them up to 115 kV.

There are no new towers. It is basically -- it is going to look the same because it is just --

MS. LAO: Increasing the voltage and amperage? I'm sorry, I'm not an engineer, very far from it in fact.

ALJ MALCOLM: I want to make something clear here. Nico just said, "we are bumping them up..." We, the PUC, are not; PG&E is. We the PUC are reviewing the proposal.

MS. LAO: I'm wondering if there is no negative impact to health and safety of children, or people for that matter, why does California Department of Education have a law against placing power lines within 100 feet of the school, or allowing towers to be built there? What happened in 1979 when they found that a cluster of children got leukemia in Denver? There was a study in 1979.

6.3

MR. HERZ: You might be thinking of Dr. Giles Theriault had a study that was looking at childhood leukemia, childhood cancer. In general, they found an association between power lines and childhood leukemia. Probably the interesting thing to note that transmission lines really weren't in the study exposure that they were looking at. They were looking at lower voltage power lines on wood poles and under ground that go through our neighborhoods. There

was actually one case in that study that lived underneath the transmission facility.

You asked a lot of questions about the issue. Let me address the Department of Education. Here in California they have specific policies in place that when you site a brand-new school, they have set rules that they incorporate based on transmission facilities that might be near a proposed school site; it varies by voltage, how far it is. It does not prohibit a utility in California from building power lines against a school. Those setbacks only apply to the construction of a brand-new school that the Department of Education has jurisdiction over.

For constructing facilities, transmission facilities and power lines in California, the California Public Utilities Commission has jurisdiction over that. They have different policies on the issue of electromagnetic fields that we follow. I have been very aware of the Department of Education's policy. I think they had a document since 1990 in place of those policies. It looked at a very similar method of taking no- and low-cost steps to reduce magnetic field exposure.

I think you asked why do we do these types of things? The health experts don't know if they are safe or unsafe. I have been working on this issue for the last 13 years. Because we understand the concern is real, people are concerned, and it makes sense to take low- and no-cost steps at the time we are building and designing something. But the scientific uncertainly doesn't justify changing the way we

use electricity at this point, but the health experts will decide whether or not it is a problem. But right now they say basically they don't know whether it is safe or unsafe.

ALJ MALCOLM: I would like to add to that. The California Department of Health Services has acknowledged that there may be risks. And scientists don't agree what that risk might be and under what conditions. So there are some things that the state has done to mitigate those risks, reduce the risks, but there is a lot of uncertainty about what they are. I don't think there is any health expert who studied this who has said that there aren't any risks. They just don't know.

MS. LAO: What our concerns are is that the public perception, and their fear of power lines, you might be able to sell your house at 115 kV, or you might be able to sell your -- try to sell a house with an increased power line. I have a concern for our neighborhood because we don't know ourselves what is going to happen to us in ten years if you increase the voltage.

6.4

What I don't understand is if you can quiet the buzzing of the power lines when you change the lines or replace those ceramic -- whatever they are -- insulators, why can't you replace them now so the buzzing would be lowered at a lower voltage?

MS. LAMBERT: They are doing that. They have a program in place that is doing that and it is gradually getting them done. So on your line, it is my understanding in six months all of the lines will be replaced; not just the

one that is being reconducted, but all those other ones: The ceramic insulators with nonceramic ones.

6.5

MS. LAO: When did that start?

MS. LAMBERT: It is a maintenance thing that they started on lines across the whole service area. So they target ones that need it. But yours happens to be in line to do it very shortly on all of the lines, not just on the one we're talking about tonight.

MS. LAO: So they've known about that for years?

MS. LAMBERT: They used to believe -- the standard in the industry was to use the nonceramic ones. I mean the ceramic ones, those get dirty and that is what causes the buzzing when it gets moist.

And so they've now come up with an industry standard that is better. It is not ceramic insulators that don't need maintenance, that don't get dirty as easily or at all. They don't have to clean them. So they are gradually converting the whole system. But it is like your wardrobe, you do it a piece at a time. So that whole system is being changed over to the nonceramic ones.

MS. LAO: I didn't get your name.

MS. LAMBERT: Jo Lynn Lambert; I'm with PG&E.

MS. LAO: I have a question to that, because on our previous -- our first protest, the one submitted December

6.6

27th, 2002 --

MS. LAMBERT: The one we responded to.

MS. LAO: It was resubmitted because I had to go on vacation and somebody else took over from there. Both -- I

6.6

mean, they were identical protests. They both asked the question -- I mean it talked about -- they both talked about the buzzing and how it disturbs sleep patterns, et cetera. And in response to that, the rebuttal said that the buzzing may be caused from the Sprint towers.

MS. LAMBERT: Our people went out and looked at it during the daytime, and it wasn't rainy weather so our lines were not making any noise. But there was a very loud noise coming from an antenna tower that belonged to Sprint. It wasn't our facility. If you can't tell the difference, you might assume that it is the lines and not something else.

But all I can tell you is when our people went out, that was where the noise was coming from. It wasn't coming from our lines.

MS. LAO: I remembered something else that came up in that protest.

You mentioned -- you were talking about television reception and how you were getting interference. Right?

MR. EGGEN: We were wondering if it would play a part in it.

6.7

MS. LAO: In our protest we stated that we saw some television cable interference quite frequently. The rebuttal for PG&E said --

MS. LAMBERT: My information was --

MS. LAO: Basically there was no answer to that. That it was almost -- I'm exaggerating -- in our imaginations or something like that.

MS. LAMBERT: I'll tell you what I said. What I was

told is that it was not caused by PG&E facilities and that it was:

"High frequency noise from power lines does not interfere with cable television reception, which is supplied via shielded coaxial cable."

That is what the engineers told me. The interference is most likely caused by low signal strength or reflections from connectors in the cable system or within the homes.

But, even saying that, as Michael points out, you can have somebody come and check that. If it happens to be a PG&E facility that for some that is malfunctioning and interfering with your cable television

MR. HERZ: The answer to the question is we were talking about two different situations. The gentleman that represents the hotel was talking about an analogue TV antenna.

The question was asked about the cable television within the hotel system. I wasn't talking about that. I was talking about the air signals near Sutro Towers. That is where we get the TV signal out in this area, that is if you have an antenna. If you have a cable system, you are probably like me, they are inherent -- they have problems with that. It is not related to something with PG&E. Your answer was correct, but we are talking about two different ways of getting television signals.

MS. LAO: Can you explain one more time? When you

switch the wires around and you cross switch them, it causes less voltage?

MR. HERZ: Less magnetic fields. The background behind that is that magnetic fields are additive and can't switch. They can add together and cancel, it depends. If you take a simple example of two wires carrying current, and one is the current is flowing in one direction and the other wire of the current is flowing in the opposite direction, they create magnetic fields that oppose each other. And you create situations where there is cancellation.

We used a three-phase system to deliver power to our customers, and the transmission system has three wires per line. And in this case the tower that we're talking about has two lines on it, so there is six wires that are carrying currents, three phases each wire.

And we designate them as A, B and C phase. In a situation where it is flowing the same direction, if you have A phase on top, both sides of phase B in the middle, C phase on the bottom, that will give you magnetic field strength X. Now, if you take one of those lines, in this case we are taking the one we are going to do work on and flip that so C is on top, B in the middle, A is on the bottom, just the exact opposite of the line next to it. When that occurs, what you have happening is you increase the amount of cancellation that occurs on a line.

So now we've seen 40 percent reduction in magnetic field levels by just doing that flip. That is one of the no-cost methods for reducing magnetic fields that we are

allowed to do under the CPUC policies on the issue of fields.

6.8

MS. LAO: Can't you do that now with the lines already in place?

MR. HERZ: We caused the CPUC policies to occur, for us to follow those. It is required with a new or an upgraded project. So the CPUC in their EMF policy didn't say to go back to existing facilities and perform those steps to reduce levels, they said only on new.

ALJ MALCOLM: Although PG&E could certainly do that under existing rules. There is no reason they couldn't reconfigure their conductors.

MR. PROCOS: Basically when an application is filed with us, as has happened right here, that triggers the low-cost, no-cost requirements. And they are implementing those with the cross phasing, switching around, A, B, C; C, B, A. And that is why that is happening in this situation whereas for existing facilities, as the ALJ said, they could do that. But I don't think they typically do that, unless there is an application filed with the PUC.

ALJ MALCOLM: They are not required by the PUC.

6.9

MS. LAO: What is rayon gas exposure? Is that what EMFs emit?

MR. HERZ: No.

MS. LAO: What is rayon gas.

MR. HERZ: I'm not an expert on that. I think it is something that comes out of the earth.

MS. LAO: I'm sorry.

Do you know what the EMF levels are on the ground

near the residences?

MR. HERZ: I've only been asked to do one for a resident. But I'm happy to come out and do one for you and let you now what they are.

MS. LAO: That's part of our protest. We were never told what the levels are outside in the open, or within the homes, or how far they extend to. Because I have done some research on the Internet, and I've seen cases where people have actually sued because they had high EMF levels within their homes and swimming pools, and they were unable to sell their homes.

6.10

MR. PROCOS: I think PG&E would be more than happy to measure them at your house, if you like.

MS. LAO: What about for all the residents, would that be impossible?

6.11

MR. HERZ: As long as the individual contacts me and sets up a measurement. We could certainly do that for you.

MS. LAO: Is there anybody else independent, other than PG&E, that can do something like that that the CPUC can hire? Or is that left to the residents?

6.12

ALJ MALCOLM: Do you mean our hiring the consultant to come out and check EMF levels at every home? It is not something we would normally do, no.

MR. PROCOS: I'm not aware of anybody who does that at the PUC, but I can check and find out for you, if you like.

MS. LAO: My concern is: A lot of those towers are right by residences or schools. And I don't live that close to them, but it certainly would concern me if I did.

6.13

6.13

Certainly some of the protestors listed in the petition live closer to them than I do.

Yes, I think that would be good if we had measurements, but I prefer an independent source.

MR. PROCOS: I can't guarantee you we have someone, but I'll ask around.

MS. LAO: That is all for now on EMFs.

MR. KIRBY: To get back on the subject of cable interference, currently we have five buildings on Beacon Street. Starting next week three of the buildings will be getting wireless data and voice communication systems installed. Are there going to be any effects on that?

4.4

MR. HERZ: I'm not aware of interference with wireless networks. Most of them operate on gigahertz range, which is the same as cell phones. We have not encountered any situations. And, again, it is very likely that you can have high sources of magnetic fields, even within home business appliances.

I have a wireless network set up at my home right next to a computer monitor. I have not had any interference problems. Again, it is a difference in frequency. The power systems in California are 60 megahertz at the low end, whereas the wireless networks that are popular now, PCS cell phones, operate at 2.4 gigahertz, almost the other end of the spectrum. So they've taken that into account for those types of products. We haven't heard of interference issues.

MS. CAPUTO: And if this does go forward, how long is it going to take and what are going be the circumstances from

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7.10

anybody getting sick? We have children; grandchildren; we have older people. And you know --

MR. PROCOS: I think you heard from Michael and from our verification of the PUC that in fact the magnetic field which people are concerned about is actually going to reduce. So I don't anticipate that that would pose a problem in the future.

As far as construction is concerned, it goes in different segments, so I believe your segment might be six to eight weeks.

MS. LAMBERT: It is two separate days, but I don't remember how much time is in between.

MR. PROCOS: Sixty to 90 days. So in your area it would be relatively short, and we would include measures in here for noise. All of this is based on local jurisdiction regulations. Your county or city sets those; PG&E is bound to abide by those. And I also believe there is going to be a phone set up, so if during construction there is any inconvenience, you can contact them. I think the important thing to realize is the project itself is going to be moving pretty fast, so there may be a little bit of an inconvenience for a day or so, but I would anticipate that they will be gone. It will be done in your area.

7.2

MS. CAPUTO: Are our rates going to go up also after they put that in?

MR. PROCOS: The way that it works for transmission is PG&E files what are called rate cases with the Federal Energy Regulatory Commission, so it is the rates. And part of what

they file incorporates the costs, or tries to recoup the costs of building such projects. And PG&E will pass that onto the ratepayers. However, all that said, it gets passed on to all ratepayers, so PG&E has a very sizeable service territory, you wouldn't notice anything. This would be very, very small.

