CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

PAUL D. THAYER, *Executive Officer*
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California Relay Service From TDD Phone **1-800-735-2922**
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SCH No. 2007062091
CSLC EIR No. 740
CSLC File #: W26210, R19806

NOTICE OF AVAILABILITY OF A REVISED FINAL ENVIRONMENTAL IMPACT REPORT AND NOTICE OF INTENT TO CERTIFY AN ENVIRONMENTAL IMPACT REPORT

Pursuant to Title 2, Section 2906, California Code of Regulations, this is to advise that the California State Lands Commission (CSLC) has completed a Revised Final EIR for the proposed project described below.

Project Title: Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline

Project Location: The proposed pipeline would be approximately 40 miles long spanning four counties: Yolo, Sutter, Sacramento, and Placer. Line 406 would begin at PG&E's existing Lines 400 and 401 in Yolo County at the foot of the Coast Range and extend east to PG&E's existing Line 172A near the town of Yolo. Line 407 would extend from PG&E's existing Line 172A where the proposed Line 406 terminates, east to PG&E's existing Line 123 near the City of Roseville. The proposed Distribution Feeder Main (DFM) would extend from the new Line 407 south and parallel Powerline Road to the Sacramento Metro Air Park development in Sacramento County.

Project Description: PG&E is proposing to construct a 30-inch diameter natural gas pipeline (Lines 406 and 407) and a new distribution feeder main from Esparto in Yolo County east to a location near Roseville in Placer County. The Project would also include the construction of six above-ground facilities.The proposed pipeline would provide greater capacity and service reliability to the existing gas transmission and distribution pipeline system in the Sacramento Valley Region and would deliver natural gas directly to an area of anticipated growth.

An Environmental Impact Report (EIR) identified as EIR No. 740, State Clearinghouse No. 2007062091, has been prepared pursuant to the requirements of the California Environmental Quality Act. On April 29, 2009, a Draft EIR was released for public review and comment, and on July 27, 2009, a Final EIR was released. The Revised Final EIR is being released on October 30, 2009, for public review to provide agencies and the public clarifying information concerning the risk analysis.

Copies of the Draft EIR and Revised Final EIR may be viewed electronically, in Adobe Acrobat format, on the CSLC internet website at: **http://www.slc.ca.gov/**

Copies of the documents are also available for review at the following locations:

CSLC, Attn: Crystal Spurr 100 Howe Avenue, Suite100-South Sacramento, CA 95825 (916) 574-0748 spurrc@slc.ca.gov	Woodland Public Library 250 1st Street Woodland, CA 95695 (530) 661-5982	Roseville Public Library 225 Taylor Street Roseville, CA 95678 (916) 774-5221

Contact:

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825
Phone: (916) 574-0748 or E-mail: spurrc@slc.ca.gov

Potential Significant Impacts on the Environment:

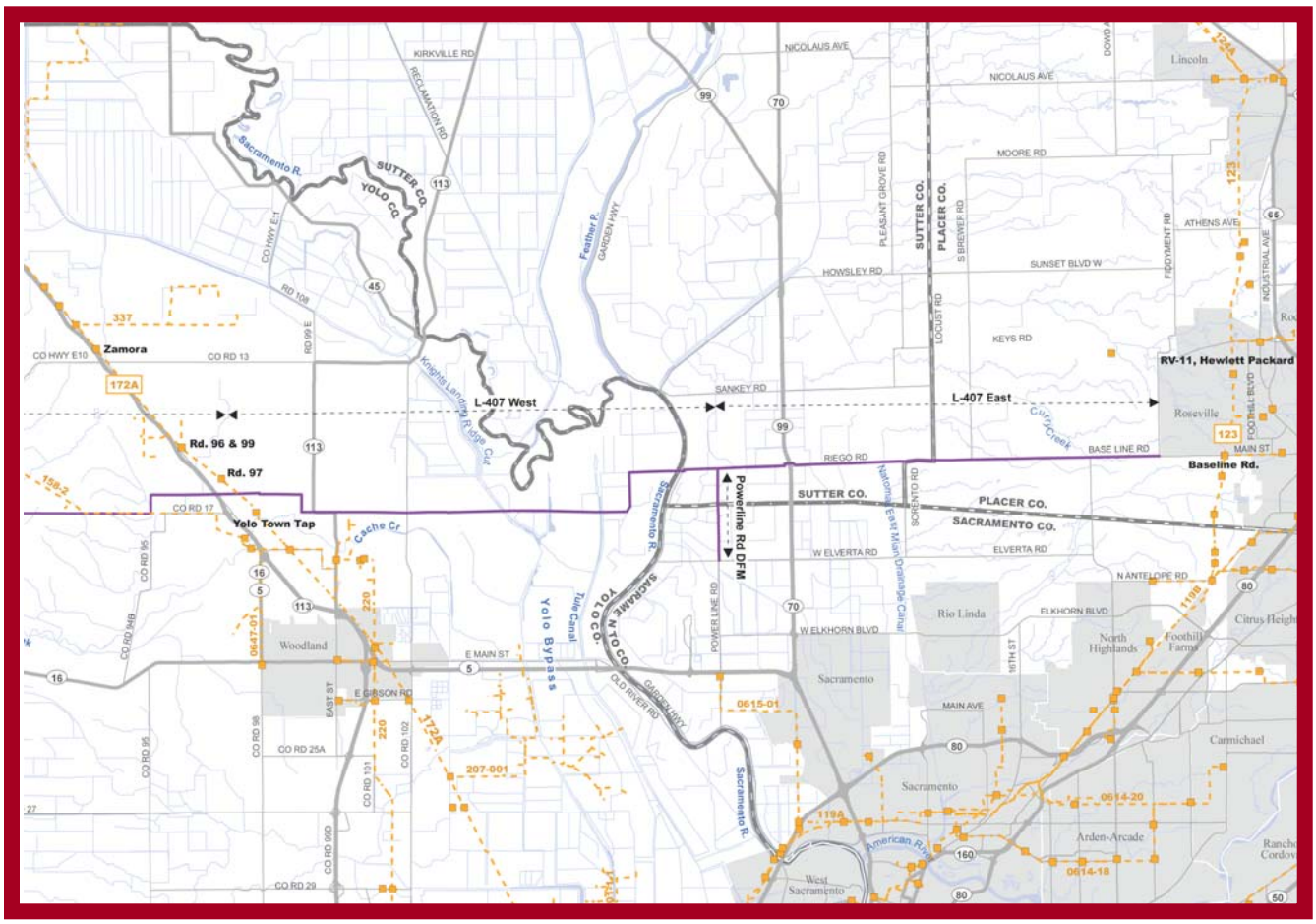
The EIR discusses the potential for significant impacts on the environment in the following subject areas: Biological Resources; Agricultural Resources; Geological Resources; Hazards and Hazardous Materials; Air Quality; Hydrology and Water Quality; Cultural, Historical, and Paleontological Resources; Transportation and Circulation; Aesthetics, Land Use and Planning; Recreation; Population and Housing/Public Services/Utilities and Service Systems; Energy and Mineral Resources; and Noise.

Commission Meeting:

The EIR will be considered for certification at a meeting of the California State Lands Commission scheduled for November 16, 2009 in Sacramento, California. The exact location of the Commission Meeting in Sacramento can be found on the CSLC website at: **http://www.slc.ca.gov**, or by contacting Crystal Spurr at the above telephone number or email address.

Persons wishing to appear at the meeting should call (916) 574-1923 to ensure time is reserved for such appearance.

PAUL D. THAYER
Executive Officer



PG&E Line 406/407 Natural Gas Pipeline Project
Revised Final Environmental Impact Report

State Clearinghouse No.: 2007062091

California State Lands Commission ▪ October 30, 2009

Michael Brandman Associates
2000 "O" Street, Suite 200
Sacramento, CA 95811

Revised Final Environmental Impact Report for PG&E Line 406/407 Natural Gas Pipeline Project Yolo County, Sacramento County, Sutter County, and Placer County, California State Clearinghouse No. 2007062091 California State Lands Commission EIR No. 740

Prepared for:

California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Prepared by:

Michael Brandman Associates
2000 "O" Street, Suite 200
Sacramento, CA 95811

Contact: Kerri Mikkelsen Tuttle, Senior Project Manager

Michael Brandman Associates

October 30, 2009

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1.0 INTRODUCTION

1.1 PURPOSE

A Revised Final Environmental Impact Report (Revised Final EIR) has been prepared for the consideration of a new lease by the California State Lands Commission (CSLC) for a pipeline river crossing at the Sacramento River for the PG&E Line 406/407 Natural Gas Pipeline Project, which spans four counties over 40 miles. This Revised Final EIR supercedes the Final EIR circulated for public review on July 27, 2009.

The Revised Final EIR consists of the April 2009 Draft EIR, comments received during the Draft EIR's 45-day public comment period, responses to those comments, and changes to the text of the Draft EIR. The Revised Final EIR shows changes made to the Responses to Comments since release of the previous Final EIR on July 27, 2009, as underline for new text, and ~~strike-out~~ for deleted text. The Revised Final EIR also shows changes made to the Draft EIR (in their final form by incorporating any previous changes shown in the superceded Final EIR and the changes made as a result of the clarifications presented in this Revised Final EIR as underline for new text, and ~~strike-out~~ for deleted text, and are organized by section of the Draft EIR.

Note that the Revised Final EIR references and incorporates the Draft EIR. The Revised Final EIR and the Draft EIR may be viewed electronically, in Word or Acrobat format, on the CSLC internet website at: http://www.slc.ca.gov/

The Revised Final EIR has been prepared pursuant to the California Environmental Quality Act (the CEQA) (section 21000 et seq., California Public Resources Code) and in accordance with the *Guidelines for the Implementation of the California Environmental Quality Act* (section 15000 et seq., California Code of Regulations, Title 14). The *Guidelines* stipulate that an EIR must be prepared for any project that may have a significant impact on the environment. The PG&E Line 406/407 Natural Gas Pipeline Project is a "project" as defined by the *Guidelines*. Upon preliminary review, the CSLC determined that the PG&E Line 406/407 Natural Gas Pipeline Project may have a significant adverse impact on the environment and, therefore, an EIR is required. The CSLC selected an environmental contractor to prepare the EIR to ensure that the document reflects an independent, objective analysis of the proposed Project.

The CSLC, as the Lead Agency for this project, is required by section 15089 of the CEQA to prepare a Final EIR. The Revised Final EIR will be used by the CSLC as part of its approval process, including setting the conditions of the lease agreement, and incorporating mitigation measures for project implementation. A Mitigation Monitoring Program inclusive of revisions following the publication of the Draft EIR is included in this Revised Final EIR.

The CSLC, as the Lead Agency for this project, is not required to recirculate the EIR because we are not providing "significant new information" requiring recirculation. According to CEQA Guidelines Section 15088.5, recirculation of an EIR would be required if: 1) a new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented; 2) a substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance; 3) a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant impacts of the project, but the project's proponents decline to adopt it; and 4) the Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Recirculation of an EIR is not required where the new information merely clarifies, amplifies, or makes minor modifications to an adequate EIR (CEQA Guidelines Section 15088.5(b). The new information in this Revised Final EIR provides clarification to the risk analysis and revises a mitigation measure that increases public safety.

The Revised Final EIR is being circulated for public review in order to provide agencies and the public details regarding the clarifications made to the risk analysis. Clarifications have been made to the System Safety and Risk of Upset Report prepared by EDM Services, Inc. that was included as Appendix H-3 to the Draft EIR. The Revised System Safety and Risk of Upset report shows changes as <u>underline</u> for new text, and ~~strike-out~~ for deleted text, and is included as Appendix H-3 to this Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, reflect the clarifications to the risk analysis and are provided in Section 4.0 of this Revised Final EIR.

This Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion.

It should be noted that the probability of a puncture or rupture over the 50-year life of the pipeline is very low. A fire could result from a natural gas release only if two conditions are present: 1) a volume of natural gas must be present within the combustible mixture range (5% to 15% methane in air); and 2) a source of ignition must be present with sufficient heat to ignite the air/natural gas mixture (1,000 degrees F). In order for an explosion to occur, a third condition must be present: the natural gas vapor cloud must be confined, to a sufficient degree. Over the life of the pipeline (50 years), the probability of a pipeline release that would result in a fire varies from 3.2% for a rupture to 7.5% for a puncture (1-inch diameter hole); while the probability of a pipeline release that would result in an explosion varies from 2.0% for a rupture to 4.7% for a puncture.

The earlier version of the risk assessment included risk measurement terminology that was not defined in the document, which has resulted in some confusion. The "aggregate risk" was presented in the Draft EIR erroneously as "individual risk". The aggregate risk presents the anticipated annual likelihood of fatalities from all of the project components, which includes approximately 40 miles of 30-inch diameter pipeline, 2.5 miles of 10-inch diameter pipeline, and six fenced, aboveground pressure limiting, pressure regulating, metering, and mail line valve stations. The actual "individual risk", relates to the risk to an individual at a specific location. Individual risk is most commonly defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval. The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year). The individual risks are evaluated using two approaches: a simplified and enhanced approach.

Section 4.1.4 of the Draft EIR correctly stated that a commonly accepted "individual risk" threshold is an annual likelihood of fatality of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). However, the report incorrectly compared the calculated "aggregate risk" to the threshold for "individual risk." Aggregate risk has no known established threshold and is not used in practice to determine individual risk.

The highest individual risk along a segment of pipeline is to persons located immediately above the pipeline. As the distance from each pipeline segment increases, the individual risk decreases. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000,

and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Since the maximum calculated individual risk is less than the threshold, the risk is considered to be less than significant.

1.2 CONTENTS OF THE REVISED FINAL EIR

As required by section 15132 of the CEQA *Guidelines,* the Final EIR consists of the following elements:

- The Draft EIR or a revision of the draft;
- A list of persons, organizations, and public agencies commenting on the Draft EIR (see Section 2.0);
- Comments and recommendations received on the Draft EIR (see Section 3.0);
- Responses to significant environmental points raised in the review and consultation process (see Section 3.0). For ease of reference, those portions of the public meeting transcripts reflecting comments by parties submitting letters immediately follow such letters. The transcripts in their entirety are in Appendix J; and
- Revisions to the Draft EIR (see Section 4.0).

1.3 DECISION MAKING PROCESS

The CSLC is the Lead Agency for this Revised Final EIR because the CSLC has jurisdiction over the Sacramento River that would be crossed by the PG&E Line 406/407 Natural Gas Pipeline Project. The CSLC will use the Revised Final EIR in its decision-making process in determining whether or not to issue a lease of State lands for construction and operation of the proposed Project. The CSLC must certify that:

- The Revised Final EIR has been completed in compliance with the CEQA;
- The Revised Final EIR was presented to the CSLC in a public meeting and the CSLC reviewed and considered the information contained in the Revised Final EIR prior to considering the proposed Project; and
- The Revised Final EIR reflects the CSLC's independent judgment and analysis (CEQA Guidelines section 15090).

In conjunction with certification of the Revised Final EIR, the CSLC must prepare one or more written findings of fact for each significant environmental impact identified in the document. These findings must either state that:

- The Project has been changed (including adoption of mitigation measures) to avoid or substantially reduce the magnitude of the impact;
- Changes to the Project are within another agency's jurisdiction and have been or should be adopted; or
- Specific considerations make mitigation measures or alternatives infeasible.

If any of the impacts identified in the Revised Final EIR cannot be reduced to a level that is less than significant, the CSLC may issue a Statement of Overriding Considerations for approval of the project if specific social, economic, or other factors justify a project's unavoidable adverse environmental effects. If the CSLC decides to approve a project for which a Final EIR has been prepared, the CSLC will issue a Notice of Determination.

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2.0 SUMMARY OF PUBLIC REVIEW PROCESS

2.1 NOTICE OF PREPARATION / INTENT AND SCOPING

The EIR process for the PG&E Line 406/407 Natural Gas Pipeline Project began with distribution of a Notice of Preparation (NOP) by the CSLC, mailed on June 19, 2007. The CSLC provided a NOP for the proposed Project to responsible and trustee agencies and to other interested parties. The NOP solicited both written and verbal comments on the EIR's scope during a 30-day comment period and provided information on a forthcoming public scoping meeting. The CSLC held four public and agency scoping meetings, two in Woodland, California on July 9, 2007, and two in Roseville, California on July 10, 2007, to solicit verbal comments on the scope of the EIR.

2.2 DRAFT EIR PUBLIC REVIEW

The EIR process for the PG&E Line 406/407 Natural Gas Pipeline Project continued with publication of a Notice of Availability by the CSLC, mailed on April 29, 2009. The Draft EIR was also released for public review on April 29, 2009, and consisted of approximately 940 pages with the appendices attached as a CD, including a detailed analysis of impacts in 14 environmental resource areas. A summary of public involvement opportunities during the CEQA process is presented below. A list of persons, organizations, and public agencies commenting on the Draft EIR, the comments received on the Draft EIR, and responses to the comments are provided in Section 3.0 of this Revised Final EIR.

2.2.1 Public Review Period

In compliance with the CEQA Guidelines, the CSLC provided a public review period of 45 days for the Draft EIR. The public review period extended from April 29, 2009, to June 12, 2009. The lead agency allowed written comments on the Draft EIR to be submitted by mail, orally at the Public Meetings, via fax and e-mail, and in person to the CSLC office in Sacramento. The Revised Final EIR consists of the April 2009 Draft EIR, comments received during the Draft EIR's 45-day public comment period, responses to those comments, and changes to the text of the Draft EIR. The Revised Final EIR shows changes made to the response to comments since release of the Final EIR on July 27, 2009, as <u>underline</u> for new text, and ~~strike-out~~ for deleted text. The Revised Final EIR also shows changes made to the Draft EIR (in their final form by incorporating any previous changes shown in the superceded Final EIR, and the changes made as a result of the clarifications to the risk analysis)

as underline for new text, and ~~strike-out~~ for deleted text, and are organized by section of the Draft EIR.

2.3 PUBLIC HEARING

Four public hearings on the Draft EIR were held by the CSLC. Two public hearings were held on Wednesday, June 3, 2009 (3:00 p.m. and 5:30 p.m.), at the Roseville Sports Center in Roseville, California. Two public hearings were held on Thursday, June 4, 2009 (3:00 p.m. and 5:30 p.m.) at St. Luke's Episcopal Church in Woodland, California. At these hearings an overview of the proposed project was provided, as well as a brief summary of Draft EIR findings. The public was then given the opportunity to present oral and/or written testimony on the Draft EIR and its contents. The decision-making process of the CSLC was also explained at the public hearings.

2.4 EIR INFORMATION AND REPOSITORY SITES

Placing the CEQA documents in "repository" sites can be an effective way of providing ongoing information about the project to a large number of people. Therefore, two repository sites in the proposed Project area were established, and documents were also available at the CSLC in Sacramento. EIR-related documents including the Draft EIR, Final EIR, and the Revised Final EIR have been made available upon their release to the public at the locations listed below.

CSLC, Attn: Crystal Spurr 100 Howe Avenue Suite100-South Sacramento, CA 95825 (916) 574-0748 spurrc@slc.ca.gov	Woodland Public Library 250 1st Street Woodland, CA 95695 (530) 661-5982	Roseville Public Library 225 Taylor Street Roseville, CA 95678 (916) 774-5221

In addition to the printed copies, electronic copies of both the Draft EIR and the Revised Final EIR have been made available at the following CSLC website address: http://www.slc.ca.gov/

3.0 RESPONSES TO COMMENTS

Copies of the written comments that were submitted on the Draft EIR are provided in this section, as well as excerpts of the transcripts from the public hearings held on June 3, 2009 and June 4, 2009 (the complete transcripts are in Appendix J). Each numbered Comment Set is immediately followed by the corresponding responses. Comment letters are presented chronologically, in the order dated or that the California State Lands Commission (CSLC) received the comment, followed by the comments received during the public hearings. The comments received by the CSLC during the public review period on the Draft EIR and at the public hearings were reproduced in a Final EIR that was circulated to the public on July 27, 2009. The same comments received by CSLC during the public review period on the Draft EIR and at the public hearings are reproduced in this Revised Final EIR along with responses to comments. The Revised Final EIR shows changes made to the response to comments since release of the Final EIR on July 27, 2009, as underline for new text, and ~~strike-out~~ for deleted text. In addition, the Revised System Safety and Risk of Upset report is included in this Revised Final EIR as Appendix H-3.

The Revised Final EIR is being circulated for public review in order to provide agencies and the public details regarding the clarifications made to the risk analysis. Clarifications have been made to the System Safety and Risk of Upset Report prepared by EDM Services, Inc. that was included as Appendix H-3 to the Draft EIR. The Revised System Safety and Risk of Upset report shows changes as underline for new text, and ~~strike-out~~ for deleted text, and is included as Appendix H-3 to this Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, regarding the risk analysis are provided in Section 4.0 of this Revised Final EIR.

The earlier version of the risk assessment included risk measurement terminology that was not defined in the document, which has resulted in some confusion. The "aggregate risk" was presented in the Draft EIR erroneously as "individual risk". The aggregate risk presents the anticipated annual likelihood of fatalities from all of the project components, which includes approximately 40 miles of 30-inch diameter pipeline, 2.5 miles of 10-inch diameter pipeline, and six fenced, aboveground pressure limiting, pressure regulating, metering, and mail line valve stations. The actual "individual risk", relates to the risk to an individual at a specific location. Individual risk is most commonly defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval. The risk level is typically

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Individual comments received during the Draft EIR public review comment period are numbered in the margins of each comment letter and correspondingly numbered responses follow each letter. Table 3-1 and Table 3-2 list all comments and show the comment set identification number for each letter or comment from the public transcripts.

Errata and minor text clarifications within the Draft EIR arising from the comments and responses are presented in Section 4.0 of this Revised Final EIR.

Table 3-1: Commenters and Written Comment Set Number

Draft EIR Comment Set #	Agency / Affiliation	Name of Commenter	Date of Documentation or CSLC Receipt
A	United Auburn Indian Community of the Auburn Rancheria	Greg Baker, Tribal Administrator	May 27, 2009
B	Property Owners	Howard and Bonnie Lopez	May 29, 2009
C	Property Owners	William Dibble, Barbara Dibble, Dorothy Dibble	June 1, 2009

Draft EIR Comment Set #	Agency / Affiliation	Name of Commenter	Date of Documentation or CSLC Receipt
D	Enterprise Rancheria	Ren Reynolds	June 4, 2009
E	Property Owner	Isabel Story	June 4, 2009
F	Property Owner	Alisa Stephens	June 8, 2009
G	Center Joint Unified School District	Craig Deason	June 9, 2009
H	Yolo County Board of Supervisors	Mike McGowan	June 10, 2009
I	Microp Limited	TR Martin	June 10, 2009
J	Department of Transportation –District 3	Alyssa Begley	June 11, 2009
K	City of Roseville	Mark Morse	June 12, 2009
L	Placer County Air Pollution Control District	Angel Rinker	June 12, 2009
M	Sacramento Metropolitan Air Quality Management District	Paul Philley	June 12, 2009
N	Feather River Air Quality Management District	Sondra Anderson	June 12, 2009
O	Yolo-Solano Air Quality Management District	Matt Jones	June 12, 2009
P	Hefner, Stark & Marois, LLP	Martin B. Steiner	June 12, 2009
Q	Klein Family Farms	Chris Ochoa and Mark Ochoa	June 12, 2009
R	Sierra Vista Owners Group	Jeff Jones	June 12, 2009
S	Pacific Gas and Electric Company	Chris Ellis	June 12, 2009
T	Placer County Community Development	Maywan Krach	June 15, 2009
U	Remy, Thomas, Moose and Manley, LLP	Sabrina V. Teller	June 12, 2009
V	Central Valley Flood Protection Board	James Herota	June 12, 2009
W	California Regional Water Quality Control Board, Central Valley Region	Virginia Moran	June 12, 2009
X	California Department of Fish and Game	Kent Smith	June 18, 2009

Draft EIR Comment Set #	Agency / Affiliation	Name of Commenter	Date of Documentation or CSLC Receipt
Y	Yolo County Farm Bureau	Tim Miramontes	June 23, 2009

1 **Table 3-2: Public Hearing Draft EIR Comments - June 3 and 4, 2009**

Comment Agency/Affiliation	Name of Commenter	Comment #	Copy of Transcript of Hearing
Wednesday, June 3, 2009, 3:00 p.m. Public Hearing Draft EIR Comments, Roseville, CA			
Local Resident	Bill Dibble	PT-1 to PT-10	Pages 25 through 31
Local Resident	Alisa Stephens	PT-11 to PT-21	Pages 32 through 39
Representative of DF Properties Land Owner	Nick Alexander	PT-22 to PT-25	Pages 39 through 41
Local Resident	Norepaul Mouaryang	PT-26 to PT-29	Pages 41 through 44
Local Resident	Mai Neng Yang	PT-30 to PT-31	Pages 44 through 47
Wednesday, June 3, 2009, 5:30 p.m. Public Hearing Draft EIR Comments, Roseville, CA			
No oral comments	No oral comments	No comments	Page 1
Thursday, June 4, 2009, 3:00 p.m. Public Hearing Draft EIR Comments, Woodland, CA			
Local Resident	Howard Lopez	PT-32 to PT-43, PT-64 to PT-66	Pages 22 through 29, 42 through 45
Local Resident	James Bennett	PT-44 to PT-46	Pages 30 through 31
Local Resident	Wilma Stephens Hill	PT-47 to PT-49	Pages 31 through 33
Local Resident	Chris Ocha	PT- 50 to PT-53, PT-68	Pages 33 through 35, 49
Local Resident	Ed Mast	PT-54 to PT 55	Pages 35 through 36
Local Resident	Fulton Stephens	PT-56 to PT-57	Pages 36 through 37
Local Resident	Paul Smith	PT-58 to PT-63, PT-69	Pages 37 through 41, 50
PG&E	Barbara Butterfield	PT-67	Page 47
Thursday, June 4, 2009, 5:30 p.m. Public Hearing Draft EIR Comments, Woodland, CA			
Local Resident	Barbara Dibble	PT-70 to PT-77	Page 17 through 21

MIWOK MAIDU United Auburn Indian Community of the Auburn Rancheria

JESSICA TAVARES CHAIRPERSON | JOHN SUEHEAD VICE CHAIR | DAVID KEYSER SECRETARY | DOLLY SUEHEAD TREASURER | GENE WHITEHOUSE COUNCIL MEMBER

May 27, 2009

California State Lands Commission
Crystal Spurr, Project Manager
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Subject: DEIR - Pacific Gas and Electric Company (PG&E) line 406-407 Natural Gas Pipeline

Dear Ms. Spurr,

Thank you for requesting information regarding the above referenced project. The United Auburn Indian Community (UAIC) is comprised of Miwok and Maidu people whose traditional homelands include portions of Placer and Nevada counties, as well as some surrounding areas. The Tribe is concerned about development within ancestral territory that has potential to impact sites and landscapes that may be of cultural or religious significance. We appreciate the opportunity to comment on the proposed project.