ALJ MALCOLM: Like you wouldn't be paying for Los Angeles.

MS. CAPUTO: I hate to tell you, but I notice everything on bills. My mother was very strict with bills. I notice everything.

MR. PROCOS: I think we are talking decimal points here for this project.

ALJ MALCOLM: These kinds of upgrades occur all the time. PG&E and other large utilities in the state are always upgrading their systems in one way or another. So new costs go into rates, and then some rates are sometimes offset and actually get lower as plants are depreciated and no longer needs to be paid off. So it is kind of an ongoing macro process.

MS. CAPUTO: I'm still mad about the mess.

MR. PROCOS: If you have more questions about where the money goes, or parts of the bill, you can actually contact the CPUC. We have people that specialize in that. I know sometimes it can be really confusing. So if you would like that, I can definitely --

6.14 MS. LAO: I'm wondering if someone does suffer from a health condition, or hopefully it won't be a small child or

6.14

pregnant woman, or the towers buzz enough to cause sleep disturbances or anything that was outlined in our protest, who is held responsible? Is it PG&E or the PUC?

ALJ MALCOLM: That is a question for the lawyers.

MR. PROCOS: That is a legal question; I'm not really sure. I don't feel comfortable answering that question. Again, I can put you in touch with someone at the PUC, a lawyer, who, if you have questions about what legal venues to pursue, they can definitely answer that for you, or if you are curious about how that process would work.

MS. LAO: In the past who have they litigated against?

MR. PROCOS: I'm not familiar with the history of the litigation for EMFs or their health impacts. Again, we are in a comment period. If you want that addressed as part of the record, it will be on the record.

6.15

MS. LAO: In regards to EMFs, there is no prudent avoidance in regard to health concerns and it becoming a factor with the public 's perception or with health risks. It is not a factor at all, or is it a factor?

MR. PROCOS: It is a factor, and has led to the measures that we impose on the regulated utilities, the no cost, low cost. That is why they do the cross phasing that Michael was talking about. So moving forward, they implement those because there is that perception that there is a potential health effect.

6.16

MS. LAO: If they buried the lines under ground like they did with the northern part of the Jefferson Morgan transmission project, they buried a lot of those lines under

6.16

ground -- I mean that would certainly lower the EMF level, right?

MR. PROCOS: Not necessarily. I think it would lower the -- maybe you can jump in here if I say something wrong -- I think it lowers the electric fields because the electric field is impeded by blockage like the earth would actually block it from.

But I believe it doesn't do that from magnetic fields. There is a misconception that you may have a transmission line 100 feet above your head. If they bury it six feet below the ground, the fact is that the magnetic field may be stronger for you, depending on how far or close you are to the actual tower or underground area.

6.17

MS. LAO: Do you think burying it would reduce -- I mean would raise property value?

MR. PROCOS: In my personal experience, I don't think there is really any evidence that points -- that putting these lines in reduces property values. I have heard one study where it actually dips a little bit, but then it goes back up. I don't personally think there is an impact on property values.

ALJ MALCOLM: But the PUC has not studied that. So we can't answer that question.

MS. LAO: Is it possible to study it, whether it is by Pac Bell or by the PUC? Is that possible?

ALJ MALCOLM: Certainly possible.

6.18

MS. LAO: We are concerned at this point because after December, we found that four, five homes had for-sale signs

6.18

in front of them because they were afraid of the higher voltage. So we've already seen an impact, very visible impact. If you drive by North Spruce, you see signs up. One of them is down because the house has been sold. One is selling on Leo for 570. I mean...

MR. PROCOS: So they are selling the houses because --

MS. LAO: They are afraid, yes, they certainly are. That is what worries us, because I've lived there since I was eight years old.

MS. CAPUTO: It is going to be 25 years for me.

ALJ MALCOLM: If you would like more information about the impact of the construction on EMFs, it might help for you to have PG&E come out and measure the EMFs, or the PUC, if Nico can find a way to do that for you. And talk to PG&E's expert about how it will change with the construction. Because if PG&E is correct, the circumstances actually get better for the people in the neighborhood.

MR. PROCOS: Let me explain also the California Environmental Quality Act property values. The reason we didn't address that here is property values are secondary, through this document called primary aesthetics. Because there is a mitigated negative declaration under CEQA law; we are not required to look -- there is no impact that can't be reduced to a less than significant level, so therefore we are not required to address or to look at the impact on property values in an EIR like Jefferson-Martin.

If there is an impact on visual, say there is going to be a new transmission line, then you could make a

link between that to property values and you can argue it is going to affect property values. And that could be addressed, for example by undergrounding, which I believe has happened in parts of Jefferson-Martin. This line -- the baseline for this project is there is three existing towers, and all they are doing is changing a wire. That is what is called baseline in CEQA. That is the base. What we are proposing to add to that base, does it cause any impacts? And according to our analysis, it does not cause any impacts. There is no visual impact from the wire. In other words, once that wire is in place, there will be no visible change. People will not be able to notice the difference. So that is why property values are not addressed here.

7.3

MS. CAPUTO: Are they going to do that one wire or all?

MR. PROCOS: Five of the six are 115 kV. The one that is left, that is our project, that is the 60 kV. I don't think the tower -- I don't think they can bump it up anymore without having to change the towers. There is something about the strength and whatnot. So I wouldn't anticipate that occurring? They are not -- they don't have future plans to upgrade, say, to a higher line.

7.4

MS. CAPUTO: Are they still going to hum like they do though? Because they do. I can go and talk to her mother, my next-door neighbor, and you can hear those lines hum. When they wash them, they bring helicopters in and wash them.

MR. PROCOS: In our project, the insulators are going to be changed, so the noise will be a lot less. I believe

that Jo Lynn touched on a program that they agreed will be changing the insulators on all the lines, so the noise should be a lot less. I don't know about the helicopters. I'm assuming that PG&E just washes towers.

MS. CAPUTO: You can hear it; they do it, believe me.

MR. PROCOS: I don't know.

MS. LAO: It is like watching Rambo.

What I'm having a problem with is that I see this new voltage would be a benefit to San Francisco. I know they want to close Hunters Point down, their station there.

MR. PROCOS: This project and the Jefferson-Martin project, the Cal ISO in conjunction with PG&E, CPUC, did a long-term reliability assessment for the Bay Area. They identified certain things that needed to be done. Jefferson-Martin is one project. This is all part of the ongoing Hunters Point issue that when these things get upgraded and some other things might happen, I'm not sure that Hunters Point will be closed down.

MS. LAO: I asked about burying the wires because I've been removing the tires -- sorry, I asked about removing the towers and burying the wires because I feel that it will allow our property values to go up. People won't move because of the horrible towers. Because there is a perception, a believed perception, apparently, since everyone here is concerned and has spoken about it, that the towers may improve health. So nobody wants to live by them.

6.19

I feel overall if they bury the wires. We put them underground since it is such a benefit to San Francisco,

6.19

won't it offset the costs? Because I understand that burying them will probably be 20 percent more or 50 percent more. Since they need the voltage and a benefit to San Francisco, why should the Peninsula or South San Francisco suffer all the burden of having them increased, of having these trucks come in and do something that we don't want them to do? Because I know the people that signed that petition do not want them to change those wires. What benefit is it to us?

MS. LAMPERT: It is a big benefit. That was one misstatement that was made that it just benefits San Francisco, it benefits the Northern Peninsula. Right where you live it will make your power more reliable. This whole system is being strengthened by the fact that we replace that wire, those wires, with new wires.

MR. PROCOS: In regards to property values for our purposes in the CEQA for the mitigated negative declaration, because the project has proposed -- we've identified this project with mitigations will not have an impact. Therefore, there is, based on our analysis, there is no need for these underground wires.

As a mitigated negative declaration, because there are no impacts, we're limited as far as looking at property values. However, all that said, we're preparing a draft mitigated negative declaration. We will respond to concerns and issue a final mitigated negative declaration. But the Commission, in their discretion, has the authority to change or require something else. This will be handed off to the judge, and it will eventually go before the Commission and

the Commission will make a decision on whether this is the way to go or something else is needed.

MS. LAO: Why, since there is an EIR, why aren't there any alternatives to this? Why is it a choice of putting towers up, or us trying to get out of work early, finding baby-sitters for our children and coming here and having to go through this?

We live there. The three of you work under those towers, but we live there. And it is our concern they do not increase that voltage unless they bury them.

6.20

MR. EGGEN: I can tell you this much: From my field, I have knowledge of electricity and this and that, what they are actually telling you is true. Reversing and crossing here in this environment, your neighborhood, which you bought into 25 years ago, will be better. This will definitely reduce electromagnetic fields. You are better off with the fields 100 feet over your head rather than six feet under your house.

MS. LAO: Even if they bury them?

6.21

MR. EGGEN: They are talking about one wire conductor out of say five other conductors on this pole. When you were saying it might be additional to put this thing in the ground is far from the truth. You wouldn't have power at your house for lengthy legs of time for them to do something like this. There is more going on in those towers.

MS. LAO: By trying to put them underground, you are thinking you are going to reduce the EMF or bury the problem, but I think at that rate you would probably be getting the

problem closer to your home. It is not just one conductor, they are talking about one of six. The other five, there is no change. They are not asking to change the other five, they are asking to change one; by changing the one, if they are telling the truth, which I'm sure they are, reversing the phasing or crossing the phasing in this electrical circuit, will reduce the EMF that we are all exposed to by working under it by living here.

MR. PROCOS: Undergrounding, he is right, undergrounding, just for one, is typically ten times the cost. Undergrounding everything is quite expensive.

All that said, the project, as proposed, we did an initial study and we study everything. We did an analysis, we came to the conclusion that any potential impacts can be mitigated to a less level. We have prepared a mitigated declaration under CEQA. We don't look at alternatives under a mitigated negative declaration. We have in the current period right now. You are more than welcome to comment if you think we have made a mistake in the analysis and point that out and propose that underground is a better way to go.

ALJ MALCOLM: You are correct. The question here was not what is the best thing we can do for Randolph Hillside neighborhood. The question was only what are the potential impacts of this project and what can the company do to offset them and to keep your community, for example, different -- or what are the benefits that offset the costs. The question was never what is the best thing for your neighborhood.

6.22 MS. LAO: So the environmental impact report, are we

6.22

allowed to have one? Will there be one?

MR. PROCOS: Based on our analysis, all of the impacts could be reduced to a less significant level. You prepare an environmental impact report, if you can't reduce the impact to a less-than-significant level. For this project, for the checklist, the aesthetics, biology, different sections, our conclusion is that the project has proposed additional mitigation measures that we are imposing on PG&E that the mitigated negative declaration is the right way to go.

6.23

MS. LAO: So this mitigated negative declaration was prepared entirely by your office?

MR. PROCOS: What happens as part of the application is PG&E has to submit the proponent's environmental assessment. So they get the ball rolling. Basically we hire consultants, which is EIP to my left here, and we work with them and review their analysis and expand upon it and impose additional mitigation measures, which is what we've done in the document. Then we release it as it is prepared by the California Public Utilities Commission, and we release it as a draft document for 30-day comment.

6.24

MS. LAO: But what concerns me is nothing has a negative -- mostly everything has no impact, or less than significant impact with mitigation incorporated. Little changes basically in our neighborhoods don't matter to anyone else but us. That is sort of like what it seems to me. If you ask our neighborhoods if they care that we don't see butterflies anymore, yeah, we care. Or that we miss our garder snakes, yes, we care.

MR. PROCOS: For this project, the biology section was very important and involved a lot of thought. And we've included mitigation measures. PG&E has them, so there won't be any impact with these mitigation measures. There will not be any impact on the butterfly or red-legged frog or the snakes. There are certain parts of this document where there are no impacts whatsoever, for example, in cultural or --

6.25 MS. LAO: So you can say for the record that there will be no impact on our property values or no impact?

MR. PROCOS: Again, this is a mitigated negative declaration, so that property values are considered a secondary impact. So if there is, for example, a visual impact from the project which there isn't in this case as it is proposed here, then maybe you can make the argument that my property values are going to be affected and you can pursue that. But under this, we've determined that with mitigation measures there are going to be no impacts, and therefore property values are not addressed in our document.