We understand that, with the exception of one isolated obsidian biface and one unevaluated pre-historic habitation site near Line 407-East, no other prehistoric cultural resources have been recorded in the vicinity of the project site. As stated in the archaeological report, the area in general is sensitive for buried prehistoric resources. In the event of an inadvertent discovery of prehistoric cultural resources or human burials, we would like to be contacted immediately to provide input on the appropriate course of action. Should excavations for site testing or data recovery become necessary, we would like to be informed in order to provide on-site tribal monitors. A-1

If you have any questions, please contact Shelley McGinnis, Analytical Environmental Services, at (916) 447-3479.

Sincerely,

Greg Baker
Tribal Administrator

CC: Shelley McGinnis, AES

Tribal Office • 10720 Indian Hill Road • Auburn, CA 95603 • (530) 883-2390 • FAX (530) 883-2380

RESPONSE TO COMMENT SET A

A-1 All work in the Project alignment will adhere to the measures outlined in Applicant Proposed Mitigation (APM) CR-3, APM CR-4, and APM CR-5, which are included in the Draft EIR in Table ES-1 of the Executive Summary; Section 4.5.4 of the Draft EIR. These APMs address inadvertent discoveries of buried materials and require notification of the local Native American community prior to subsurface excavations at prehistoric archaeological sites.

May 29, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA. 95825

Dear California State Lands Commission,

Here are some of the concerns that we have with the PG&E line 406/407 Natural Gas Pipeline project coming through our property that we will be bringing up at the June 4th meeting in Woodland with the PG&E and the California State Land Commission:

1. It will devalue our property as long as they have the pipeline easement.
2. The amount that they offered us for our 1.562 acres was way too low. B-1
3. Our property is prime ag land, we have grown tomatoes, bell peppers seed crops, orchard crops, wheat, corn, organic crops and livestock.
4. They will restrict us from ever planting almonds on the pipeline easement which the loss to a grower would be around $4500. 00 per acre. Over a 15 year period for us on our 1.562 acre, the loss amounts to $105,435.00. B-2
5. They will restrict us from ever planting grapes and the loss to the grower would be $4200.00 per acre.
6. Other companies that have gotten easements on property such as cell phone towers are paying the property owner $1000 to $1200 per month for the easements. B-3

7. They will be segmenting our property with a new easement when only 230 yards away they already have an easement along the county road. B-3

8. Activities with heavy equipment such as leveling, deep ripping and simply crossing this line will be restricted. B-4

9. The landowner will get zero benefit from the pipeline. B-5

10. They will have the right to come on our property whenever they see fit.

11. We will be put at risk do to the fact of the size of the line and that natural gas will be flowing though it for a potential leak and explosion. B-6

12. The pipeline will be crossing a known earthquake fault line in the vicinity of freeway 505. B-7

13. Our first choice is the no project option. Second choice is Option E in the Environmental Impact Report from the California State Lands Commission dated April 29,2009 B-8

Any question call us at 787-3384.

Howard & Bonnie Lopez

Howard and Bonnie Lopez

RESPONSE TO COMMENT SET B

B-1 The statement and concerns regarding economic impact to farmland is included in the public record and will be taken into account by decision-makers when they consider certification of the EIR and consider whether to approve the proposed Project. PG&E has their own process, separate from the Environmental Impact Report prepared pursuant to the CEQA, which addresses negotiations with landowners. In developing projects, PG&E identifies routes based on engineering and environmental considerations. In performing the field work prior to submitting an application for a proposed project to the CSLC, PG&E often engages in discussions with landowners and may be able to address their concerns. PG&E prefers to work out property rights with landowners in a mutually agreeable manner. PG&E will work with landowners and their tenant farmers to arrive at agreed upon compensation both for the value of the pipeline easement, as well as the impacts to agricultural crops resulting from this pipeline Project. The CSLC is not involved in the PG&E discussions and negotiations with landowners.

PG&E provided an application to the CSLC for a lease of CSLC lands, thereby triggering the need for environmental review of their proposed pipeline Project. The CSLC is the lead agency for the preparation of an EIR in accordance with CEQA. The CEQA process is a public disclosure and participation process regarding the environmental effects of a proposed project.

The proposed 40-mile pipeline Project would temporarily disturb 511 acres of farmland within four counties (329 acres in Yolo County, 91 acres in Sutter County, 18 acres in Sacramento County, and 73 acres in Placer County). Based on response to comment S-15, pages 4.2-24 and 4.2-25 of the Draft EIR have been revised to reflect that the proposed Project would prohibit the planting of deep-rooted plants, such as trees or vines within 10 feet (rather than the previously stated 15 feet) on either side of the pipeline centerline (20 feet, rather than 30 feet total within the permanent easement). This would result in the limitation of crops grown on 102 acres of farmland within the four counties to row crops, field crops, or any other crops that do not involve deep-rooted plants. The proposed Project would result in the loss of 2.0 acres of orchards located within Yolo County. The proposed Project would permanently impact 2.55 acres of farmland across all four counties due to the aboveground stations. Temporary and permanent agricultural impacts are discussed on pages 4.2-23 through 4.2-25 of the Draft EIR, and revisions to the Draft EIR can be reviewed in Section 4.0 of this Revised Final EIR.

Both temporary and permanent economic losses of normal farm operations are required to be compensated as stated in the California Code of Civil Procedure. PG&E is required to provide financial compensation for temporary and permanent loss of agricultural uses through the California Code of Civil Procedure, as follows:

- Section 1245.030(b) requires compensation for property damage, including crop damage, resulting from pre-construction project studies, testing, surveying, etc.

- Section 1263.210(a) requires all property improvements, including agricultural crops and associated facilities and infrastructure, be included in project land rights acquisition compensation.

- Section 1263.250(a) requires compensation for crop damage/losses resulting from project construction. It also requires scheduling project construction to avoid impacts to agricultural crops when possible.

According to CEQA Guidelines Section 15358(b), effects analyzed under CEQA must be related to a physical change in the environment. CEQA Guidelines Section 15125 (a) provides that an EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time of the Notice of Preparation of the EIR, or at the time environmental analysis is commenced (baseline conditions). The introduction of the Draft EIR, Section 1.0, provides a definition of the affected environment, and each major resource section of the Draft EIR provides an environmental setting, including agricultural resources. Attempting to determine future uses of farmland currently planted in field or row crops that would be converted to orchard or vineyard is too speculative for evaluation.

We analyzed the impact to agricultural resources based on baseline conditions being able to continue once the pipeline was installed and the topsoil restored. Most of the agricultural land along the proposed Project alignment is used for row or field crops. Refer to pages 4.2-23 through 4.2-25 of the Draft EIR for a discussion of temporary and permanent impacts to agricultural land. The temporary impacts to the 511 acres of farmland would not result in a physical change to the environment for more than three weeks in any one area, or in the case of horizontal directional drilling (HDD), for more than four weeks. In addition, the amount of farmland permanently impacted (2.55 acres) across all four counties, and the amount of farmland converted from

deep-rooted plants to other types of crops (2.0 acres of orchard loss) located within Yolo County does not represent a significant regional loss.

B-2 Please refer to response to comment B-1.

B-3 Please refer to response to comment B-1. Public Utility Easements (PUEs) may exist in which PG&E and other utilities have installed facilities. However, in general PUEs do not provide sufficient rights and protection for large transmission facilities. Therefore, PG&E acquires easements to install transmission facilities rather than PUEs.

Segmenting property with a utility easement for a buried pipeline does not preclude the use of the easement for farming, once construction of the pipeline is complete, but only precludes the planting of deep-rooted crops. As discussed on page ES-32, while Alternative Options A, B, C, D, E, and G would result in similar impacts to agricultural resources as the proposed Project, these options would reduce the number of agricultural fields that would be segmented by the Project. However, implementation of these alternative options would result in increased impacts associated with factors such as movement of the pipeline closer to roadways, residences, and in some cases businesses, thereby increasing the number of people that would be at risk if a rupture of the pipeline were to occur with a subsequent explosion and/or fire. Please also refer to responses to comments B-1 and E-3.

B-4 As noted on page 4.2-24 of the Draft EIR, most farming practices would be allowed to resume within the permanent easement following pipeline completion. The pipeline is proposed to be constructed with 5 feet of soil coverage in order to allow farming activities such as discing or deep-ripping to continue within the entire easement. PG&E has increased the soil coverage beyond minimum requirements from 3 feet to 5 feet because PG&E's experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations. Restrictions to crossing the easement would exist during project trenching, installation, and backfill. As described on page 2-54 of the Draft EIR, such restrictions would be expected to last no more than three weeks.

B-5 Please refer to response to comment B-1 for a discussion regarding landowner compensation.

Regarding pipeline access, the Draft EIR on page 2-38 of Section 2.0, Project Description, states, "Routine maintenance along the majority of the line would consist of quarterly to annual patrolling (e.g., foot or aerial patrol), cathodic

protection, and surveys. PG&E would maintain a 50-foot-wide permanent easement along the length of the Project, with the exception of the Powerline Road DFM, which would have a 35-foot-wide permanent easement. Vegetation maintenance would be as needed to maintain a 30-foot-wide corridor centered on the pipe that is free of deep-rooted plants. Because the majority of the route is grassland, row crops, or rice fields, very few areas are expected to require vegetation maintenance by PG&E." (Please note that in response to comment S-15, the 30-foot-wide corridor that is free of deep-rooted plants has been decreased to a 20-foot-wide corridor. Please refer to Section 4.0 of this Revised Final EIR for changes to the Draft EIR.)

PG&E has provided information that some annual patrols are conducted from the air so no access to the property is required. When a patrol or inspection on the ground is required, vehicles will use existing farm roads and off-road travel will be on foot. PG&E tries to schedule these ground inspection activities at such times that they do not impact agricultural activities. In the unlikely event of ground disturbing maintenance activities, PG&E will work with the landowner to minimize disruption to their property and activities.

B-6 The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, regarding the risk analysis are provided in Section 4.0 of this Revised Final EIR. The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

~~In addition, Table 5.1.5-1 of the report, as well as Table 4.7-6 on pages 4.7-34 and 4.7-35 of the Draft EIR, summarizes the potential consequences from fires and explosions at various distances from the proposed pipeline.~~

Generally, natural gas could be released from a leak or rupture in the pipeline. If the natural gas reached a combustible mixture and an ignition source was present, a fire and/or explosion could occur.

The individual risk significance threshold used in the Revised Final EIR is an annual likelihood of one in one-million (1:1,000,000) for ~~serious injury or~~ fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The maximum risk posed by Line 406 in Yolo County before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chances of fatality per year. The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~The level of risk posed by Line 406 in Yolo County before mitigation is 1:350,000, which is 3 times greater than the level of risk generally considered acceptable. After mitigation, the level of risk posed by Line 406 would be approximately 1:700,000, which is still greater than the level of risk generally considered acceptable. The overall total annual likelihood of serious injury or fatality, taking into account the entire pipeline route, is 1:16,000 before mitigation. The mitigation measures being imposed on the Project would reduce the risk by approximately 50 percent. However, the individual risk of serious injury or fatality would still be approximately 1:30,000, 33 times greater than the level of risk generally considered acceptable. (Please refer to page 4.7-33 and 4.7-39 of the Draft EIR.)~~

~~The lead agency recognizes that the risks remain significant even after mitigation has been implemented to reduce the magnitude of the risks. The CSLC will need to balance the economic, legal, social, technological, or other benefits of the proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the EIR is certified by the CSLC, a statement of overriding considerations will need to be adopted at the time of certification and approval of the Project (CEQA Guidelines Section 15093).~~

B-7 In addition to all other applicable federal and State codes, regulations, and industry standards for pipeline design, the CSLC requires that the pipeline design also meet the requirements of current seismological engineering standards such as

the "Guidelines for the Design of Buried Steel Pipe" by American Lifeline Alliance and "The Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines" by the Pipeline Research Council International, Inc. The CSLC also required that all engineered structures, including pipeline alignment drawings, profile drawings, buildings, structures, and other appurtenances and associated facilities, be designed, signed, and stamped by California Registered professionals certified to perform such activities in their jurisdiction.

The faults within the Project area are discussed in the Draft EIR, Section 4.6, Geology and Soils (reference pages 4.6-19 through 4.6-31).

The geotechnical report prepared for the proposed Project notes that "evidence suggests that, although the Dunnigan Hills fault shows compelling evidence of surface rupture a few miles north of the proposed alignment, the fault becomes buried in the area where the proposed alignment crosses it." The Draft EIR provides an impact and mitigation measure regarding earthquake faults and seismic risks to the pipeline. A portion of Impact GEO-1 on page 4.6-39 of the Draft EIR has been revised. Mitigation Measure (MM) GEO-1 on page 4.6-39 and 4.6-40 of the Draft EIR has also been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

B-8 Section 3.0 of the Draft EIR evaluates a number of alternatives or options along the proposed pipeline alignment to reduce or avoid one or more impacts of the proposed Project. This comment expresses a preference for the No Project Alternative (1st choice) or Option E (2nd choice). The No Project Alternative means that PG&E would not construct/operate the natural gas pipeline along the proposed route. Option E would involve a minor realignment of the proposed Line 406 route to follow CR-19, east of CR-87. At CR-19A, it would extend back to the north via an existing dirt road and underneath a large electrical transmission corridor. The pipeline would then cross an irrigation lateral and continue north where it would converge back with the proposed Line 406 route, just west of I-505. The pipeline would then follow the same route as the proposed Project east of I-505. This alternative would increase slightly the total length of the pipeline. Figure 3-2D of the Draft EIR shows Option E.

The reason Option E was considered is that it would meet all of the basic Project objectives and would reduce segmenting agricultural fields in the Hungry Hollow area. However, this alternative would require locating the pipeline closer to several

residences and result in the removal of trees from an existing orchard situated along CR-19.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is the construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

From: <dibblesbs@inreach.com>
To: "Crystal Spurr" <spurrc@slc.ca.gov>
Date: 06/01/2009 8:32 PM
Subject: gas pipe line

This is in regards to the proposed gas pipe line 406-407 that is proposed to go through my property located at 27960 C.R. 19 North of Esparto. It will devalue my property as long as the pipe line is in service, which is for 50 years. The amount you have offered is incredibly low $7700.00 for 50 years, is ridiculous. C-1

You restrict me from growing grapes or any deep rooted crops, if you have looked at our area you have seen numerous new orchards going into production, as the income from these crops are signifinaly higher than the crops now grown. Almonds are going for $4500.00 per acre and grapes at $4200.00 per acre. I barley make enough to pay my property taxes now so this will leave me at a great disadvantage for future income. C-2

I will receive no benefit from the gas line. They have not offered me free Gas and Electric for the right to use and destroy my land. C-3

When the geologist came out to talk to me about this project he informed me that the gas line was 100% safe. I went into goggle search and found this to be untrue, there have been 22,500 ruptures to 30-36 inch gas pipe lines. C-4

The C.R. 16 route I asked about. I was informed that this route was not considered because of side hill "solving" (his word) I have driven this route and again this is untrue as the area proposed between C.R. 87 and Interstate 505 is as flat as the C.R. 16 alternate. From there the line will have to go through the Dunnigan hills which according to you will cause "slouving". C-5

I have been lets not say lied to but have been told things that are untrue, so I cannot believe anything I have been told about this project.
My mother lives just to the West of me at 28000 C.R. 19 she is very concerned about this project also as we share income of my property, and the possibility of a pipe line rupture. C-6

I thought I lived in the United States, at least that is what they told me when I went to war to defend this country. I might as well live in a third world communist country where you have No rights, as this is what you are trying to tell me.

William Dibble
Barbara Dibble
Dorothy Dibble

RESPONSE TO COMMENT SET C

C-1 Please refer to response to comment B-1.

C-2 Please refer to response to comment B-1.

C-3 Please refer to response to comment B-1.

C-4 Please refer to response to comment B-6. Please see the Revised System Safety and Risk of Upset report in Appendix H-3 of this Revised Final EIR. Also, please see Section 4.7 of the Draft EIR, as revised in the Revised Final EIR, ~~and the EDM Services, Inc. report included in Appendix H~~ for a discussion of the number of pipeline incidents on 30- to 36-inch natural gas pipelines. Both include credible references regarding pipeline incident statistics.

C-5 The commenter is referring to the use of CR-16 as a pipeline alignment. While portions of Option A and Option B follow CR-16 (refer to pages 3-12 and 3-13 of the Draft EIR), it is the portion of the Line 406 Central Alternative that would cross hillsides between Hwy 505 and I-5 for which sloughing was a primary concern. The Line 406 Central Alternative was considered but eliminated from full evaluation in the Draft EIR (refer to pages 3-10 and 3-11 of the Draft EIR) because this proposed pipeline alignment alternative would be longer than the preferred alternative (resulting in greater impacts) and would require crossing a greater amount of potential foraging habitat for Swainson's hawk, nesting habitat for burrowing owls, and other habitats utilized by special-status species. This alternative would also require construction along sidehills, which would present additional engineering, construction, and maintenance considerations.

C-6 Please refer to responses to comments B1 and C-4.

Enterprise Rancheria

Estom Yumeka Maidu Tribe

3690 Olive Hwy
Oroville, CA. 95966 -5723

Ph: (530) 532-9214
Fax: (530) 532-1768
Email: info@enterpriserancheria.org

May 28, 2009

Crystal Spurr
Project Manager

RE: PACIFIC GAS AND ELECTRIC COMPANY LINE 406-407 NATURAL GAS PIPELINE

Sutter, County

Enterprise Rancheria EPA Department
The tribes offer site monitors to assist on these projects.
We need a map of the Sutter area that will be affected ! D-1

Our protocol is as follows.
If during ground disturbing activities, any resources are uncovered all work shall cease within the area of the find, pending an examination of the site and materials by a professional archaeologist and tribal monitor. D-2

If any remains are uncovered, the Health and Safety Code 7050-55097.9 shall be enforced and strictly adhered to! D-3

The tribe will work with local authorities on the disposition of cultural resources.
We will be working with the tribes in our area and you on this project! D-4

EPA Planner
Site Monitor Ron Reynolds

When developers and public agencies assess the environmental impact of their projects, they must consider "historical resources" as an aspect of the environment in accordance with California Environmental Quality Act (CEQA) Guidelines section 15064.5. These cultural features can include Native American graves and artifacts; traditional cultural landscapes; natural resources used for food, ceremonies or traditional crafts; and places that have special significance because of the spiritual power associated with them. When projects are proposed in areas where Native American cultural features are likely to be affected, one way to avoid damaging them is to have a Native American monitor/consultant present during ground disturbing work. In sensitive areas, it may also be appropriate to have a monitor/consultant on site during construction work.

A knowledgeable, well-trained Native American monitor/consultant can identify an area that has been used as a village site, gathering area, burial site, etc. and estimate how extensive the site might be. A monitor/consultant can prevent damage to a site by being able to communicate well with others involved in the project, which might involve:

1. Requesting excavation work to stop so that new discoveries can be evaluated;
2. Sharing information so that others will understand the cultural importance of the features involved;
3. Ensuring excavation or disturbance of the site is halted and the appropriate State laws are followed when human remains are discovered;
4. Helping to ensure that Native American human remains and any associated grave items are treated with culturally appropriate dignity, as is intended by State law.

RESPONSE TO COMMENT SET D

D-1 Please refer to Figures 2-4, 2-5, and 2-6, which provide detailed views of the proposed pipeline location within Sutter County. Portions of Sutter County affected by the Project are shown on various figures throughout the Draft EIR, including Figure 2-1, 2-2, 2-4, 2-5, 2-6, 2-7, 2-12, and 2-15; Figure 3-2A, 3-2 Map 2 of 3, 3-2G Map 3 of 3, and 3-3; Figure 4.2-1B and 4.2-1C; Figure 4.3-1; Figure 4.4-1, 4.4-2, and 4.4-3; Figure 4.6-1, 4.6-2B, 4.6-2C, 4.6-3, and 4.6-4; Figure 4.8-1; Figure 4.9-1B and 4.9-1C; Figure 4.13-1; and Figure 5-1.

D-2 Please refer to APM CR-3, APM CR-4, and APM CR-5, which are included in Section 4.5.4 of the Draft EIR. These APMs address the inadvertent discovery of archaeological resources. As described on page 4.5-36 of the Draft EIR, these APMs require PG&E to consult with the local Native American community prior to any subsurface excavation at prehistoric archeological sites to give them the opportunity to monitor the excavations; allow supervision of trenching by a qualified professional archaeologist and/or geo-archeologist; stop work near discovered potential resources; and develop a Discovery Plan indicating the appropriate treatment of archeological materials or human remains.

D-3 Comment acknowledged. As outlined in APM CR-4, on page 4.5-36 of the Draft EIR, the discovery of human remains outside a dedicated cemetery will require compliance with Health and Safety Code Section 7050.5.

D-4 As discussed above in response to comment D-2, and as outlined in APM CR-3, APM CR-4, and APM CR-5, the PG&E would work with the local Native American community during Project implementation. These APMs are included in the revised Mitigation Monitoring Program in ~~Appendix F of~~ this Revised Final EIR.

RECEIVED
2009 MAY 13 PM 1:32
CALIFORNIA STATE
LANDS COMMISSION

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Subject: Comments to Project Title "Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline (SCH No. 2007062091)

Dear Ms. Spurr:

The purpose of my letter is to provide comments in response to your letter titled Notice of Availability/Public Meetings Draft Environmental Impact Report "and mailed 29 April 2009.

I have reviewed the Line 406 and Line 407 Pipeline Project Overview Map and the Line 406 and 407 Pipeline Project Alternatives Map. These proposed routes begin from Line 401 located on the western side of Yolo County north of Township of Capay and goes eastward toward the City of Roseville to PG&E's existing Line 123. Also I am a property owner of land being considered by either proposal so I may have a bias; however I will try to be objective with my comments.

1. The proposed pipeline transverses from the west to the east side of Yolo County and into Sacramento County. On its proposed route it would go through fertile lands laid down over thousands of years by Cache Creek and the Sacramento/Feather Rivers. Part of the pipeline would cut through the Dunnigan Hills which has been declared a specific wine appellation area and can not just be called grazing lands. E-1

2. Construction is a very destructive process to fertile ag land. Water percolates into ground water. Construction could intersect this process and effect ground table water. E-2

3. Yolo County has had an objective to promote farming. Their detailed objectives can be reviewed by going online to www.yolocounty.org. Under County Administrator, General Plan Update their vision statement is outlined. A pipeline would prohibit future deep rooted farming practices (e.g., walnut, almond, fruit trees & grape vines) over the proposed line. This has the affect of not only reducing farm income but includes associated ag related jobs & related economic infrastructure. An attachment dated July 22, 2003 to Judy Brown , California State Lands Commission has comments regarding the Draft EIR for Kinder Morgan Concord to West Sacramento Pipeline Project (State Clearing house Number 2002022019 EIR 711) from Lynnel Pollock, Chair Yolo County E-3

Board of Supervisors is provided for additional detail on Yolo County's planning to promote farming. Has Yolo County & Sacramento County been afforded the opportunity to provide comments?

E-3 Cont.

4. The Sacramento Bee's Business Section had an article indicating the Sacramento area has 20% of its homes unoccupied at present. When PG&E made their studies in 2007 basing data studies on prior experience there could have been support for a natural gas need. A sea of events has changed economics and environmental concerns in the intervening years. There is a major emphasis not only to conserve energy but also to support renewable energy. Roseville, Sunset City, Loomis etc. have been an area under development.. But with the present mortgage problems in this area a big question is raised. Many homes are being foreclosed. "Do we need to build more homes and which have lengthy commutes to jobs in Sacramento and else where?" Another question raised is do we really want to pave over and build upon fertile land? We could be depriving ourselves of food, oxygen generating plants, carbon foot print reductions, plus jobs to employ our present population. Just recently the Sacramento Bee in its editorial pages talk of citizens leaving this State because of taxes & jobs.

E-4

5. Homes built have had increased square footage (aka McMansions). Now interest is to downsize homes which not only saves land but consumption of natural resources as well. Downtown Sacramento has increased its population with lofts & condos. For years the City of Davis has been trying to have a slow growth movement in action. Our San Joaquin Valley has had very rapid growth and much of its lands have been paved or built upon. If you don't believe me, traverse Highway 99 in that area. Suburban living with large acreages may be a thing of the past. Should we make the same philosophy apply to the Sacramento Valley?

6. Natural gas is not a renewable energy source. Currently it is abundant and we should not consume this natural resource just because it is abundant. Russia is preparing to sell natural gas to the US and is constructing huge buildings, ships & infrastructures to provide this commodity. This will result in another huge transfer of wealth to a foreign plus dependency upon said country for this product. Lessons have not been obvious with China within the last 20 years or Russia's actions with Europe. How about conservation of the natural gas we do have available? Further, California's law requiring power providers to get 20% of their electricity from green sources by the end of 2010 maybe increased to 33% by 2030. SMUD uses natural gas to generate electricity for this area. Doesn't this apply to PG&E? So by 2010 a large demand for natural gas in this area could be reduced significantly so that PG&E would not have to increase capacity to provide reliable service for anticipated demand to the existing gas transmission and distribution pipeline.

E-5

7. Planning for the use of California's Lands needs to be carefully weighted. Greater capacity to PG&E also means greater revenue. Statistics are about what has happened and projections based upon statistics may not necessarily be indicative of events which follow. The State Lands Commission should be about planning for the State's future needs.

E-6

Thank you for affording the opportunity to express my concerns on land use in this State.

Sincerely,

Isabel Story
2953 Leta Lane
Sacramento, CA 95821
Phone number: 916.489.4709
Email address: imstory47@gmail.com
May 27, 2009

Attachment as stated above dated July 22, 2003 to Judy Brown, CSLC in paragraph numbered 3.

ATTACHMENT "A"

DRAFT

July 22, 2003
California State Lands Commission
Attn: Judy Brown
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202
Re: Comments Regarding the Draft EIR for the Kinder Morgan Concord to West Sacramento
Pipeline Project (State Clearinghouse Number 2002022010 EIR 711).
Dear Ms. Brown,
The purpose of this letter is to provide comments in response to the above referenced Draft
Environmental Impact Report (EIR). It has been submitted in accordance with the 30-day
review period, which will end on July 28, 2003. The County retains the right to submit further
comments during later stages of the State Land Commission's environmental review, should
new information and/or analysis become available.
Based on the information provided within the Draft EIR, the County has the following concerns:

- To minimize impacts on agricultural practices, utility lines should follow the edges of fields in
existing utility or transportation corridors, or along property lines. Pipelines crossing agricultural areas should be buried deep enough to avoid conflicts with normal agricultural or
construction activities.
- Utilities should be designed and constructed to minimize any detrimental effect on levee
integrity or maintenance.
- The construction of pipelines on and near productive agricultural lands and operations
should be avoided during harvest season.
- The pipeline should be buried deeper in areas where certain agricultural practices are used
(e.g., eight feet in lands suitable for grape production that have not been deep ripped; at
least two feet below the bottom of existing irrigation and drainage ditches; or obtain the
landowner's agreement to bury the pipeline at a shallower depth).
- The subsidence of Delta lands due to the oxidation of its peat soils should be taken into
consideration when determining the depth at which pipelines should be buried to avoid
impacts to agricultural operations and terrestrial wildlife.

attachment

• Pipelines should be weighted or anchored in areas where saturated soils may cause the
pipeline to float.
• An Encroachment Permit should be obtained from the local flood control or reclamation
districts before any drilling under levees occurs.
4
• A business plan and inventory will be required from the County Environmental Health
Department if the threshold quantities of hazardous materials are stored at construction
staging areas for greater than thirty days.
• A Conditional Use Permit will be required from the County Planning and Public Works
Department prior to the commencement of construction.
• As a part of the Conditional Use Permit review by the County, a determination will be
required from the City of Davis regarding the consistency of the proposed project with the
City-County Pass-Through Agreement.