Basically what is happening is that the towers -- there is existing towers and there is existing lines, and all they are doing is taking three of the lines out of the middle tower and putting in three other lines which is basically fundamentally what they are saying. So there is no visual impact from that. So therefore it is less than significant, it is not addressed in this document.

ALJ MALCOLM: To answer your question, nobody at the PUC studied anticipated changes in property values directly.

6.26 MS. LAO: Are there studies available at the PUC?

ALJ MALCOLM: Not for this project, no.

7.5 MS. CAPUTO: Are they still going to go with the helicopter to clean the lines though?

ALJ MALCOLM: PG&E?

MR. BILLOT: I'm Alain Billot, A-L-A-I-N, last name B-I-L-L-O-T.

Once the insulators are replaced with nonceramic insulators, there is no need to wash them regularly. So they will not.

6.27 MS. LAO: I'm wondering for the helicopters that will be used and the trucks that will go up there, I received a complaint from several neighbors, they say when the trucks go up there it blows dust all over their house and car. Was that addressed in here?

MR. PROCOS: You are referring to maintenance activities which occur on the transmission towers and lines. That is not addressed in this. The only thing this is addressing is the reconductor of that one side of the No. 4 line. All that said, there are mitigation measures to reduce, for example, blowing dust. These mitigation measures restrict certain times, certain speeds. So for that part of this project, they are subject to those mitigations now. The other maintenance activities I'm not aware of, and that is going to be beyond the scope of what we're looking at. I'm sure you can contact somebody at PG&E and talk to them about that.

6.28 MS. LAO: Why aren't there any alternatives?

MR. PROCOS: It is not an EIR. It is a mitigated

negative declaration at CEQA. You don't look at that for mitigated, only the EIR has alternatives.

MS. LAO: I'm really confused, because I don't understand why we even bothered with the petition or our comments are even being heard. It seems like nothing is going to happen. It seems like you keep telling me that you've already got it all in here. There is not going to be enough impact or significance to change your minds. Why are we here?

6.29

MR. PROCOS: I think the point of this from the CEQA perspective, we've issued a draft mitigated negative declaration. We have a 30-day comment period. The reason that was set up is we prepared something; sometimes things are overlooked. That happens sometimes, the analysis is flawed. We are putting it out there. This is the public participation time. People have an opportunity to comment on it and say this was missed, this was not considered. You submitted a comment letter to us. We are required by CEQA to comment on it.

If something has been overlooked that all of a sudden becomes a significant impact, then we will have to change the project. But as it stands right now, we don't anticipate that, but it all depends on how people comment.

ALJ MALCOLM: Remember too he has been describing the process that the Commission staff undertakes to comply with law looking at the project proponent. It doesn't mean that -- their final document does not become the final word on this. The Commission's order does. So if there are

things that you would like the Commission to do in addition to mitigation measures included in this report, you can propose them. And the Commission may adopt them even if they are outside the scope of this report. So if you have ideas, if you have thoughts that you think the neighborhood deserves, you propose the stuff.

6.30 MS. LAO: Can I propose that there be an EIR?

ALJ MALCOLM: You certainly may.

MS. LAO: I propose that.

MR. PROCOS: Part of the process -- you can't just propose it. You have to back it up with objectives and factual evidence that points to why we should prepare it.

MS. LAO: I think it is -- but the fact of -- the fact -- and I -- I mean -- I'm sorry. I haven't had dinner.

We feel that -- I basically -- I see that as a benefit to San Francisco. I do. And I feel that the negative impacts are all being felt by, you can say the Peninsula, South San Francisco. I just don't understand why there is not a better alternative that has even come to the

6.31 floor.

Why should we even have to be bothered by all of this when it is such a benefit to San Francisco county and to Hunters Point. Honestly, I work in Bay View-Hunters Point, they have one of the highest rates of cancer. And I'm not sure what it is, but I know they have an extremely high count over there. I could never figure out why. I figured it was the power plant.

Now you are talking about shifting all this power

6.31

above our houses. So that scares us. And there is no benefit to us. I mean there is even a fear that there will be more buzzing. PG&E said that there won't be any buzzing, but I still can't understand if they can control the buzzing in the first place, why did I have to hear it for 20 years? I think PG&E also said they can lower the voltage, why don't lower the voltage into the lines that are there? They could have asked for that, but they didn't want to, right?

What are the benefits to our community for having this? I want to know. If it takes something, a document like an EIR with alternatives, that is what we want.

MR. PROCOS: It is a really good question about the benefits. I think it is not only for the power that is going to run through, it is not only for San Francisco, I think other areas as well. I think maybe the benefit issue is something to be brought up in your comment letter. Also you are a party to the actual application. I would imagine that you could file something bringing that issue out and people will address it.

MS. CAPUTO: How long is that going to take?

MR. PROCOS: It is actually pretty quick if you file something on this application. People want to move forward on this, so I would imagine the reply would be very quick. This is more something that the ALJ deals with. She will consider your comments on the application and their requests.

THE REPORTER: Your Honor, can we go off the record?

ALJ MALCOLM: Yes. Off the record.

(Recess taken)

ALJ MALCOLM: Let's go back on the record.

If there are no other questions from the audience, or comments, I want to thank everybody for coming. And as I stated, the deadline for comments is August 19th. The plan is to have a decision on the Commission's agenda for September 11th. Thank you. We are adjourned.

(Whereupon, at the hour of 6:45 p.m., the public participation hearing concluded.)

* * * * *

To:

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Hon. Kimberly Malcolm
Administrative Law Judge
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Subject:

Comments on the Mitigated Negative Declaration and Initial Study Pacific Gas & Electric Company's Application for a Permit to Construct San Mateo-Martin #4 Conversion Project (A.02-11-051)

We, the Concerned Citizens of the Randolph-Hillside Community in South San Francisco, have the following comments to make on the Mitigated Negative Declaration and Initial Study, Pacific Gas & Electric Company's Application for a Permit to Construct San Mateo-San Martin #4 Conversion Project (A.02-11-051).

We strongly oppose the Mitigated Negative Declaration and Initial Study for the reasons listed below.

8.1 The project corridor crosses environmentally sensitive areas, which contain endangered and/or protected wildlife species. The power line conversion and modifications at the four substations will greatly disrupt the habitat and wildlife in the path of the Proposed Project. Past procedures for habitat preservation have been inadequate to preserve wildlife in the proposed areas.

8.2 The Mitigated Negative Declaration and initial Study provide no clear description of proposed procedures for consulting with neighbors or district wildlife environmental groups. No analysis has been provided in regards to the "Habitat Conservation Plan" described (page B.4-21).

Mitigation of negative impacts to the environment have not been addressed by the concerned wildlife organizations. A detailed analysis of the Habitat Conservation Plan should be provided before it can be referenced. There is contradictory data and testimony regarding the effectiveness of the Habitat Conservation Plan's reliability to preserve wildlife species and the preservation of their habitats.

8.3 There is no to demonstration or potential demonstration of old growth characteristics of vegetation removal, or that it can be re-grown. The plan does not prohibit use of herbicides ~~or~~. The proposed project focuses on efforts to clear the way for construction

but does not describe any re-planting of plant species and adequate protection of existing plant and animal habitats.

Disruptions to the surrounding areas cause wildlife to move. This is witnessed numerous times by residents in the Hillside-Randolph community. Our community opposes the proposed Mitigated Negative Declaration (MND) as it does not clearly account for and identify the lost of wildlife during construction. Quantitative measures must be
8.3 investigated to ensure the survival of endangered species. Extensive research will reduce impact to the environment if foreseeable events are identified.

Given the aforementioned, the MND does not contain enough data or research to evaluate the negative impacts to the environment or to to provide for the repair, rehabilitation, and restoration to the impacted elements of the disturbed environment. Cause and effect data evaluation and mitigation is necessary to ensure the survival of an ecosystem. The MND also does not compensate for the negative impacts through replacement or by providing for alternative resources or environments. This therefore cause consequential irreparable damage to the ecosystem, habitats, and wildlife.

Scenic attractiveness of the landscape was defined under "Existing Conditions."

8.4 The aesthetic and visual qualities and the view of the San Bruno Mountain and the adjacent neighborhoods also be changed.

The transmission towers were existent prior to the proliferation of recent negative public perception and epidemiological reports reporting EMFs as a carcinogen. The study does not properly address public perception or the assertion that there is a health risk involved. The construction will increase the voltage and hence the levels of EMFs of the power lines which will be public knowledge. No reports of property assessment and devaluation where incorporated in the IS/Mitigated Negative Declaration.

As acknowledged in the Proposed Project's Initial Study (I.S.), Pg B44, "there is a great
8.5 deal of public interest and concern..." regarding EMFs. Public perception of EMFs and the resulting negative impact on property values of the residents and property owners adjacent to the conversion project are not necessarily related to any findings in studies on EMFs, whether positive or negative. Public perception is clearly negative, as witnessed by the numerous attempts and immense amount of time, energy and money spent by utility companies and regulatory agencies to educate them. Although many studies are inconclusive as to the affects of EMF on public health, regulations and restrictions are in effect around schools indicating acknowledgment of negative impacts by regulatory agencies on human health. Public awareness of these regulations and restrictions will therefore have a potentially negative impact on property values in residential areas adjacent to high voltage overhead transmission lines.

Although the negative effects are 'inconclusive' at times, "The strength of the (magnetic) field is directly dependant on the current in the line." Therefore, the conversion from 60 kV to 115 kV of these lines in residential areas certainly increases the potential effects on the health of the men, women and children living in the path of these transmission lines. This study also states that "Scientists have found that EMF can produce a number of biological effects (Carstensen, 1987). These range from slowed heart rates to changes in the rate at which the body produces various compounds." Prudent avoidance would indicate that some mitigation of these potentially harmful health effects should be part of the scope of Visual quality impacts are not mitigated as proposed in the current plan.

8.5

Coherent evidence from different levels of biological organizations, biophysical arguments, evidentiary tests for causality in epidemiology, hypersensitivity to electromagnetic fields, independent EMF exposure assessments, and public health risk evaluation were not contained in the IS/Mitigated Negative Declaration.

The implementation of the project raises equity and environmental justice issues. The distribution of EMF risks and electricity benefits is unfair. While the power will benefit other electricity users, a concentrated few are at risk of exposure. A large amount of social groups, particularly low-income and people of color will bear a higher burden of EMF exposure than others. Residents whose properties are near the power lines are concerned that the MND does not identify the distribution of risks and benefits. Experts in the field of environmental justice, ethics, law, economics, and risk assessment have not been consulted.

Living near the transmission lines exposes people to the highest levels of EMF and the associated health risks. While the general benefits of electricity are shared, the burden of potential EMF risks for communities of color, which are the most vulnerable and most susceptible, are over-representative.

8.6

We of the community ask the CPUC that our community be protected from the potential hazards to our already dis-proportionate burden. We ask that CPUC take preventive action by implementing a plan with a lower degree of scientific certainty of the EMF hazard. Title 6 of the Civil Rights Act protects communities of color because of historical social, economic, and environmental discrimination.

In regards to environmental justice the principles of due care define economical and technically precautionary actions for the prevention of disproportionate cumulative exposure of any minority group or population sector. We oppose the MND and we request that an Environmental Impact Report be created which addresses environmental justice, and which takes into consideration the prevention of pollution, and any cost-benefit analysis.

8.7 All mitigation measures for the San Bruno Mountain (applicant proposed) are 'during construction' and none seem to apply to the long term impacts 'after construction.

8.8 The impact to the environment, the temporary and/or permanent loss of sensitive vegetation and wildlife, some protected, has been minimally addressed in the Applicant

8.8 Proposed Mitigation Measures. The mitigation and monitoring plan proposes that the applicant self-monitor most if not all of these issues which are clear conflict of interest. This is akin to the fox guarding the henhouse. Monitoring by an outside agency seems more appropriate in light of the possible long-term and/or irreversible consequences of the Proposed Project.

8.9 The Initial Study and Mitigated Negative Declaration do not outline any distribution of EMF exposures, socio-demographic characteristics, property value concerns, any system of claims and restitution. As a community we request an Environmental Impact Report because the proposed project will have significant adverse effects on the environment.

8.10 The initial study/negative mitigation does not reduce the potential negative effects to the environment, the residents of the community declare that the IS/Mitigated Negative Declaration is erroneous, incomplete and requires further data and alternatives.

8.11 In conclusion, we the Concerned Citizens of Randolph-Hillside Community, believe that the burdens and the impacts of this conversion project fall on residents and businesses who are not direct beneficiaries of this proposed project. We feel that these impacts are significant. Therefore we respectfully request that further study be conducted, alternatives (including a no project alternative) analyzed and that an EIR be provided.

Respectfully submitted,

Edlyn Lao, Community Representative
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650.873.4243

CC: Angela K. Minkin, Chief Administrative Law Judge
San Bruno Mountain Watch
Governor Gray Davis
Pedro Gonzalez, Mayor of South San Francisco
Karyl Matsumoto, Mayor Pro Tem
Council Member Ray Green
Council Member Joe Fernekes
Council Member Rich Garbarino
Candace B. Gianni, Representative of the Concerned Citizens of the Randolph-Hillside Community

From: Lambert, Jo L (Law) [mailto:JLLm@pge.com]
Sent: Monday, August 25, 2003 11:36 AM
To: Nicolas Procos (E-mail)
Cc: Trixie Martelino; Rod Jeung
Subject: San Mateo-Martin #4

9.1 HAZ-3:
Change "light duty trucks and mobile equipment" to "vehicles and equipment" and at end of sentence add "or shall be grounded to prevent electrical discharge during fueling."

II.B

CALIFORNIA DEPARTMENT OF FISH AND GAME AGREEMENT

AGREEMENT BY AND BETWEEN

PACIFIC GAS AND ELECTRIC COMPANY

And

THE CALIFORNIA DEPARTMENT OF FISH AND GAME

Relating to

THE SAN FRANCISCO GARTER SNAKE FOR
SAN MATEO - MARTIN 60kV CIRCUIT NUMBER 4
RECONDUCTORING PROJECT
WEST-OF-BAYSHORE PARCEL

SAN MATEO COUNTY
(Reference No. 1802-2003-005-03)

This Agreement ("Agreement") is made and entered into by and between Pacific Gas and Electric ("PG&E") and the California Department of Fish and Game ("DFG"), collectively, "the Parties," for the purpose of avoiding mortality or injury to the San Francisco garter snake during the San Mateo - Martin 60 kV Circuit Number 4 Reconductoring Project on the West-of-Bayshore parcel ("Project").

In carrying out the Project, PG&E agrees to undertake efforts to protect and avoid mortality or injury to the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*), a species of wildlife protected by the California Endangered Species Act, California Fish and Game Code section 2050, et seq. ("CESA"), and fully protected under Fish and Game Code section 5050. The Project is a portion of the replacement of approximately 12 miles of existing overhead transmission lines with higher capacity wires (a process known as reconductoring) between the existing Martin and San Mateo Substations located on the San Francisco Peninsula. Part of this reconductoring will occur on the San Francisco International Airport's West-of-Bayshore Parcel that is inhabited by San Francisco garter snakes.

1.0 RECITALS

1.1 Whereas, DFG is trustee for the fish and wildlife resources of the State of California and has jurisdiction over the conservation, protection, and management of fish, wildlife and native plants, and the habitat necessary for biologically sustainable populations thereof pursuant to Fish and Game Code section 1802. Under the objectives and policies of CESA, it is DFG's goal to conserve, protect, restore, and enhance State-listed species and their habitat. Fish and Game Code section 5050 prohibits the take of fully protected reptiles, except for take that is authorized for scientific purposes.

1.2 Whereas, the San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) ("SFGS"), listed by the State in June 1971 as endangered, is known to exist at the Airport's 180-acre West-of-Bayshore parcel bounded on the north by San Bruno Avenue, on the south by Millbrae Avenue, on the east by Highway 101, and on the west by the cities of San Bruno and Millbrae (including, but not limited to, 7th Street, San Antonio Avenue, Madrone and Bay streets, and Aviador Avenue). This Agreement is the result of a cooperative effort by the Parties to ensure the Project complies with CESA and Fish and Game Code section 5050.

2.0 PROJECT DESCRIPTION

PG&E is required to reconductor the San Mateo-Martin 60 kilovolt (kV) transmission line between Martin Substation in Brisbane and San Mateo Substation in San Mateo. Construction of this project is considered vital to ensuring system reliability and protecting the integrity of the electrical system in the San Francisco and the northern peninsula. The proposed project includes the reconductoring of approximately 12 miles of the existing San Mateo-Martin 60kV Circuit Number 4 with higher capacity conductors (wires). Circuit #4 is located on the same towers as Circuit #3 which was replaced starting in 2000 under 1802-2000-001-03.

The reconductoring work shall occur within PG&E's existing power line corridor, located in the cities of Daly City, Brisbane, South San Francisco, San Bruno, Millbrae Burlingame, and San Mateo, and some unincorporated areas of San Mateo County. Only one section of the utility corridor proposed for reconductoring is located on the West-of-Bayshore parcel that supports SFGS and its prey, the Federally-listed threatened California red-legged frog (*Rana aurora draytonii*), and reconductoring of this section constitutes the Project for purposes of this Agreement.

Work within the West-of-Bayshore parcel, shall be limited to modifications to the existing towers and removal of two existing wooden poles. Existing dirt roads shall be used to access the towers on the parcel. Vegetation shall be cut along existing access roads, and in undisturbed areas where equipment access is necessary. Laydown areas shall be established adjacent to towers for parking and equipment storage, as well as to provide staging areas for construction equipment and tower materials. Plywood or timber mats or steel plates shall be used to provide a stable surface, especially in wet conditions, for equipment to operate from. Ground disturbance in these areas shall be minimized. Earth disturbance shall only occur for the installation of the temporary guard structures, ground poles and removal of the two wooden poles. For the wire pulling and stringing site, the laydown site dimensions shall be up to 100 feet by 280 feet to allow for these construction activities. It is anticipated that each tower modification will be completed in one day. As a result, exclusion fencing shall not be required for any work sites.

2.1 Extent

'owers covered by this Agreement are 4/33 through 6/49

2.2 Dead End Conversions

Towers 4/37, 4/38, 4/39, 5/41, 5/43, 5/44 and 6/48 will be converted to dead-end structures. This will be accomplished by removing the existing cross-arms on the poles and replacing them with arms of a different configuration. Equipment used to carry out this work will be a crew cab pickup, helicopter and bucket truck at each site. The disturbance area at each site will be approximately 2,750 square feet.

2.3 Installation of Temporary Guard Structures and Ground Rods

During reconductoring, the existing transmission lines shall be de-energized and grounded. Since these lines pass over other energized lines, nets must be strung in these locations as a safety precaution. To support the nets, from four to six wood poles, each with up to two wire cables as anchors up to 15 feet from each pole, shall be set between the spans. Guard structures will be placed between towers 4/36 and 4/37 and at towers 4/38, 5/43 and 5/44. A 24-inch pickup truck mounted auger will be used to drill holes from six to fourteen feet deep. A 25 ton crane and condor truck will be used to erect the poles, place the nets and guy wires and to remove the apparatus once the work is done.

To comply with worker safety requirements, personal protection grounds shall be attached to each tower. A 5/8-inch steel ground rod will be driven into the ground adjacent to one footing of each of the towers. These rods shall be driven deep enough to reach firm ground, with approximately one foot of ground rod projecting above ground level during construction. Grounding equipment from the tower shall be connected to these ground rods during construction hours and disconnected when service is restored on the line. These ground rods shall remain in the ground during the entire construction period. They shall be removed using truck-mounted equipment.

2.4 Roller and Insulator Installation

Rollers and insulators shall be brought on the parcel by helicopter, pickup truck or on foot at all towers. Where this equipment is walked in, crews shall install the equipment by hand after climbing the towers. After the new line is pulled in, sagged, and tensioned, the newly strung wire will be relocated from the temporary rollers and clipped permanently into the insulator clip by hand. Then the rollers will be removed by hand.

2.5 Reconductoring

Two pull and tension sites shall be established at tower 6/48, each of which will be approximately 100 by 200 feet in area.

At each tension site, two line trucks shall be used to position four trailers. First, two tensioning trailers shall be positioned side by side in alignment with the tower lines.

Second, two conductor trailers shall be positioned behind each tensioning trailer. The line trucks will remain hitched to the conductor trailers during operations.

From the conductor trailer, the new conductor (wire) shall be attached to the existing conductor by a rope and pulled through by the equipment at the pulling site. The tensioning equipment shall set the designed tautness and sag on the conductors.

At each pull site, one line truck shall tow a pulling trailer to the site in alignment with the tower line. The existing conductors (wires) shall be attached to the drums, located on the bed of the trailer, by ropes and reeled onto the drums. In addition, pickup trucks shall be used to transport smaller equipment.

At both sites, the equipment shall remain stationary after it is positioned for the pulling and tensioning operations.

2.6 Pole Removal

Pickup trucks will be used to bring crews to the site. Two existing wooden poles will be cut off just below ground level and removed from the site by helicopter.

3.0 SFGS DESCRIPTION AND IMPACTS

The SFGS is a colorful snake, identified by a burnt orange head, yellow to a greenish-yellow dorsal stripe edged in black, and a red lateral stripe which may be continuous or broken with black blotches and edged in black. The belly color varies from greenish-blue to blue. Large adults can reach three feet in length.

The SFGS's preferred habitat is a densely vegetated pond near an open hillside where it can sun itself, feed, and find cover in rodent burrows. The snakes are extremely shy, difficult to locate and capture, and quick to flee to water or cover when disturbed. Adult snakes may seek cover in rodent burrows during summer months when ponds may dry. On the coast, snakes hibernate during the winter, but further inland, if the weather is suitable, snakes may be active year round. Although highly agile, adults spend considerable time after emergence in their hibernacula. They have been seen breeding at entrances to these burrows shortly after emergence from hibernation, and may spend the majority of each day during the active season in the same burrow. Garter snakes breed in the spring or late fall and bear live young from May through October, with an average litter size of 12-18 (Stebbins, 1985).

Although primarily a diurnal species, captive snakes housed in an outside enclosure were observed foraging at night on warm evenings. Adult snakes feed primarily on frogs, and may also feed on juvenile bullfrogs. In laboratory studies, Larsen (1994) fed adult garter snakes second year tadpoles and found that only the largest adults could eat and digest the tadpoles; smaller adults regurgitated partially digested tadpoles, apparently unable to fully digest them. Larsen (1994) also observed that when these smaller adult snakes were fed bullfrogs and frogs of comparable size, they were unable to hold and eat the bullfrogs although they had no trouble with

the frogs of comparable size. Newborn and juvenile garter snakes depend heavily upon Pacific tree frogs (*Hyla regilla*) as prey (Larsen 1994), and young snakes may not survive if they are not available.

4.0 MEASURES TO AVOID MORTALITY OR INJURY TO SFGS

PG&E shall be responsible for ensuring that all measures to avoid mortality or injury to SFGS are implemented by PG&E, its contractors and other agents. DFG believes that if the terms of this Agreement, particularly the measures set forth below, are fully implemented by PG&E, the Project will not result in mortality or injury to the SFGS by PG&E, its contractors or other agents. If injury or mortality to an individual SFGS occurs as a result of Project activities, PG&E, its contractors and other agents shall immediately cease all project activities within the West-of-Bayshore parcel and shall immediately contact DFG and the U. S. Fish and Wildlife Service (the "Service") pursuant to section 5.0 of this Agreement. Any injury to or mortality of an individual SFGS may result in amendment of this Agreement to specify additional measures to avoid further mortality or injury to the species. PG&E agrees not to resume or allow its contractors or agents to resume Project activities on the West-of-Bayshore parcel until DFG agrees that sufficient measures are in place to avoid further mortality or injury to SFGS.

4 Project Representative

Before initiating the reconductoring activities and installation of guard structures and ground rods, PG&E shall designate a representative responsible for communications with DFG and for overseeing compliance with this Agreement. DFG shall be notified in writing of the representative's name, business address, and telephone number, and shall be notified in writing if a substitute representative is designated.