The Board of Supervisors thanks the State Lands Commission for their thorough analysis of the
proposed project. If you have any questions about the items addressed in this letter, please
contact Linda Caruso, Planner, at (530) 666-8850. The opportunity to review this environmental
document is appreciated.

Sincerely,
Lynnel Pollock, Chair
Yolo County Board of Supervisors

RESPONSE TO COMMENT SET E

E-1 CSLC acknowledges that the Dunnigan Hills area is referred to as an appellation of origin by at least five vintners. Text has been added to page 4.2-2, line 11 of the Draft EIR describing the Dunnigan Hills appellation area. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

E-2 Pages 4.8-11 through 4.8-13 of the Draft EIR discuss construction-related impacts to groundwater flow and supply (see Section 4.8.5, Hydrology and Water Quality). As proposed in APM HWQ-3 and APM HWQ-4, and APM BIO-20 and APM BIO-21, the Project incorporates design features and construction techniques that reduce potential impacts to groundwater flow to less than significant levels. Trenching or directional drilling in accordance with these APMs would ensure that the Project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. As discussed on page 4.4-80 in Section 4.4, Biological Resources, implementation of APM BIO-5, APM BIO-7, APM BIO-13, APM BIO-16, and APM BIO-23 would further reduce potential impacts to groundwater flow to less than significant levels. Please also refer to response to comment F-5.

E-3 Yolo County General Plan goals regarding agriculture that are applicable to the proposed Project are included on page 4.2-19 of the Draft EIR. Page 1-8 of the Draft EIR has been revised to indicate that PG&E, as a CPUC-regulated entity, is not required to adhere to county or city zoning or land use designations, nor are they required to obtain discretionary permits from such jurisdictions. However, PG&E may be required to obtain ministerial permits, such as grading and encroachment permits, from affected counties, cities or other local jurisdictions, such as reclamation districts. Furthermore, PG&E may be required to obtain permits or approvals from certain reviewing authorities such as those listed in Section 1.0, Introduction, under the heading 1.4 Permits, Approvals, and Regulatory Requirements, beginning on page 1-8 of the Draft EIR. Refer to section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

While PG&E, as a CPUC-regulated entity, is not required to adhere to local jurisdiction regulations, Yolo County's General Plan policies were taken into consideration during the preparation of the Draft EIR. As noted on page 4.2-24 of the Draft EIR (as amended in Section 4.0 of the Revised Final EIR), restrictions on deep-rooted plants and vines would affect approximately 102 acres of farmland in

Yolo County. The majority of the land within the proposed permanent easement is grassland, row crops, or rice fields, and these activities could continue within the permanent easement. Attempting to determine that future uses of farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative for evaluation. The temporary impacts to the 511 acres of farmland would not result in a physical change to the environment for more than three weeks in any one area, or in the case of HDD, for more than four weeks. In addition, the amount of farmland permanently removed (2.55 acres) across all four counties, and the amount of farmland converted from deep-rooted plants to other types of crops (2.0 acres of orchard loss) located within Yolo County does not represent a significant regional loss. In addition, it is not an uncommon practice to plant commercial cover crops in vineyards and orchards between the rows, such as fava beans. Such shallow-rooted crops would be allowed within the 10 feet on either side of the pipeline.

PG&E would coordinate with landowners, tenant farmers, and adjacent property owners prior to and during construction of the proposed pipeline in order to coordinate the construction schedule with agricultural activities such as crop spraying, crop irrigation, and harvest activities. For construction activities within rice fields, the proposed plan is that PG&E work with landowners to isolate the right-of-way prior to the fall, so that construction can begin on May 1 (or as soon as the field is sufficiently dry) without interfering with the rice field preparation, planting, and flooding schedule (refer to the Draft EIR, page 2-51).

The proposed Project would prohibit the planting of deep-rooted plants, such as trees or vines within 10 feet on either side of the pipeline centerline (20 feet total within the permanent easement). This would result in the limitation of crops grown on approximately 102 acres of farmland within the four counties to row crops, field crops, or any other crops that do not involve deep-rooted plants. Most of the agricultural land along the proposed Project alignment is currently used for row or field crops, and those types of uses would be allowed to continue within the entire pipeline permanent easement once the pipeline has been installed and the topsoil restored.

While Attachment A to Comment Letter E is a letter sent in response to the Kinder Morgan Concord to West Sacramento Pipeline Project, not the Line 406/407 Natural Gas Pipeline Project discussed in this Draft EIR, the CSLC has provided responses to those comments that are applicable to this Project. Both Yolo County and Sacramento County have received notices regarding the availability of the Draft EIR

and have been provided the opportunity to provide comments during the public review period. The Yolo County Board of Supervisors has submitted comments on the PG&E Line 406/407 Natural Gas Pipeline Draft EIR (refer to Comment Set H). Sacramento County did not provide written comments.

Response to Comments in Attachment A of Comment Set E:

Response to Comment E-3, Attachment A, Bullet 1 One of the Project objectives is to install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner. An attempt has been made to locate the pipeline along edges of agricultural fields. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways, and to avoid impacting additional trees that might be used for nesting by numerous protected birds. As a part of the proposed Project, PG&E has increased the soil cover beyond minimum requirements from 3 feet to 5 feet because its past experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations, such as discing or deep-ripping.

Response to Comment E-3, Attachment A, Bullet 2 As noted on page 2-1 of the Draft EIR, HDD construction technique uses a hydraulically-powered horizontal drilling rig to tunnel under vertically and/or horizontally-large sensitive surface features such as water courses, levees, and wetlands. Table 2-5, beginning on page 2-56 of the Draft EIR (as revised in this Revised Final EIR), indicates that sensitive features with levees, such as the Knights Landing Ridge Cut, the West Yolo Bypass/Drainage, East Yolo Bypass/Tule Canal, Sacramento River, and East Levee Road would be crossed using HDD technologies. Table 2-1, on page 2-17 of the Draft EIR indicates the depth at which these features would be crossed. The protection of levees is discussed in Section 4.6, Geology and Soils, and Section 4.8, Hydrology and Water Quality (refer to page 4.6-38 and pages 4.6-42 through 4.6-56, and page 4.8-40 through 4.8-41 of the Draft EIR, respectively).

Response to Comment E-3, Attachment A, Bullet 3 PG&E would coordinate with landowners, tenant farmers, and adjacent property owners prior to and during construction of the proposed pipeline in order to coordinate the construction schedule with agricultural activities such as crop spraying, crop irrigation, and harvest activities. For construction activities within rice fields, the proposed plan is that PG&E work with landowners to isolate the right-of-way prior to the fall, so that construction can begin on May 1 (or as soon as the field is sufficiently dry) without

interfering with the rice field preparation, planting, and flooding schedule (refer to the Draft EIR, page 2-51).

Response to Comment E-3, Attachment A, Bullet 4 PG&E requires that within their 50-foot permanent easement, a 20-foot-wide corridor located in the center be maintained free of deep rooted crops in order to perform routine maintenance activities, such as annual patrolling (by foot or aerial patrol), cathodic protection and other surveys. Other types of crops, such as row crops, field crops, and rice fields, can be planted within that 20-foot-wide corridor. The pipeline is proposed to be constructed with 5 feet of soil coverage in order to allow farming activities such as discing or deep-ripping to continue within the entire easement. PG&E has increased the soil coverage beyond minimum requirements from 3 feet to 5 feet because PG&E's experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations. Excavations in excess of 5 feet present additional construction challenges (and cost) due to the need for trench benching or shoring for worker entry. In addition, the comment letter from the Yolo County Farm Bureau (comment set Y) notes that "We appreciate that PG&E has decided to bury the pipeline under 5 feet of dirt. This provides safety for agricultural operations above the pipeline." ~~See response to comment E-3, bullet 1, for discussion of depth below crops.~~ With regard to constructing the pipeline beneath irrigation or drainage ditches, PG&E will address depth on a site-by-site basis as these irrigation features are encountered and determine, in consultation with the property owner, the appropriate depth to place the pipeline.

Response to Comment E-3, Attachment A, Bullet 5 For the length of the proposed pipeline PG&E will likely encounter varying conditions that will require consideration including soil types. Refer to Section 4.6, Geology and Soils, for a discussion of soil types likely to be encountered in the Project area. This pipeline occurs outside of the primary and secondary Delta and, therefore, peat soils are not a concern with the proposed Project.

Response to Comment E-3, Attachment A, Bullet 6 As discussed under the heading "Pipe Buoyancy" on page 2-71 of the Draft EIR, PG&E would apply criteria specified in DOT 49 CFR section 192.317 to protect the Project from flooding hazards. For portions of the Project within the FEMA-designated 100-year flood zone, PG&E would apply a factor of safety (FS) of 1.5 to decrease the downward force of backfill acting on the pipe. In addition, a relative compaction of 80 percent would be required to ensure the backfill would be stable during the ~~first~~ winter seasons. Soil conditions, pipe geometry, and depth of the HDD crossings are

sufficient to prevent buoyancy concerns of the HDD crossings. To address the potential for scour within the Yolo Bypass, a concrete coating would be applied to provide a downward force of 10 lbs/ft or 2-inch minimum thickness whichever is greater.

Response to Comment E-3, Attachment A, Bullet 7 PG&E will coordinate construction of the proposed Project with all property owners and agencies and acquire permits and approvals as required by the CPUC. As noted under Section 1.4, Permits, Approvals, and Regulatory Requirements, in addition to the action by the CSLC, the proposed Project may require encroachment permits from affected local flood control or reclamation districts including the Sacramento, Yolo, Placer, and Sutter Counties, Central Valley Flood Protection Board, Yolo-County Flood Control and Water Conservation District and the Placer County Flood Control and Conservation District.

Response to Comment E-3, Attachment A, Bullet 8 PG&E has indicated that they will not store or handle hazardous waste or materials within the project area in quantities exceeding State thresholds. Therefore, they will not be preparing a Business Emergency Response Plan and Inventory.

Response to Comment E-3, Attachment A, Bullet 9 PG&E, as a CPUC-regulated entity, is not required to adhere to county or city zoning or land use designations, nor are they required to obtain discretionary permits from such jurisdictions. However, PG&E may be required to obtain ministerial permits, such as grading and encroachment permits, from affected counties, cities or other local jurisdictions, such as reclamation districts. Furthermore, PG&E may be required to obtain permits or approvals from certain reviewing authorities such as those listed in Section 1.0, Introduction, under the heading 1.4 Permits, Approvals, and Regulatory Requirements, beginning on page 1-8 of the Draft EIR.

Response to Comment E-3, Attachment A, Bullet 10 The pipeline does not pass through the City of Davis.

E-4 As indicated on page 4.12-19 of Section 4.12, Population and Housing/Public Services/Utilities and Service Systems, the purpose of the Project is to support existing and approved future planned population growth in the Project area. The proposed Project is intended to extend natural gas service to planned residential and commercial developments in Placer, Sutter, and Sacramento counties as approved by their respective General Plans and Specific Plans. General

Plans and Specific Plans are required to go through an environmental review process. The General Plans of Yolo, Sutter, Sacramento and Placer counties and the City of Roseville have been taken into account in the following sections: Section 4.9, Land Use and Planning, and Section 4.12, Population and Housing/Public Services/Utilities and Service Systems. The proposed Project has no jurisdiction over the approval of residential development. With the exception of six aboveground stations, totaling 2.55 acres, the pipeline would be underground and following installation, the temporary and permanent easement areas would be restored to pre-construction conditions or in accordance with pre-arranged landowner requirements.

E-5 PG&E is required by statute to procure 20 percent of its electricity from renewable energy resources beginning in 2010. However, facilities with which PG&E has executed power purchase agreements have not yet been built, and the CPUC's rules of flexible compliance allow up to 3 years for deliveries to meet the targets. PG&E expects to meet its 20 percent obligation with deliveries received during the 3 years following 2010.

Nonetheless, an increase in the use of renewable sources of electricity is not expected to eliminate the need for the proposed Project. The Project is necessary to provide reliable natural gas service to existing core residential and small commercial customers, and extend service to planned residential and commercial development in Sacramento, Yolo, Sutter, and Placer Counties. A reduction in power generation gas usage will have no effect on the need for additional pipeline capacity to serve these customers.

PG&E's natural gas load growth forecasts for core residential and small commercial customers are updated and scaled to reflect the use of readily available ENERGY STAR® technologies in new home construction, and Energy-Efficiency Audits and Rebates offered for existing homes and businesses. The extent to which these energy efficiency measures have been used to reduce natural gas consumption has been taken into account in PG&E's load growth forecast.

E-6 Refer to response to comment E-4. As described on page 1-4 of the Draft EIR. The CSLC is the State agency with jurisdiction and management control over California's sovereign and submerged lands. This EIR will be used by the CSLC to exercise its jurisdictional responsibilities in making its decision to grant a lease for the pipeline river crossing at the Sacramento River.