4.2 Biological Monitor

4.2.1. Knowledgeable and experienced biologists approved by DFG shall be retained by PG&E as biological monitors and shall be present during all Project activities within areas of SFGS habitat to help avoid mortality or injury of individual SFGS and to minimize disturbance to the habitat. Biologists who hold or are named on a valid 10(a)(1)(A) Federal Scientific Collection permit issued by the Service for handling SFGS (hereinafter referred to as "permitted biologist") shall be the only individuals allowed to handle SFGS. All biological monitors shall provide quality control and quality assurance for implementation of the measures to avoid mortality or injury to SFGS. The biological monitors shall ensure compliance with the measures provided in this Agreement. The biological monitors shall inspect each activity area daily immediately before activities begin and continually monitor in advance of the work crew. If a snake is found, the monitor shall call a permitted biologist.

4.2.2 PG&E and its contractors and agents working on the West-of-Bayshore parcel shall provide biological monitors with the express authority to order any immediate changes in Project activities that are necessary to bring those activities into compliance with this Agreement, or to otherwise avert a risk of imminent mortality or injury of SFGS, and to stop any

activity that cannot be or has not been brought into immediate compliance. DFG and the Service shall be notified the same day or within 24 hours of circumstances that led biological monitors to halt work or to take other actions to ensure compliance with this Agreement, or to otherwise avert threatened mortality or injury of SFGS.

Prior to drilling holes for the guard structure poles, the following shall occur:

a. A permitted biologist shall inspect the pole location, and out from the pole location a distance of 15 feet, for rodent burrows.

b. All rodent burrows that are encountered shall be hand dug by the permitted biologist to clear the burrows. A biological monitor may assist in clearing burrows, only under the supervision of the permitted biologist.

c. At the guard structure between towers 4/36 and 4/37, if no rodent burrows are found, the truck-mounted 24-inch auger may be used exclusively to excavate the holes for the structure. If rodent burrows are found, the procedure outlined in section 4.2.3.d. shall apply.

d. At the guard structure near 4/38, the holes shall be hand dug until the permitted biologist determines that all rodent burrows have been hand excavated or that the soil type or other relevant factors preclude the existence of additional rodent burrows. Once the permitted biologist has made this determination, the truck-mounted 24-inch auger may be used to complete the holes for the structure.

4.2.4 Prior to driving the ground rods into the ground, a permitted biologist shall inspect the location of the ground rod, and out from the rod location a distance of six (6) feet, for rodent burrows. All rodent burrows that are encountered shall be hand dug by the permitted biologist to clear the burrows. A biological monitor may assist in clearing burrows under the supervision of the permitted biologist.

4.2.5 A biological monitor shall inspect underneath any vehicle that is parked for 30 minutes or more immediately prior to moving the vehicle.

One biological monitor shall be continually present during the following activities:

a. Guard structure installation.

b. Ground rod installation.

c. Movement of equipment larger than a pickup truck onto or off of the site using access roads. A biological monitor shall walk in front of the equipment and watch for snakes.

d. Movement of any equipment onto or off of undisturbed areas as necessary to conduct activities adjacent to or in alignment of, towers, (including, but no limited to line trucks, trailers, cranes, pickup trucks, etc.). A biological monitor shall walk in front of the equipment and watch for snakes.

e. All vegetation clearing, whether cleared by hand or weed whacker.

f. Pole removal near 4/36.

4.2.7 Neither the biological monitors nor DFG shall be liable for any costs incurred in complying with the measures in this Agreement, including a halt of Project activities.

4.2.8 Each biological monitor shall be supplied by PG &E with an operable cellular phone for the purpose of efficient communication on site.

4.2.9 Each biological monitor shall be supplied with a copy of this signed Agreement for the purpose of ready reference in the field.

4.2.10 PG&E agrees to provide DFG and Service representatives with access to the biological monitors for purposes of discussing implementation of the measures to avoid mortality or injury of SFGS.

4.3 Delineation of Project Area

4.3.1 Numbered tower locations shall be as those delineated in the map attached as Exhibit 1 (Map entitled San Mateo-Martin No.4 Conversion Project) and in the aerial photographs attached as Exhibit 2 (Photos labeled Jurisdictional Waters and Wetlands of the United States, Figures 2-1 through 2-5, originally from the document entitled Pacific Gas and Electric Company San Mateo-Martin 115kV Circuit Number 3 Reconductoring Project, dated October 1999).

4.3.2 Tower specific work shall be as described in the table attached as Exhibit 3 (Table entitled Table 1-1 PG&E San Mateo-Martin Number 4 60 kV Conversion Project, dated November 2002; pages 1-15 through 1-23.

4.3.3 PG&E, its contractors and agents shall restrict activity areas to the minimum area necessary to transport materials and equipment to the towers and laydown areas. Road access and laydown areas shall be clearly delineated by posting stakes, flags, and/or rope or cord, as directed by DFG and the Service.

4.3.4 Once work begins, all Project-related parking and equipment storage shall be confined to established roads, or to areas off the West-of-Bayshore. Undisturbed areas shall not be used for parking or equipment storage except at the tension and pull sites and at sites where a crane or aerial lift is required to be used for multiple days. Project related vehicle traffic shall be restricted to established roads or laydown areas adjacent to towers where equipment shall be positioned to conduct the necessary tower, guard structure, and grounding activities.

4.3.5 Clearance of parking or laydown areas or when plywood or timber mats, or steel plates are required to be placed in the case of wet or unstable ground, shall be preceded by the following:

a A permitted biologist shall inspect the area to be covered by the mats or plates for rodent burrows.

b. All rodent burrows that are encountered shall be hand dug by the permitted biologist to clear the burrows. A biological monitor may assist in clearing burrows, only under the supervision of the permitted biologist.

If the mats or steel plates must remain in place for more than one day, dirt or sand bags shall be used to seal the edges of the mats or plates to prevent snakes from crawling underneath them.

4.3.6. When plywood or timber mats, or steel plates are removed, a biological monitor shall inspect underneath the mats or plates.

4.3.7 Driving off access roads, except for the positioning of critical equipment is prohibited

4.3.8 All entry gates to the West-of-Bayshore parcel that are not used for construction access shall be locked at all times. All gates to the West-of -Bayshore parcel that are used for construction access, shall be kept closed when not in use during construction hours and shall be locked during non-construction hours.

4.3.9 Biological monitors shall designate access points to work site off access roads in undisturbed areas for PG&E, its contractors and agents, prior to beginning work each day.

4.4 Employee Orientation

4.4.1. PG&E, its contractors and agents, shall conduct an orientation program for all persons who will work on the West-of-Bayshore parcel. The program shall consist of a brief presentation from a permitted biologist, knowledgeable about the biology of the SFGS, regarding the terms of this Agreement. The education program shall include a discussion of the biology of the SFGS, the habitat needs of this species, its status under CESA, and the conservation and

protection measures in this Agreement as well as those required by the Service. A fact sheet containing this information shall also be prepared and distributed. Upon completion of the orientation, employees shall sign a form stating that they attended the training and understand all of the conservation and protection measures. These forms shall be submitted to DFG through Dave Johnston at the address in section 5.2.1. Employees assigned to the job after the initial presentation must receive the same training and sign the form before beginning work.

4.4.2. Personnel who detect any snake on site shall cease work in the vicinity and immediately report their finding to a biological monitor for a determination as to whether the detected snake is a SFGS. Personnel shall not attempt to capture or move any snake detected. If the biological monitor determines that the snake is not a SFGS, the biological monitor may hand capture and move the snake in a manner consistent with this Agreement. If the biological monitor determines that the detected snake is a SFGS, or is unable to positively identify the snake, then the biological monitor shall notify the permitted biologist for appropriate action.

4.5 Other Measures Prior to, During and After Construction

4.5.1 PG&E shall enforce a ten (10) mile per hour (m.p.h.) speed limit on the established access roads on the West-0f-Bayshore parcel.

4.5.2 When overnight parking is necessary for equipment larger than a pickup truck, a containment tarp shall be set up under the equipment to catch any leaking fuel or oil. No pickup trucks shall be parked on West-of-Bayshore overnight.

4.5.3 All vehicles entering the parcel shall carry a functional fire extinguisher and shall be used immediately to extinguish fire caused by the work or other activities.

4.5.4 All excavated material shall be hauled off site and disposed of properly No material shall be stockpiled on West-of Bayshore.

4.5.5 Vegetation shall not be cut closer than four to six inches to the ground, whether by hand or weed whacker. All other methods for vegetation removal, including but not limited to, discing and herbicide application, are prohibited.

4.5.6 All vegetation cut on the West-of-Bayshore parcel shall be removed the same day it is cut.

4.5.7 All holes created from either ground structure pole or ground rod placement shall be backfilled with native soil or clean sand.

4.5.8 All food related trash items shall be removed from the site daily

4.5.9 PG&E, its contractors and agents shall strictly enforce a prohibition on all smoking on the West-of Bayshore parcel.

4.6 Access to Project Site

PG&E and its contractors and agents shall allow DFG and Service representatives access to the Project site without advance notice, subject to reasonable safety restrictions as PG&E requests. PG&E shall provide for specified DFG and Service representatives to receive appropriate clearance to access the Project site for the life of the Project.

4.7 Compliance Inspections and Report

4.7.1. Within thirty (30) days of completing construction on the West-of-Bayshore parcel, PG&E shall provide to DFG and the Service a final, post-construction compliance report. The report shall be prepared by a knowledgeable, experienced biologist and shall include the following: (1) construction dates; (2) verification that measures in this Agreement were fully implemented; (3) identification of any measures that were not fully implemented; (4) a description of Project effects on SFGS, SFGS prey and habitat; and (5) other pertinent information.

4.7.2 Daily field monitoring forms shall be maintained by the on-site biological monitors to document project implementation. Monitoring forms shall describe the progress of the work, any difficulties encountered, observation of SFGS, and any other pertinent information regarding project implementation. These forms shall be submitted to DFG and Service for review on a weekly basis.

4.7.3 A pre-activity site meeting shall be arranged by PG&E in consultation with DFG for the purpose of allowing DFG representatives to review the terms of this Agreement. The meeting shall include PG&E, its contractors and agents, permitted biologists and biological monitors, DFG, and the Service. It is to be held no more than thirty (30) days prior to the start of the Project on the West-of-Bayshore parcel.

4.7.4 A post-activity site meeting will be held for PG&E, its contractors and agents, permitted and other biological monitors, DFG, and the Service within two weeks after the completion of the Project to assess the effectiveness of the terms of this Agreement.

4.8 Preservation and Habitat Restoration

To avoid incidental take of SFGS resulting from loss or disturbance of habitat, all related construction materials for the Project shall be removed from the Project site in a manner consistent with the terms of this Agreement.

5.0 NOTIFICATION

Notification Regarding Dead or Injured Animals

5.1.1 DFG believes that implementation of the measures in this Agreement will allow the Project to be constructed without mortality or injury to SFGS by PG&E, its contractors or agents. If, however, PG&E or any of its employees, contractors or agents kills or injures an individual SFGS, or finds any such animal dead or injured, Project activities on the West-of-Bayshore parcel shall immediately cease and DFG and Service shall be notified within 30 minutes of the discovery.

5.1.2 Any dead or injured animal shall be turned over to DFG, the Service or its agent.

5.1.3 A written report detailing the date, time, location, and general circumstances under which a dead or injured individual SFGS was found shall be submitted to DFG and the Service no later than three (3) business days following the incident.

5.2 Contact Information

5.2.1 Whenever PG&E is required to provide notification to DFG under this Agreement, that notification, except when specifically stated otherwise, shall be delivered to Dave Johnston, Environmental Scientist, at (831) 475-9065; djohnston@dfg.ca.gov. If Mr. Johnston cannot be reached in person, PG&E shall leave a message, if an answering machine is operating, and additionally shall contact Scott Wilson at Regional Headquarters at (707) 944-5584. All required written notices shall be made to Scott Wilson, Conservation Planning Supervisor, Central Coast Region, P. O. Box 47, Yountville, CA 94599, and to Dave Johnston, P.O. Box 4169, Santa Cruz, CA 95063.

5.2.2 Whenever PG&E is required to provide notification to the Service under this Agreement, that notification, except when specifically stated otherwise, shall be delivered to Valary Bloom, Staff Biologist, (916) 414-6626, U. S. Fish and Wildlife Service, 2800 Cottage Way, W-2605, Sacramento, CA 95825.

5.2.3 Whenever DFG is required to provide notice to PG&E under this Agreement, that notice will be delivered to Mr. Robert M. Masuoka, Mail Code N10A, Post Office Box 770000, San Francisco, CA 94177, (415) 973-8273.

5.2.4 Contact names, addresses and telephone numbers in this section may be amended by providing written notice to the other party and to the Service.

6.0 ENTIRE AGREEMENT

This Agreement comprises the entire agreement and understanding between the Parties concerning the Project impacts on the SFGS. This Agreement supersedes all prior and contemporaneous agreements, representation or understandings, whether oral or written. If this Agreement conflicts with anything contained in the Exhibits attached hereto, this Agreement will control.

7.0 GOVERNING LAW

This Agreement shall be governed by the laws of the State of California. Actual or threatened breach of this Agreement may be prohibited or restrained by a court of competent jurisdiction.

8.0 FURTHER ACTIONS

8.1. The Parties shall by mutual agreement execute such instruments and other documents, and take such other actions, as may be reasonably necessary to carry out the terms of this Agreement. This Agreement cannot be amended or modified in any way except by a written instrument duly executed by the Parties. Any proposal for amendment or modification must be delivered to the other party for review and approval by the appropriate representative. Any requests by PG&E for amendment of this Agreement must be sent to Mr. Scott Wilson, Conservation Planning Supervisor, Central Coast Region, P. O. Box 47, Yountville, CA 94599.

8.2 PG&E and DFG agree that if an individual SFGS is injured or killed at the Project site, Project activities on the West-of-Bayshore parcel will immediately cease and PG&E and DFG will consult as to what additional measures may be warranted to avoid further mortality or injury to SFGS. PG&E agrees not to resume activities or allow its contractors or agents to resume activities on the West-of-Bayshore parcel until DFG states in writing that it is satisfied that adequate measures are in place to avoid further mortality or injury to the SFGS.

8.3 The following circumstances shall require an amendment to this Agreement

a. Any change in Project activities on the West-of-Bayshore parcel that, in the determination of DFG, has the potential to impact SFGS habitat or to otherwise increase the risk of mortality or injury of SFGS.

b. Any off-road travel on the West-of-Bayshore parcel that is not consistent with this Agreement.

9.0 REMEDIES

If DFG determines that there is a breach of the terms of this Agreement, DFG shall give written notice to PG&E of such breach and of the specific corrective action sufficient to cure the breach. If PG&E fails to cure a breach within three (3) days after receipt of notice of such a breach from DFG, provided that the breach can be cured within three (3) days, or if PG&E fails to continue diligently to cure such breach, DFG may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Agreement, or alternatively, in its sole discretion, may cancel this agreement upon written notification to PG&E that the uncured breach creates an unacceptable risk that SFGS will be killed or injured. PG&E and its employees and agents assume all risk, criminal and civil, for any mortality or injury to SFGS. Nothing in this Agreement shall be construed to entitle DFG to bring any action against PG&E for any injury to

or change in the property resulting from causes beyond PG&E control, including, without limitation, fire, drought, flood, mud slide, and storm.

10.0 TERMINATION

This Agreement shall terminate upon completion of construction of the Project and all measures identified under this Agreement, or upon DFG's cancellation of this agreement pursuant to section 9.0.

DISCLAIMER

DFG believes this Agreement contains measures that, if fully implemented, will allow PG&E to avoid mortality or injury of SFGS in constructing the Project. PG&E understands and recognizes that this Agreement does not constitute or imply compliance with other applicable State or Federal laws and regulations and, to that extent, does not create an entitlement to proceed with the Project.

EFFECTIVE DATE

This Agreement shall be immediately effective upon execution by the Parties.

EXHIBITS

This Agreement includes and incorporates the following:

EXHIBIT 1 Map entitled San Mateo-Martin No.4 Conversion Project

EXHIBIT 2 Photos labeled Jurisdictional Waters and Wetlands of the United States, Figures 2-1 through 2-5, originally from the document entitled Pacific Gas and Electric Company San Mateo-Martin 115kV Circuit Number 3 Reconductoring Project, dated October 1999

EXHIBIT 3 Table entitled Table 1-1 PG&E San Mateo-Martin Number 4 60 kV Conversion Project, dated November 2002; pages 1-15 through 1-23.

The Parties acknowledge and accept the terms and conditions of this Agreement as evidenced by the following signatures of their duly authorized representatives. It is the intent of the Parties that this Agreement shall become operative on the last date written below.

PACIFIC GAS AND ELECTRIC COMPANY

RICHARD A. GIGLIOTTI
Manager

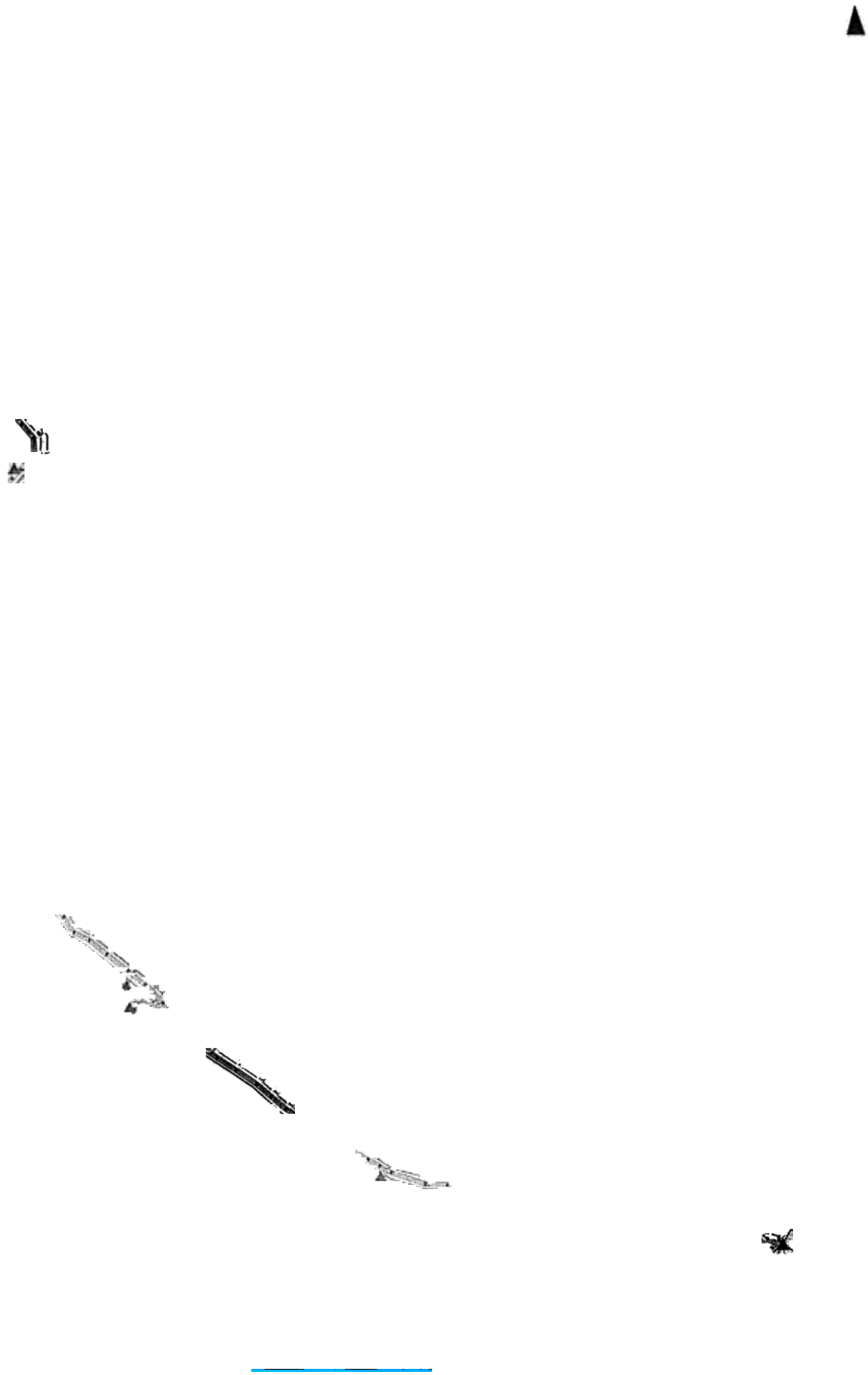
Date: 8.5.03

CALIFORNIA DEPARTMENT OF FISH AND GAME

ROBERT W. FLOERKE
Regional Manager, Central Coast Region

Date: July 14, 2003

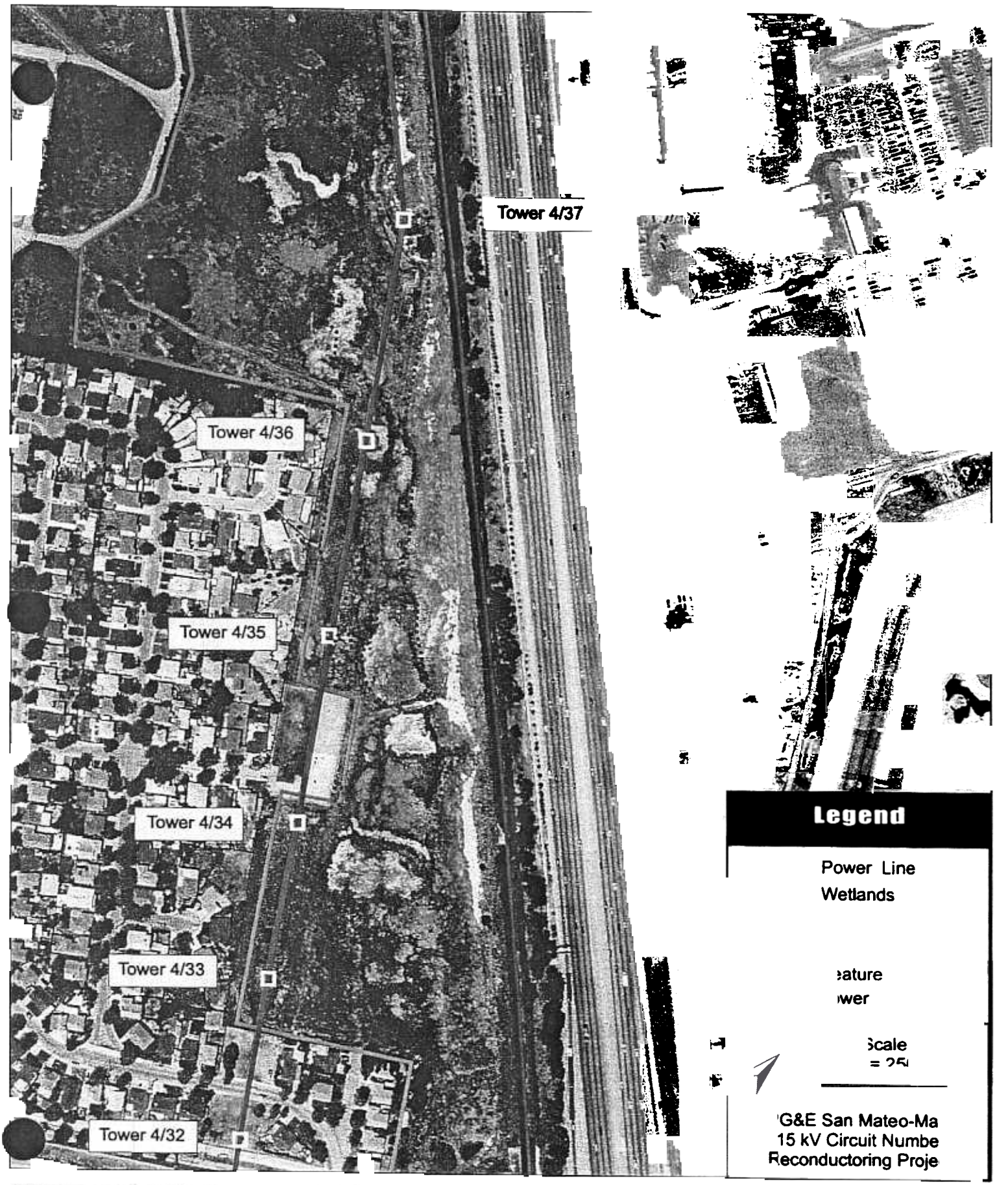
EXHIBIT 1 Map entitled San Mateo-Martin No.4 Conversion Project