ALISA J. STEPHENS
8267 S. Lake Circle
Granite Bay, CA 95746
Telephone: (916) 791-2251
Cell: (916) 764-0950

June 3, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Re: Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline

Dear Ms. Spurr:

I am a co-owner of the F.E. Mast farm located at 13990 County Road 88A, Esparto, Yolo County, California 95627. The property is 58.5 acres, consists of two parcels, APN 48-200-04 and 48-200-06, which are bisected by County Road 88A. Our family farmhouse is on the West parcel. There are outbuildings. The farmhouse and outbuildings were built in approximately the 1890's. My Grandfather, Floris E. Mast, purchased the farm in 1924. It has been in the family since then. It is prime agricultural land, typically planted in irrigated row crops, such as tomatoes, sunflowers and alfalfa. It is in the Williamson Act. We have our own agricultural and domestic wells.

Enclosed is a photograph of the route of the proposed pipeline, with our farm outlined in black. As you can see, the pipeline would bisect our two parcels from West to East. **Our primary concern is that this would segment our small farm property, making it less viable as an agricultural enterprise**. The following are our objections to the proposed location of the pipeline, which would cut through our property: F-1

1. The pipeline easement will segment our 58.5 acre farm, making it less viable as an income-producing agricultural enterprise;

2. The pipeline will run through prime agricultural property, causing significant impact to agricultural resources; F-2

3. We intended to plant a vineyard or an orchard on the property in the future. With the proscription against grapes and trees in the easement, our future plans cannot be realized. Several almond orchards have been planted in close proximity to our land in the past few years; F-3

3. The pipeline will be in close proximity to our farmhouse (less than .5 mile), creating an unacceptable hazardous risk of fire, explosion and natural gas leakage into the environment; F-4

4. The pipeline could degrade the groundwater which we use via our wells for agricultural and domestic use; F-5

5. The eucalyptus trees on the North boundary of the property are a habitat for owls and Swainson's hawks, and there are a myriad of other birds on the property: pheasants, Valley quail, redwing blackbirds, magpies and others. Swainson's hawks are a protected species; attached is a map from the USDA Natural Resources Conservation Service showing a concentration of Swainson's hawks on and around our farm. There is no hawk concentration along County Road 16. F-6

In reviewing the EIR, there are several proposed alternate routes that would **minimize segmenting prime farmland. Segmenting prime agricultural land has a significant negative impact on agricultural resources, decreasing the segmented land's viability as an agricultural economic enterprise.** Yolo County's General Plan, adopted on July 17, 1983, sets for the following goal, objective and policy: F-7

> **"Goal AG-1: Conserve and preserve agricultural lands in Yolo County, especially areas currently farmed or having prime agricultural soils and outside existing planned communities and city limits."**

The location of the proposed pipeline does not comply with the General Plan. The pipeline will cause permanent loss of farmland for vineyard and orchard use. Further, Paragraph 4.1.1 of the EIR states: F-8

> **"The proposed alignment of the pipeline parallels existing county and farm roads to the maximum extent feasible; however, some portions will cross through agricultural lands containing crops."**

This statement is untrue! The route of the proposed pipeline in Western Yolo County begins running along Road 17, but then jogs South **and runs directly across prime cropland when it could easily be routed parallel to existing county roads, avoiding cropland.**

With the primary goal being to preserve prime agricultural land in Yolo County, my preferences with respect to the proposed pipeline, are as follows (in order from highest to lesser preferences):

1. **No pipeline**;

2. **Option A.** This would follow existing County Road 16 to I-505. See Figure 3-2B, Map 3. The pipeline would run **along the boundaries of agricultural fields, not through them.** There are almost no structures or trees along CR 16. Under Option A there is only 1 residence located within 200' of the pipeline, whereas 8 residences would be located within 200' of the pipeline for the proposed project. **Option A would cause the least impact on homes and agricultural cropland.** F-9

3. **Option F.** This would following existing CR 17 and then jog North through the Dunnigan Hills. The route would run along CR 17 instead of bisecting fields. See Figure 3-2E, Map 1. **Under Option F no houses would be within 200' of the pipeline.**

4. **Option B.** The route would follow CR 16, and then turn South to cross I-505. See Figure 3-2B, Map 4. **This route results in 2 miles less bisecting agricultural lands.** This is a sparsely populated area and no residences are located with 200' of the proposed pipeline.

5. **Option E.** This route follows existing CR 19, resulting in less bisecting of agricultural land. Three residences would be located within 200' of the proposed pipeline, less than the 5 residences under Option D.

6. **Option D.** This route would shift a nearly 2-mile portion of the pipeline from bisecting 10 agricultural fields located between CR 17 and CR 19 to the agricultural field boundaries along CR 17. It is preferable to locate the pipeline along existing county roads than to bisect fields. The drawback of this option is that the pipeline would be located within 200' of 5 residences.

F-9 Cont.

It is my opinion that the primary factor in deciding the route of the proposed pipeline is to avoid bisecting, and thus segmenting, prime agricultural cropland. Bisecting cropland, vineyards and orchards causes a permanent loss of agricultural resources. Segmenting agricultural parcels, especially small ones such as ours, makes the parcels less viable as an agricultural enterprise.

F-10

In looking at PG&E's proposed route, it is clear that it is a "straight shot" through cropland for purposes of keeping its cost as low as possible. Please do not permit that to happen, as there are very viable alternate routes which run along existing county roads, particularly CR 16 which is little used and has only 1 structure and few trees. Aesthetic impact to CR 16 would be de minimus.

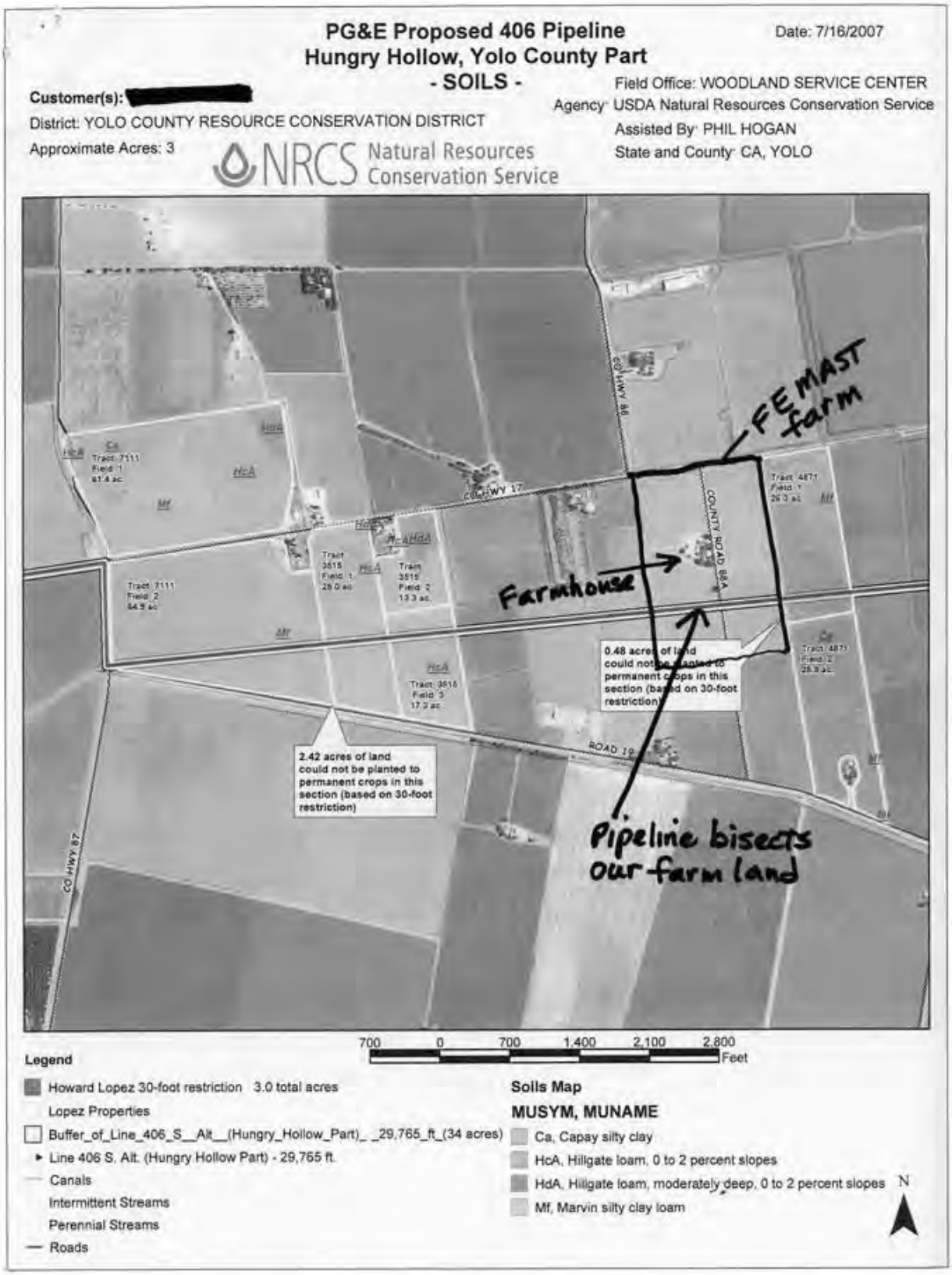
F-11

Thank you for considering my comments and preferences. Please do not hesitate to contact me if you wish further information.

Very truly yours,

ALISA J. STEPHENS

Encs.
Cc: Ed Mast
Wilma Stephens Hill
Howard and Bonnie Lopez
Yolo County Farm Bureau


PG&E Proposed 406 Pipeline
Hungry Hollow, Yolo County Part
- SOILS -
Date: 7/16/2007
Customer(s): [redacted]
District: YOLO COUNTY RESOURCE CONSERVATION DISTRICT
Approximate Acres: 3
Field Office: WOODLAND SERVICE CENTER
Agency: USDA Natural Resources Conservation Service
Assisted By: PHIL HOGAN
State and County: CA, YOLO
NRCS Natural Resources Conservation Service
FEMAST farm
Farmhouse
Pipeline bisects our farm land
0.48 acres of land could not be planted to permanent crops in this section (based on 30-foot restriction)
2.42 acres of land could not be planted to permanent crops in this section (based on 30-foot restriction)
CO HWY 17
COUNTY ROAD 88A
ROAD 19
CO HWY 87
700 0 700 1,400 2,100 2,800
Feet
Legend
Howard Lopez 30-foot restriction 3.0 total acres
Lopez Properties
Buffer_of_Line_406_S__Alt__(Hungry_Hollow_Part)_ _29,765_ft_(34 acres)
Line 406 S. Alt. (Hungry Hollow Part) - 29,765 ft.
Canals
Intermittent Streams
Perennial Streams
Roads
Soils Map
MUSYM, MUNAME
Ca, Capay silty clay
HcA, Hillgate loam, 0 to 2 percent slopes
HdA, Hillgate loam, moderately deep, 0 to 2 percent slopes
Mf, Marvin silty clay loam
N

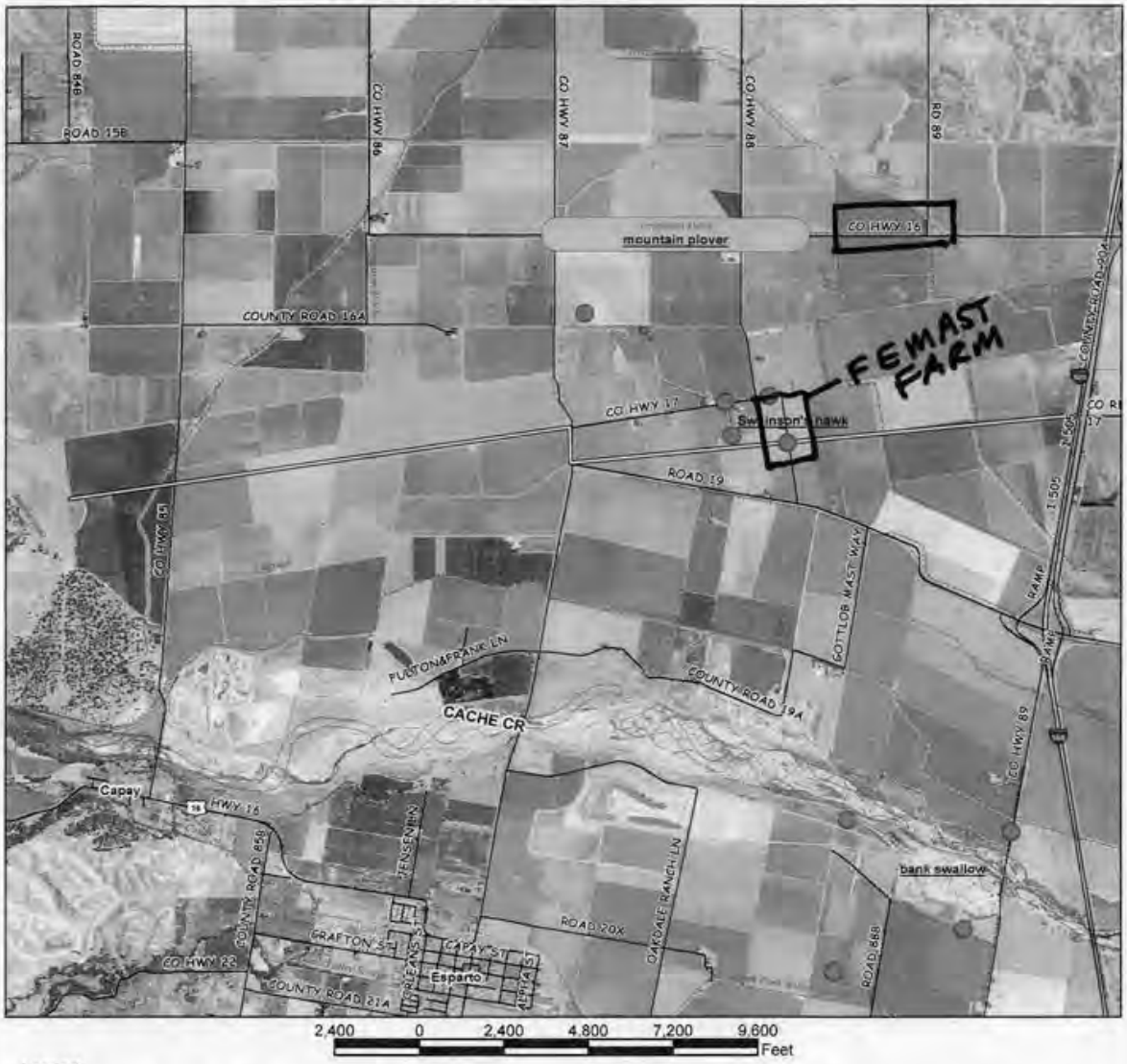
PG&E Proposed 406 Pipeline
Hungry Hollow, Yolo County Part
Protected Species

Date: 7/16/2007

Field Office: WOODLAND SERVICE CENTER
Agency: USDA Natural Resources Conservation Service
Assisted By: PHIL HOGAN
State and County: CA, YOLO

District: YOLO COUNTY RESOURCE CONSERVATION DISTRICT
Approximate Acres: 34

SOURCE: California Natural Diversity Database
California Department of Fish and Game



Legend

- Buffer_of_Line_406_S__Alt__(Hungry_Hollow_Part)_ _29,765_ft_(34 acres)
- Line 406 S. Alt. (Hungry Hollow Part) 29,765 ft.
- Canals
- Intermittent Streams
- Perennial Streams
- Roads

Protected Species

CNAME
- Swainson's hawk
- mountain plover

Unincorporated Towns

Town
- Capay
- Esparto

N

NRCS Natural Resources Conservation Service

SWAINSON'S HAWK

RESPONSE TO COMMENT SET F

F-1 Please refer to responses to comments B-1, B-3, and B-4.