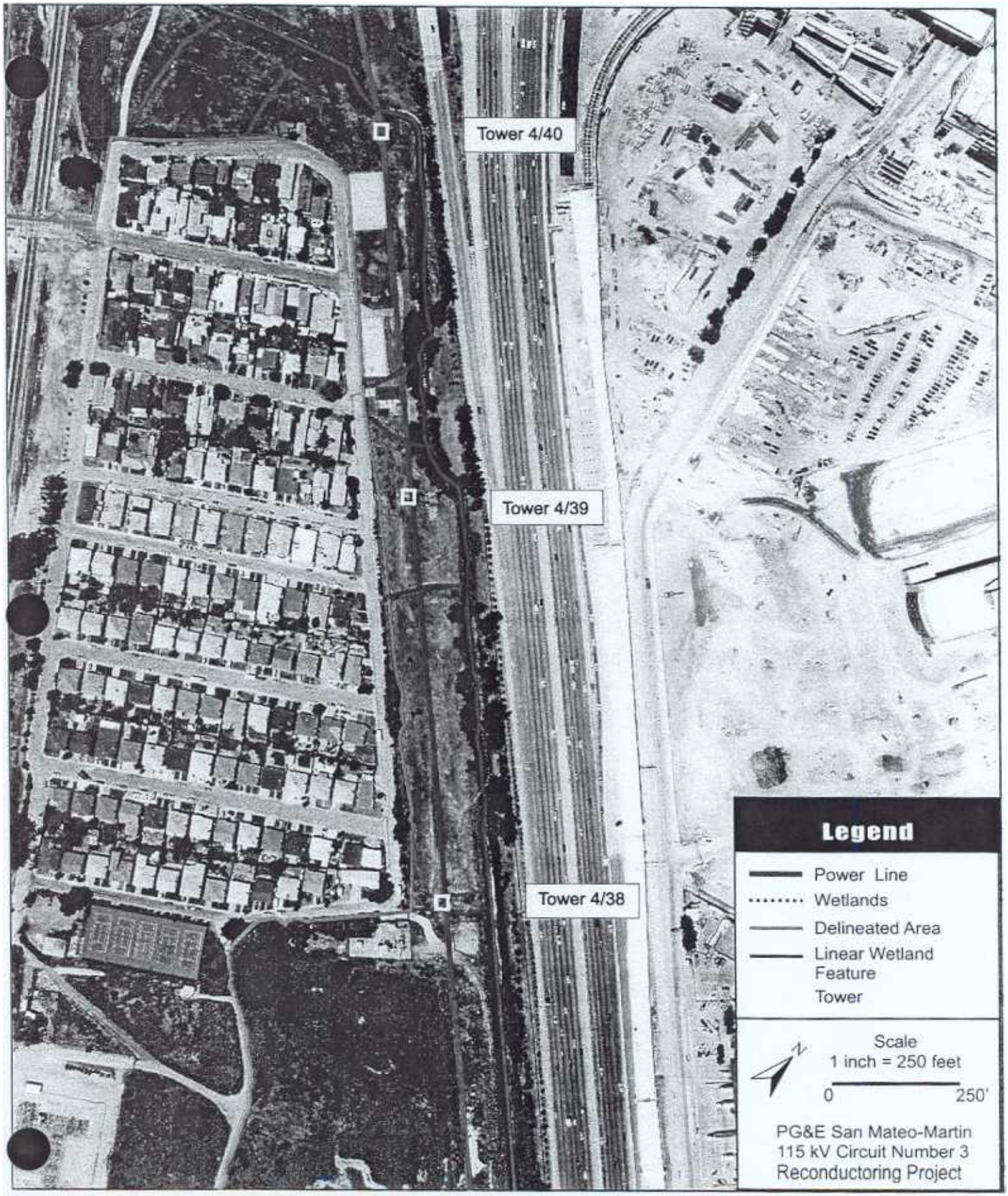
roiect Route Map

FIGURE

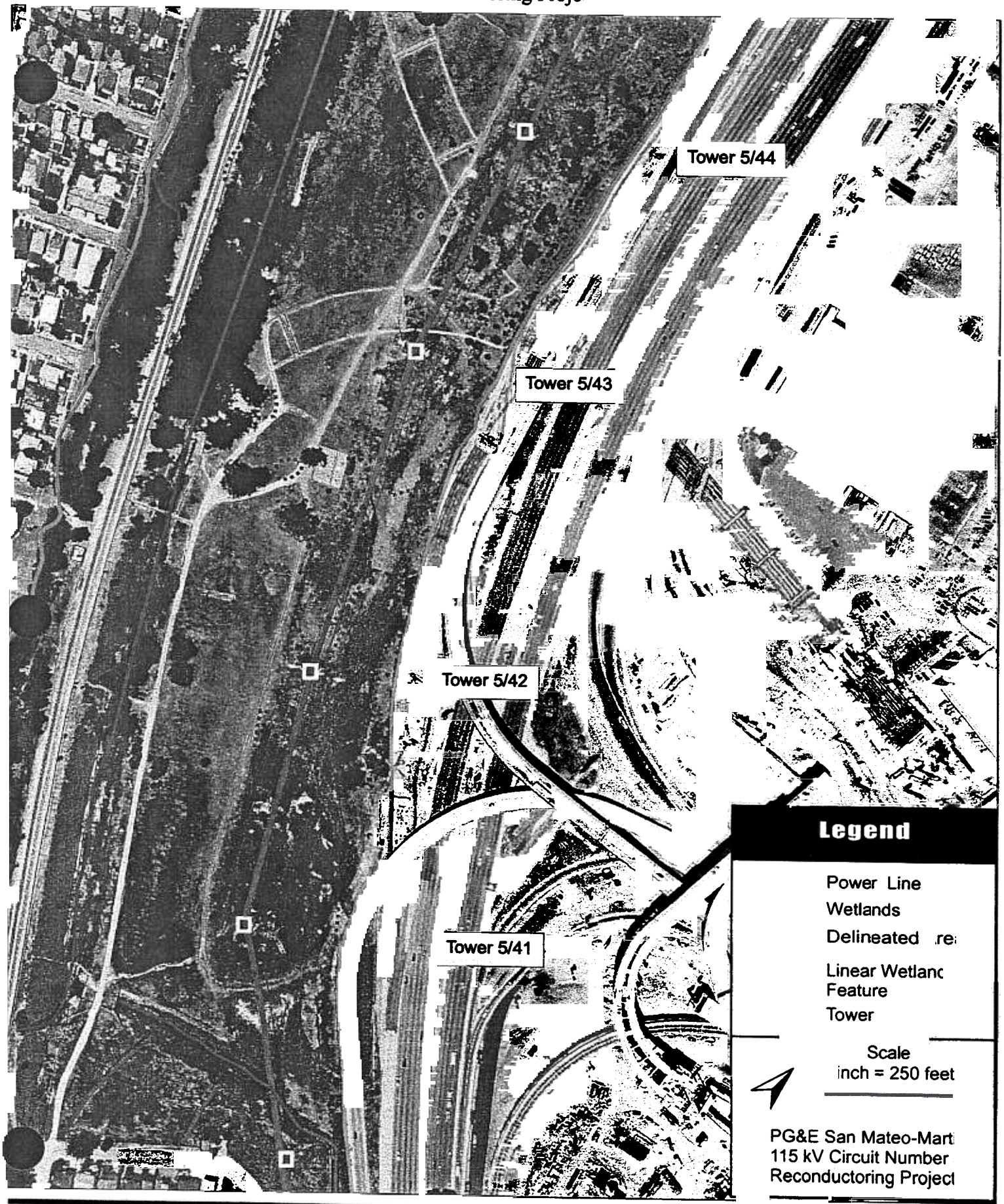
EXHIBIT 2: Photos labeled Jurisdictional Waters and Wetlands of the United States, Figures 2-1 through 2-5, originally from the document entitled Pacific Gas and Electric Company San Mateo-Martin 115kV Circuit Number 3 Reconductoring Project, dated October 1999



Jurisdictional Wetlands and Waters of the United States **FIGURE 2-1**

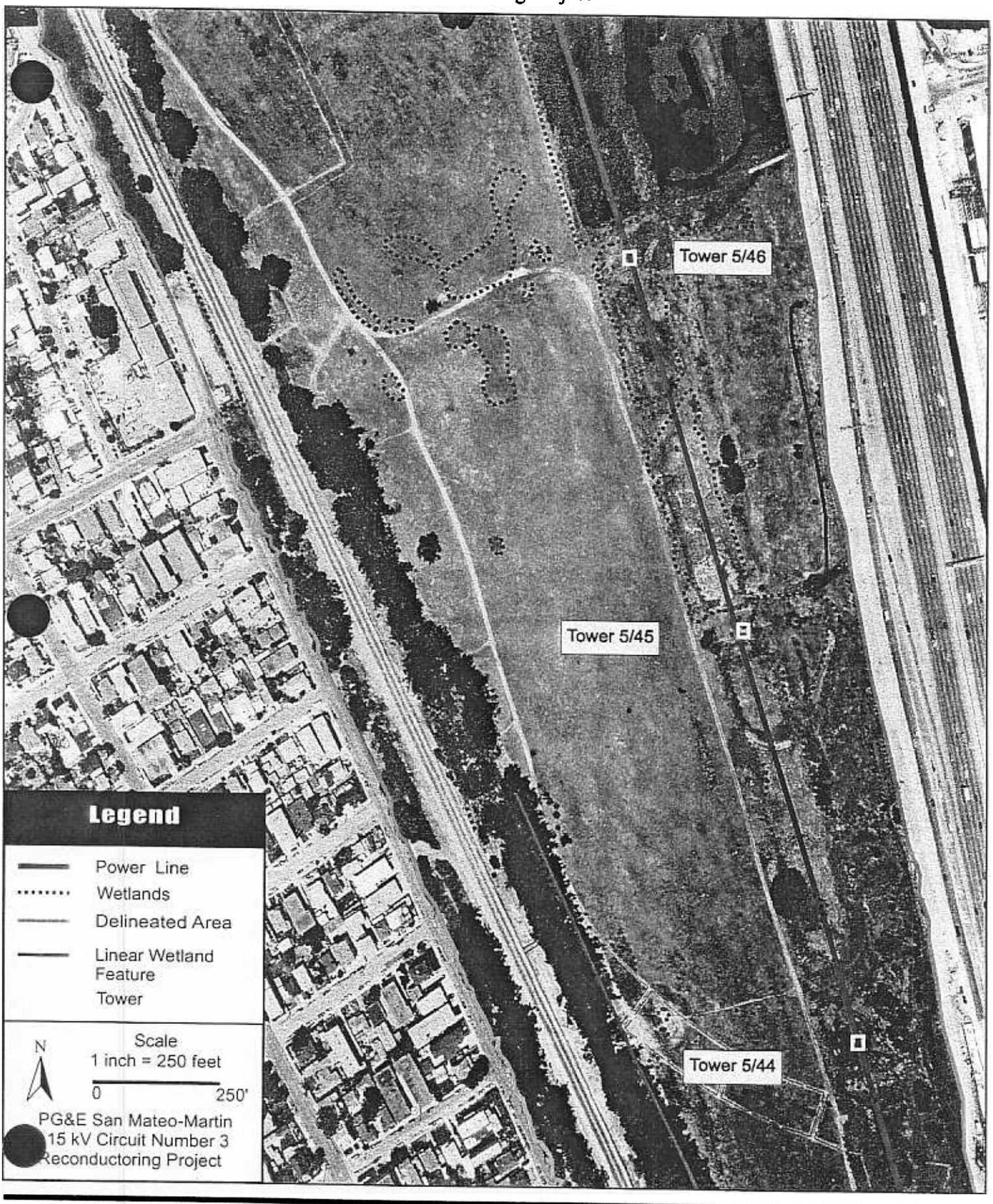


Jurisdictional Wetlands and Waters of the United States **FIGURE 2-2**

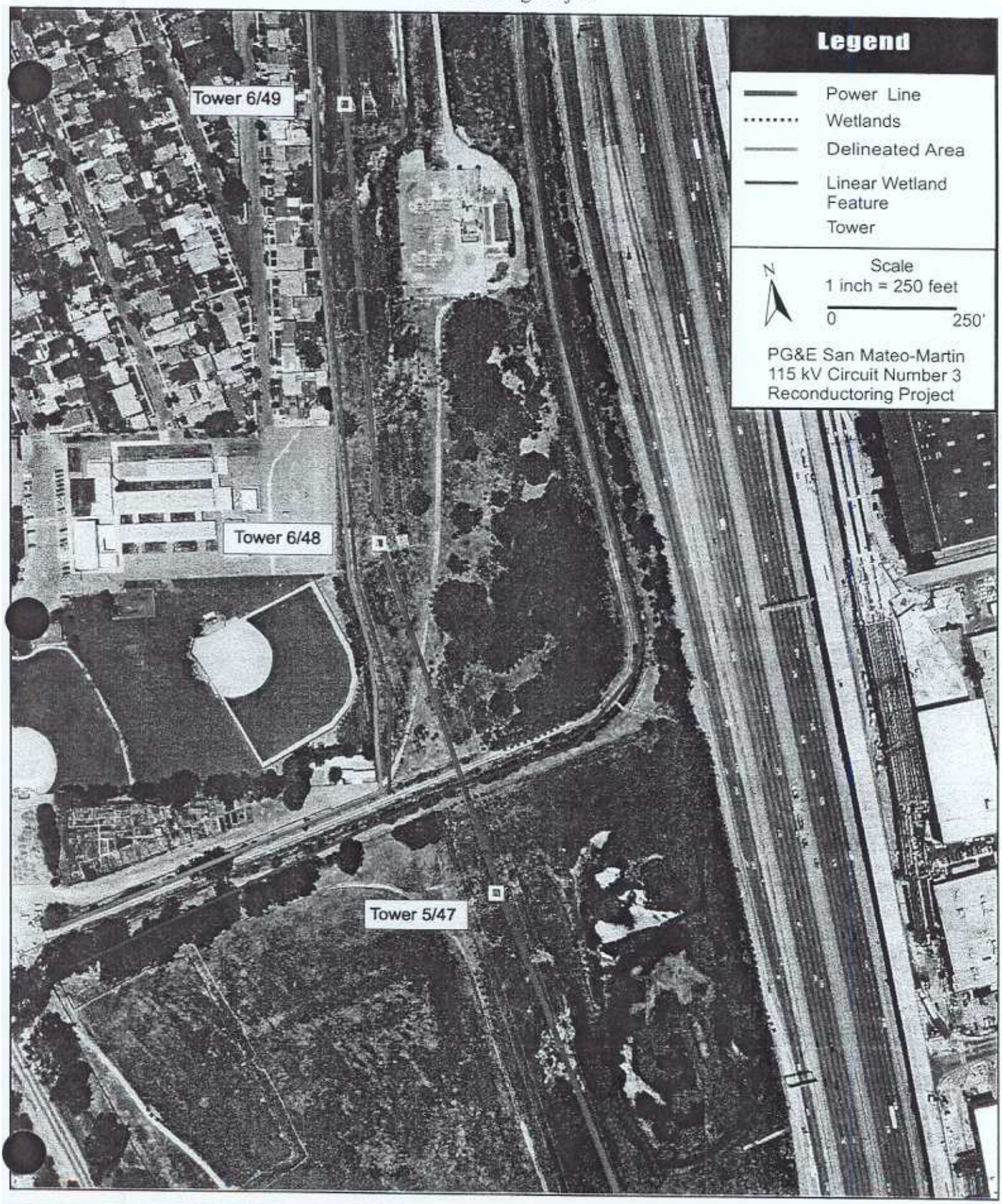


Jurisdictional Wetlands and Waters of the United States

FIGURE 2-3



Jurisdictional Wetlands and Waters of the United States **FIGURE 2-4**



Jurisdictional Wetlands and Waters of the United States **FIGURE 2-5**

EXHIBIT 3: Table entitled Table 1-1 PG&E San Mateo-Martin Number 4 60 kV Conversion Project, dated November 2002; pages 1-15 through 1-23.

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
4/31	No	No	No	Yes	Bay Area Rapid Transit (BART) parking lot	Existing access road, foot, and helicopter	• Pick-up trucks • Helicopter • Boom truck	• Install rollers, clip in wire, and remove rollers • Attach dead-end eye to tower
4/32	Yes; 100 by 200	No	No	Yes	Urbanized areas (residential, commercial, industrial)	Existing access roads, foot, and helicopter	• 5-ton line truck • Aerial truck • Rope truck • Truck-mounted puller or tensioner • Pickup trucks • Helicopter • Boom truck	• Install rollers and insulators, clip in wire, and remove rollers. • Attach dead-end eye to tower
West of Bayshore Parcel								
4/33 to 4/35	No	No	No	No	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers • Clear vegetation

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
4/36	No	No	No	No	Delineated wetlands; San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers. • Clear vegetation
West of 4/36	No	No	No	No	Delineated wetlands; San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Remove the two 60 kV wood poles once conversion is completed by cutting them below ground level • Minor filling with spoil from auguring, and abandon bases of poles in place

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
Between 4/36 and 4/37	No	No	Yes	No	Delineated wetlands; San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter • Mobile crane	• Use digger to dig pole hole 6 feet deep • Install temporary guard structure consisting of six wood poles (50 feet Class 4) with one anchor (7/132 down guy) for each pole 15 inches from pole using utility truck • Install netting across poles • Remove temporary crossing structure once construction is complete over 115 kV line and fill holes (approximately 3 cubic yards of fill)
4/37	No	No	No	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter • Boom truck	• Install rollers and insulators, clip in wire, and remove rollers • Attach dead-end eye to tower

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
4/38	No	No	Yes	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter • Boom truck	• Install rollers and insulators, clip in wire, and remove rollers • Attach dead-end eye to tower • Use digger to dig pole hole 6 feet deep • Install temporary crossing structure consisting of 4 wood poles (50 feet Class 4) with one anchor (one 7/132 down guy) for each pole 15 inches from pole using utility truck • Install netting across poles • Remove temporary crossing structure once construction is complete over 115kV line and fill holes (approximately 2 cubic yards of fill)

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
4/39	No	No	No	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter • Boom truck	• Install rollers and insulators, clip in wire, and remove rollers. • Attach dead-end eye to tower
4/40	No	No	No	No	Delineated wetland; San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers
5/41	No	Yes; modification	No	No	Delineated wetlands; San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Replace existing cross arm with new cross arm and convert to dead-end • Replace one cross member • Install rollers and insulators, clip in wire, and remove rollers
5/42	No	No	No	No	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
5/43	No	No	Yes	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Condor truck • Pickup trucks • Helicopter • 25-ton crane	• Install rollers and insulators, clip in wire, and remove rollers • Attach dead-end eye to tower • Use digger to dig pole hole 10 to 14 feet deep • Install temporary crossing structure consisting of four wood poles (90 to 100 feet above ground) with up to two anchors (7/132 down guys) for each pole 15 inches from pole using crane • Install netting across poles • Remove temporary crossing structure once construction is complete over BART tracks and fill holes (approximately 7 cubic yards of fill)

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
5/44	No	No	Yes	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Condor truck • Pickup trucks • Helicopter • 25-ton crane	• Install rollers and insulators, clip in wire, and remove rollers • Attach dead-end eye to tower • Use digger to dig pole hole 10 to 14 feet deep • Install temporary crossing structure consisting of four wood poles (90 to 100 feet above ground) with up to two anchors (7/132 down guys) for each pole 15 inches from pole using crane • Install netting across poles • Remove temporary crossing structure once construction is complete over BART tracks and fill holes (approximately 7 cubic yards of fill)

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
5/45	No	No	No	No	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers
5/46	No	No	No	No	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers
5/47	No	No	No	No	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• Install rollers and insulators, clip in wire, and remove rollers
6/48	Yes; two 100 by 200 sites south and west of tower	No	No	Yes	San Francisco garter snake and California red-legged frog habitat	Existing access roads, foot, and helicopter	• 5-ton line truck • Aerial truck • Rope truck • Truck-mounted puller and/or tensioner • 3-reel truck and trailer • Pickup trucks • Helicopter • Boom truck	• Pull or tension sites • Install rollers and insulators, clip in wire, and remove rollers • Attach dead-end eye to tower

Tower Number	Pull or Tension Site (Yes/No) and Dimensions in Feet	Tower Modification or Minor Reinforcement (Yes/No)	Guard Structure (Yes/No)	Dead-end Structure (Yes/No)	Land Use and Site Conditions[1] (in addition to existing overhead transmission line corridor)	Access	Equipment	Work to Be Performed
6/49	**No**	**No**	**No**	**Yes**	**Delineated wetlands in access; San Francisco garter snake and California red-legged frog habitat**	**Existing access roads, foot, and helicopter**	• **Pickup trucks** • **Helicopter** • **Boom truck**	• **Install rollers and insulators, clip in wire, and remove rollers**
Towers 6/50–8/67								
6/50 to 6/51	No	**No**	No	No	Urbanized	Existing access roads, foot, and helicopter	• Pickup trucks • Helicopter	• **Install rollers and insulators, clip in wire, and remove rollers**
6/52	Yes; 180 by 120	**No**	No	Yes	Under Interstate 380 interchange	Existing access roads, foot, helicopter	• 5-ton line truck • Aerial truck • Rope truck • Truck-mounted puller and/or tensioner • 3-reel truck and trailer • Pickup trucks • Helicopter • Boom truck	• **Pull or tension site** • **Install rollers and insulators, clip in wire, and remove rollers** • **Attach dead-end eye to tower**

San Mateo-Martin #4 Conversion Project

Project Features

- Towers
- Tower 1/8 in SF Bay
- San Mateo-Martin #4

Transmission Features

- Substation
- Co-gen
- Transmission line
- Transmission line
- Transmission line

Other Features

- City Boundary

Environmental Features

- Burlingame Lagoon
- SF Garter Snake/CRLF
- San Bruno Mountain
- Delineated Wetlands

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ejp0 08/12/02

SAN FRANCISCO
DALY CITY
MARTIN SC
MARTIN (STATION "H")
11/86A
BRISBANE
SOUTH SAN FRANCISCO
EAST GRAND
UNITED CO-GEN INC
SHAW ROAD (BART)
SAN BRUNO
San Francisco International Airport
MA
MILLBRAE
SAN ANDREAS
MILLBRAE JCT
BURLINGAME
SAN MATEO
HILLSBOROUGH
LELAND AVE
HAHN ST
TUNNEL AVE
MARTIN ST
BAYSHORE BLVD
SIERRA POINT PKWY
AIRPORT BLVD
PALM AVE
MAPLE AVE
4TH LN
MILLER AVE
BADEN AVE
1ST LN
2ND LN
3RD LN
LINDEN AVE
RAILROAD AVE
N CANAL ST
FIR AVE
S LINDEN AVE
HARBOR WAY
UTAH AVE
HERMAN ST
W B RD
I 380
GREEN AVE
3RD AVE
HUNTINGTON AVE
BEECH AVE
CYPRESS AVE
ELM AVE
MCDONNELL RD
HELEN DR
ANITA DR
PALM AVE
POPLAR AVE
ASHTON AVE
HAZEL AVE
I 280
SERVICE RD
US 101
ADRIAN RD
CALIFORNIA DR
EL CAMINO REAL
BERNAL AVE
CORTEZ AVE
DRAKE AVE
BALBOA AVE
VANCOUVER AVE
HILLSIDE DR
LAGUNA AVE
CAROLAN AVE
PALM DR
OAK GROVE AVE
BURLINGAME AVE
HOWARD AVE
BAYSWATER AVE
CHANNING RD
N IDAHO ST
PARK RD
STATE ST
BARROILHET AVE
N SAN MATEO DR
N DELAWARE ST
N HUMBOLDT ST
TILTON AVE
1ST AVE
2ND AVE
E 4TH AVE
7TH AVE
PATRICIA AVE
OTTAWA ST

0 0.5 1 Miles

0 1000 2000 Meters

Scale: Approx 1:40,000