F-2 Please refer to response to comment B-1.

F-3 Please refer to response to comment B-1.

F-4 Please refer to response to comment B-6. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold. The individual risk significance threshold used in the Revised Final EIR is an annual likelihood of one in one-million (1:1,000,000) for ~~serious injury or~~ fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The maximum risk posed by Line 406 in Yolo County before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chances of fatality per year. The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~Section 4.7, Hazards and Hazardous Materials, of the Draft EIR provides an analysis of the risks associated with the proposed pipeline based on the System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project. This report is included as a part of Appendix H. Table 5.1.5-1 of the EDM report, as well as Table 4.7-6 on pages 4.7-34 and 4.7-35 of the Draft EIR, summarizes the potential consequences from fires and explosions at various distances from the proposed pipeline. As noted in the table, the consequences of an explosion at 1,260 feet from the release are not anticipated to result in any injuries; for this case, 10 percent window glass breakage would be anticipated with no injuries to building occupants. The consequences of a torch fire at 1,540 feet from the pipeline are not anticipated to cause detrimental impacts to humans from prolonged exposure. The consequences of an explosion from a release at 1,890 feet would include some glass breakage but no injuries to building occupants.~~

F-5 Pages 4.8-11 through 4.8-13 of the Draft EIR discuss potential impacts to water quality (see Section 4.8.5, Hydrology and Water Quality). As proposed in APM HWQ-3 and APM HWQ-4, and APM BIO-20 and APM BIO-21, the Project incorporates design features and construction techniques that reduce potential impacts to groundwater flow to less than significant levels. As discussed in Impact HWQ-2, the Project has the potential to interrupt or degrade groundwater used for private or municipal purposes. Accordingly, MM HWQ-2 (as amended in this Revised Final EIR) would required testing of wells identified as potentially at risk and consultation with landowners, should wells be affected (please refer to page 4.8-21 through 4.8-22 of the Draft EIR). Implementation of MM HWQ-2 would ensure that Project construction activities would avoid potential conflicts with private water wells, irrigation wells, and water pipelines. Refer to section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

F-6 Swainson's hawk and other special-status bird species are discussed in Table 4.4-3 (refer to pages 4.4-30 through 4.4-38 of the Draft EIR and as amended in this Revised Final EIR). Figure 4.4-2 shows California Natural Diversity Database (CNDDB). As discussed on page 4.4-33, Swainson's hawks were observed on numerous occasions during surveys of the Project alignment, and suitable nesting and foraging habitat was confirmed throughout the scattered trees, open grasslands, and agricultural areas along the proposed alignment. Implementation of APMs BIO-1 through BIO-19, APM BIO-29, APM BIO-30, and APM BIO-35, MM BIO-2a, MM BIO-2b, MM BIO-4a, MM BIO-4b, MM BIO-4c, and MM BIO-4d would reduce impacts to Swainson's hawk and other special-status bird species to less than significant levels. As noted on pages 4.4-125 through 4.4-126, Options A and B, portions of which would run along SR 16, would result in fewer potential impacts to nesting birds. However, as discussed in the Executive Summary of the Draft EIR, Options A and B would result in a greater magnitude of impacts to agricultural resources, biological resources, cultural resources, soils, risk of upset hazards, land use and traffic. Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new High Consequence Area (HCA) would potentially be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate near the pipeline.

F-7 As discussed on page ES-32, while Alternative Options A, B, C, D, E, and G would result in similar impacts to agricultural resources as the proposed Project, these options would reduce the number of agricultural fields that would be bisected by the Project. However, implementation of these alternative options would result in

increased impacts associated with factors such as movement of the pipeline closer to roadways, residences, and in some cases businesses, thereby increasing the number of people that would be at risk if rupture of the pipeline were to occur with a subsequent explosion and/or fire (resulting in an increase in the magnitude of the societal risk). Please also refer to responses to comments B-1, B-3, B-4, B-5, and E-3.

F-8 The proposed alignment crosses through agricultural fields containing crops only in locations where an alignment paralleling existing county road and farm roads would not reduce the environmental impacts, including agriculture. If the proposed pipeline were to follow a path along existing roadways rather than cross through agricultural fields, the pipeline would still be located within the agricultural fields along those roadways. There are jurisdictional requirements regarding the distance from roadways that the pipeline must be located. Paralleling roadways could result in an increase in the amount of land needed for the pipeline, and in some cases bring the pipeline closer to residences. As an example, Options D and E would increase the pipeline length by 860 and 3,480 feet, respectively, within those agricultural fields paralleling the roadways.

The ~~proposed Project~~ use restrictions within the permanent easement would prohibit the planting of deep-rooted plants, such as trees or vines, within 10 feet on either side of the pipeline centerline (20 feet total within the permanent easement). This would result in the limitation of crops grown on approximately 102 acres of farmland within four counties to row crops, field crops, or any other crops that do not involve deep-rooted plants. Most of the agricultural land along the proposed Project alignment is currently used for row or field crops, and those types of uses would be allowed to continue within the entire pipeline permanent easement once the pipeline has been installed and the topsoil restored.

F-9 Section 3.0 of the Draft EIR evaluates a number of alternative options along the proposed pipeline alignment to reduce or avoid one or more impacts of the proposed Project. This comment expresses a preference for the No Project Alternative, Option A, Option F, Option B, Option E, and Option D, in that order.

The No Project Alternative means that PG&E would not construct/operate the natural gas pipeline along the proposed route. This option would not meet the Project objectives, and continued growth in Yolo, Sutter, Sacramento, and Placer counties would put further strain on existing natural gas infrastructure, and could result in emergency restriction or interruption of services.

Option A would increase the overall pipeline length by approximately 2,200 feet through the edges of mostly agricultural fields, increasing the impacts to agricultural lands including existing vineyards and orchards. Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new "high consequence area" or "HCA" would potentially be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate within a certain distance (646-foot impact radius) from the proposed pipeline.

Option F would not alter the length of the overall pipeline, but would result in bisecting an agricultural field instead of extending along the edge of the field. This option would increase the magnitude of impacts to biological resources by bordering an ephemeral drainage with adjacent wetlands that the Project avoids.

Option B would increase the overall pipeline length by approximately 2,640 feet through the edges of mostly agricultural fields, increasing the impacts to agricultural lands including existing orchards. Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new "high consequence area" or "HCA" would potentially be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate near the pipeline.

Option E would involve a minor realignment of the proposed Line 406 route to those agricultural lands along County Road 16. This option would increase the overall pipeline length by roughly 3,480 feet, along the edges of agricultural fields. This option would impact more trees and would move the pipeline closer to residences along County Road 16.

Option D would involve a minor variation to the proposed Line 406 route to those agricultural lands along County Road 19. This option would increase the overall pipeline length by roughly 860 feet through the edges of agricultural fields. This option would need to take into consideration the ditch along County Road 19, would impact an additional orchard, and would move the pipeline closer to residences along the road.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all

project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

F-10 Please refer to responses to comments B-1 and B-3.

F-11 Please refer to response to comment F-9.

Center Joint Unified School District

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June 9, 2009

VIA EMAIL to spurrc@sic.ca.gov and U.S. Mail

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Re: Comments on Draft Environmental Impact Report for Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline Project

Dear Ms. Spurr:

On behalf of the Center Unified School District ("District"), I am submitting the following comments regarding the PG&E Line 406/407 Natural Gas Pipeline Project Draft Environmental Impact Report ("DEIR").

OVERVIEW AND GENERAL COMMENTS

The Project, as described in the DEIR, is PG&E's proposal to construct a 30-inch diameter natural gas pipeline (Lines 406 and 407) and a new distribution feeder main from Esparto in Yolo County east to a location near Roseville in Placer County. The Project also includes the construction of six above-ground facilities. The natural gas pipeline is a high pressure pipeline and, therefore, poses unique safety risks for development, including schools, in the vicinity.

The District has plans to build a future high school which will be located on Baseline Road within the Placer Vineyards Specific Plan. The high school site is within fifty (50) feet of the proposed pipeline. In addition, the District plans to build an elementary school within the Placer Vineyards development which is within 1400 feet of the proposed pipeline. (See DEIR 4.7-5-4.7-6) Pursuant to an agreement between the District and the owners of the Placer Vineyards development project, these parcels of land have been identified and made available for acquisition by the District for purposes of building the schools. The District has already gone through an extensive and expensive planning process with the developer to identify these sites which are suitable for elementary and high school campuses. Similarly, the Sierra Vista Specific Plan proposed land use plan includes five dedicated school sites that will be developed by the District. The closest proposed school site to the pipeline is an elementary school site within the Sierra Vista Specific Plan located approximately 1500 feet north of the proposed Project pipeline. (DEIR 4.7-5-4.7-6)

G-1

The District is concerned that the Project implementation could have a number of significant direct and indirect impacts on the District and its planned projects. The DEIR should place greater emphasis on the principle that schools must be treated as a sensitive land use given the concentration of young children within and around school facilities for many hours of the school day and during after-school activities. G-2

The District has concerns regarding the Project's potential health and safety impacts on its schools. The District requests that the EIR fully take into account the Project's potential direct and indirect impacts on nearby school facilities pursuant to the requirements established in California Code of Regulations, title 5, including section 14010 which sets forth specific criteria for school sites. Specifically, section 14010 requires that all districts select a school site that provides safety and that supports learning. Section 14010(h) provides:

> The site shall not be located near an above-ground water or fuel storage tank or within 1500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional, which may include certification from a local public utility commission.

G-3

Accordingly, the pipeline should be located more than 1500 feet from the identified school sites given the hazards associated with a high pressure pipeline.

The District requests that the EIR recognize the unique nature of school facilities as provided under California law. Schools are one of the most protected land uses. The development of new schools and the expansion and modernization of existing schools trigger various special requirements which make finding an adequate school site very difficult. The regulations require review by the California Department of Education, the Department of Toxic Substances Control and various other agencies, and often require special studies to confirm that stringent standards are met. Such studies may involve various agency consultations and oversight and the use of rigorous study protocols. This very high level of review creates great difficulty in establishing a site for and constructing school facilities. Therefore, the District is very concerned that the proposed Project may subsequently preclude the District from building schools as planned near the Project area, including a high school and elementary school, and that the Project will raise the costs of construction, or otherwise impact the District's ability to construct new facilities at these locations.

The DEIR analyzed various alternatives including various pipeline alignment options. The District requests that the pipeline route be changed to an alternate route to the north. The District supports, in varying degrees, the following alternatives as described below.

1. The District supports and prefers "Option J" because it will place the pipeline the farthest distance away from the high school site and outside the requested 1500-foot buffer zone. However, the District would also support "Option I" because it places the pipeline more than 1500 feet from the high school site. Because the pipeline is closer to the high school site under this "Option I," it is the less preferred alternative but would be acceptable. G-4

2. The District supports and prefers "Option K" to "Option L" because under "Option K" the pipeline would be outside the 1500-foot buffer for the proposed elementary school site. "Option L" would allow the pipeline within 1500 feet of the proposed elementary school site but would require a risk assessment and possible corrective measures which could be costly to the District. There can be no assurance that the risk assessment would find that the site will not pose a safety risk with or without corrective measures under "Option L." If the risk assessment found a safety risk even with corrective measures, the school site would not meet the standards set forth in the California Code of Regulations, title 5, section 14010. G-5

The DEIR is inadequate in that not all reasonable alternatives have been fully explored. The DEIR should also consider, as an alternative, the utilization of multiple smaller pipelines to deliver gas in lieu of the high pressure pipeline on Baseline Road. Smaller pipelines should be located away from school sites. G-6

SPECIFIC COMMENTS

1. The District opposes the planned Project because of the proximity of the pipeline location to school sites. The District would support various Options set forth in the DEIR.

2. The District supports "Option I" described on DEIR ES-10, line 32-ES-11, line 26 as a less preferred but acceptable alternative. As stated therein,

> This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline to a location with fewer residences. This option also would reduce the risk of upset hazards to a planned high school site. (ES-11, lines 11-14.) G-7

Similarly the DEIR provides:

> Option I will move the pipeline to a location outside of the 1500 foot safety buffer required by state school regulations. (DEIR ES-32, lines 14-16.)

The DEIR notes that a location such as a school that houses or attracts children is a "sensitive receptor." (DEIR 4.3-16, lines 10-16.) This DEIR conclusion supports the choice of "Option I" because the pipeline will be farther from the school than 1500 feet.

3. The District prefers and supports "Option J" as described on DEIR ES-11, line 27-ES-12, line 22. "

> This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline to a location with fewer residences. This option also would reduce the risk of upset hazards to a planned high school site. (ES-12, lines 7-10.) G-8

The District supports this option as it avoids the location of the pipeline within 1500 feet of the school site.

The DEIR notes that a location such as a school that houses or attracts children is a "sensitive receptor." (DEIR 4.3-16, lines 10-16.) This conclusion supports the choice of

"Option J" because the pipeline will be farthest from the school. The increase in distance from the school site to the pipeline affords greater safety to the District's students and staff than "Option I." G-8 Cont.

4. The District prefers and supports "Option K" as described on DEIR ES-12, line 23-ES-13, line 20. As stated therein,

> This option would help reduce the risk of upset to a planned elementary school because the pipeline will be more than 1500 feet from the school site. (ES-13, lines 3-4.)

G-9

The DEIR notes that a location such as a school that houses or attracts children is a "sensitive receptor." (DEIR 4.3-16, lines 10-16.) This conclusion supports the choice of "Option K" because the pipeline will be farther from the planned elementary school than "Option L."

5. The District supports "Option L" described on DEIR ES-13, line 14-ES-14, line 7 as a less preferred alternative. Under California Code of Regulations, title 5, section 14010, a high school site more than 1500 feet from a high pressure gas pipeline is allowable. Option L does not create a 1500-foot buffer but instead provides for PG&E and the District to jointly develop a risk analysis in accordance with California Code of Regulations section 14010(h) to evaluate potential pipeline impacts to the school. If the assessment determines that there is a risk of serious injury or fatality presented by the pipeline, the DEIR states that corrective measures would be recommended to reduce the probability and/or consequence such that the risk is reduced to an acceptable level per the above mentioned regulation. G-10

The District notes that a risk analysis and resulting mitigation measures could be very expensive for the District. The District should not be required to expend funds for this purpose when a safer location for the proposed pipeline is available. Moving the pipeline more than 1500 feet away from the site is a better alternative as it is more cost effective and does not raise safety concerns. Therefore, "Option K" is preferable as both a cost-saving and safety measure.

The DEIR notes that a location such as a school that houses or attracts children is a "sensitive receptor." (4.3-16, lines 10-16.) This conclusion also supports the choice of "Option L" because the pipeline will be farther from the school.

6. Release Probability and Sensitive Receptors (DEIR 4.7.6 and 4.7-4)

These sections note the proximity of proposed school sites to the proposed pipeline as described above. The DEIR states that some of the reportable gas pipeline incidents have included the following scenarios: G-11

Caused a death or personal injury requiring hospitalization;

Resulted in gas ignition;

Caused estimated damage to the property of the operator or others, of a total of $5,000 or more. (DEIR 4.7-6, lines 14-22.)

The people who are sensitive to air pollution include children, and schools are considered a sensitive receptor. (DEIR 4.7-4, line 20-4.7-5, line2.)

The potential damage and personal injury to children and adults at a school site weigh heavily in favor of moving the pipeline more than 1500 feet from a school site.

An alternate EIR for a route north of the District should be prepared.

G-11 Cont.

7. MM HAZ-2b Installation of Automatic Shutdown Valves. (DEIR 4.7-38).

An alternate EIR for the route north of the District should be prepared.

Automatic shutdown valves where the pipeline comes within 2,000 feet of a school site should be required.

G-12

8. Hazardous Materials Release (DEIR 4.7)

The applicant's proposed pipeline location is within fifty (50) feet of the proposed high school.

"Option I" would realign a portion of Line 407 to place the pipeline outside the 1500-foot buffer zone around a planned high school. (DEIR 4.7-42, lines 2-3.)

"Option J" would realign a portion of Line 407 to place the pipeline outside the 1500-foot buffer zone around a planned high school (PG&E 2009). (DEIR 4.7-42, lines 28-29.)

"Option K" would place the proposed natural gas pipeline outside the 1500-foot buffer for the elementary school. (The applicant proposed pipeline location is approximately 1350 feet from the proposed school boundary.) (DEIR 4.7-43, lines 24-27.)

G-13

"Option L" would involve the installation of Line 407, within the 1500-foot buffer of a planned elementary school. (DEIR 4.7.44, lines 33-34

The installation of methane release sensors should be installed at PG&E expense on each school site within one-half mile of the pipeline. PG&E should be required to work with the County and local fire department to develop an emergency hazardous materials release response action plan.

A school district cannot be located within one-quarter mile of a known emitter of hazardous or acutely hazardous materials unless findings are made that emission levels do not constitute an actual or potential endangerment of public health to persons who would attend or be employed at the school. (See Education Code section 17213.)

A pressure regulating station such as the one which will be located on Baseline Road between Walerga Road and Fiddyment Road (Baseline Road Pressure Regulating Station or "BRS") (See DEIR section 4.10-5, lines 17-18) are potential emitters of hazardous emissions, principally methane, as described in the DEIR section 4.7-4, lines 1-18. As stated therein, leaks may expose sensitive populations to methane. The greatest potential hazard is explosion and fire.

G-14

Therefore, the pressure release stations should be more than one-quarter mile from any school site. Additionally, the installation of methane release sensors on each school site within one-half mile of the pipeline should be required. PG&E should be required to work with the

County and local fire department to develop an emergency hazardous materials release response action plan. G-14 Cont.

9. Schools (DEIR 4.12-7, line 26 to 4.12-9, line 6)

This section is incomplete in that there is no mention made of the Center Joint Unified School District which is located, in part, in Placer County and which will be affected by the proposed pipeline. Further, no mention is made of the current and future population that the District serves or will serve. G-15

Please correct this section to include an accurate description of the District, its schools and current student enrollment. Information on the location of planned schools, the projected enrollment, and the proximity of the schools to the pipeline should also be included.

10. Transportation and Traffic (DEIR 4.13-19, lines 7-13 and 4.13-23, line 31- 4.13-24, line 6.)

There is no "Placer County Unified School District" yet it is referenced in both of these sections as the pertinent school district. G-16

Please correct these references to include the Center Joint Unified School District.

CONCLUSION

The proximity of the proposed high pressure natural gas pipeline is a safety hazard for the District at its planned locations for schools. The location of the gas pipeline should be changed in accordance with identified options which place the pipeline more than 1500 feet from a school site for the safety of the children as well as others who will be at the future school sites. If the pipeline is not relocated, the District will suffer financially by being forced to undertake expensive studies or even find new school sites. Other requirements described herein for the safety of the students should be imposed. The alternative of multiple smaller pipelines to provide service should be considered as well. G-17

The District reserves the right to make additional comments in the event that further environmental analysis is done.

Very truly yours,

Craig Deason

Craig Deason
Assistant Superintendent, Facilities
and Operations

CD:cf

bcc: Elizabeth B. Hearey, Esq., Atkinson, Andelson, Loya Ruud & Romo
Michael Winters

"Proud of the Past, Planning for the Future"

RESPONSE TO COMMENT SET G

G-1 The commenter provided background information regarding the location of planned and proposed schools in the Placer Vineyards Specific Plan (PVSP) and the Sierra Vista Specific Plan (SVSP) areas. The proposed Line 407 is intended to serve the PVSP (approved by Placer County Board of Supervisors on July 16, 2007), and the SVSP (still in the planning stages).

Within the approved PVSP are seven dedicated school sites that will be developed by the Center Joint Unified School District. School sites are also proposed to be included in the SVSP, and a land use plan shows five proposed school site locations. Two dedicated school sites within the PVSP (one high school and one elementary school) are located within 1,500 feet of the proposed Project pipeline. The commenter states that the planned high school site is located within 50 feet of the proposed pipeline, and the planned elementary school is located within 1,400 feet of the proposed pipeline. The commenter also states that one proposed school site within the SVSP (elementary school) is located approximately 1,500 feet north of the proposed Project pipeline.

As noted in Table 4.7-6 of the revised risk analysis attached to the Revised Final EIR as Appendix H-3, the impacts are very minor at distances greater than 800 to 1,000 feet. Since the planned elementary school site boundaries within the PVSP and the SVSP are located 1,400 feet and 1,500 feet, respectively, from the proposed pipeline, it is unlikely that serious risks would be posed to the student body. At this distance from the pipeline, the consequences from a potential fire or explosion are not expected to result in any injuries. ~~Since the SVSP is still within the planning stages, the proposed schools sites can be moved to locations outside of the school district recommended safety buffer prior to finalizing that plan.~~

The location of the PVSP schools were considered in the Draft EIR (please refer to pages 4.7-5, 4.7-6, and 4.9-1). Alternative Option I, Option J, Option K, and Option L were considered in order to reduce risks to the proposed school sites (please refer to pages 3-55 through 3-57 of the Draft EIR). The impacts of these options in regards to the proposed school sites are discussed under Impacts of Alternatives in Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning (please refer to page 4.7-42 through 4.7-45 and 4.9-29 through 4.9-31 of the Draft EIR, as revised in Section 4.0 of this Revised Final EIR).

G-2 In the Executive Summary of the Draft EIR and in Sections 4.3, Air Quality; 4.7, Hazards and Hazardous Materials; 4.9, Land Use and Planning; and

4.10, Noise, of the Draft EIR, school sites are identified as sensitive land uses. Sections 4.7, Hazards and Hazardous Materials, and 4.9, Land Use and Planning, of the Draft EIR also provide language regarding the California Education Code, section 17213, and the California Code of Regulations, Title 5, section 14010(h), regarding the 1,500-foot study zone ~~buffer~~ between school sites and high-pressure gas pipelines. Page 3-3 of the Draft EIR considers potential land use conflicts associated with school siting requirements that require school districts to perform risk analyses when a school site is located within 1,500 feet of an easement for an underground pipeline as one of the reasons considered for looking at alternative locations. Safety risks to planned school sites are discussed in the Executive Summary and in Section 4.7, Hazards and Hazardous Materials and 4.9, Land Use and Planning, as revised in Section 4.0 of this Revised Final EIR.

Alternative Options I, J, K, and L were developed to attempt to reduce the magnitude of risks to two planned school sites within the PVSP area. Options I and J looked at moving the pipeline to a distance greater than 1,000 feet from the school site, based on the results of a risk analysis, so as to reduce the risk to the school population if a pipeline leak were to occur resulting in a fire or explosion. As noted in Table 4.7-6 of the revised risk analysis attached to the Revised Final EIR as Appendix H-3, the impacts are very minor at distances greater than 800 to 1,000 feet. At this distance from the pipeline, the consequences from a potential fire or explosion are not expected to result in any injuries. Therefore, Option I routes the pipeline approximately 1,550 feet from the planned high school site to move the pipeline outside the CDE study zone and reduce the risk, and would place the pipeline within agricultural fields. Option J would move the pipeline even further from the planned high school, but would move the pipeline closer to residences. Moving the pipeline to a distance of 1,550 feet from the planned high school is adequate since the risk analysis shows that no fatalities or injuries are expected to occur if a pipeline release and subsequent fire or explosion were to result at a distance greater than 1,000 feet from the pipeline.

Option K places the pipeline route outside the 1,500-foot study zone, while Option L has the construction of the pipeline within the proposed alignment for Line 407-E, within the 1,500-foot study zone, but at a depth of 35 feet to reduce the magnitude of the risk to the planned elementary school. In Option L, PG&E would use HDD to place the pipeline at this increased depth (approximately 35 feet deep). PG&E has also proposed to jointly develop a risk analysis with the School District to determine pipeline impacts to the school (refer to APM ALT-L) as a part of Option L. Since the

planned elementary school site would be located 1,400 feet from the pipeline, it is already at an adequate distance from the pipeline that no fatalities or injuries are expected to occur if a pipeline release and subsequent fire or explosion were to result. Therefore, moving the pipeline another 150 feet (as in Option K) from the planned elementary school and impacting wetlands and vernal pools is not necessary. Increasing the length of the HDD in the area of the planned elementary school would serve to reduce the risks of third-party damage and serve to further reduce the safety risks to the school.

G-3 Please refer to response to comment G-2.

G-4 The Center Joint Unified School District has indicated a preference for Option J over Option I. Section 3.0 of the Draft EIR evaluated a number of alternatives or options along the proposed pipeline alignment to reduce or avoid one or more impacts of the proposed Project. Both alternative options would have greater impacts to biological resources but these impacts could be mitigated to less than significant levels. Both options would meet all of the basic Project objectives and would increase the distance of the pipeline from a planned high school along Baseline Road. However, Option J would place the pipeline close to several residences, while Option I would go through agricultural fields.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

G-5 The Center Joint Unified School District has indicated a preference for Option K over Option L. Both options were considered due to proximity to the planned elementary school site in the PVSP area. Option K places the pipeline route outside the 1,500-foot study ~~buffer~~ zone, while Option L has the construction of the pipeline within the proposed alignment for Line 407-E, within the 1,500-foot

~~buffer~~ study zone, but at a depth of 35 feet to reduce the magnitude of the risk ~~potential~~ to the planned school. In Option L, PG&E would use HDD to place the pipeline at this increased depth (approximately 35 feet deep). PG&E has proposed to jointly develop a risk analysis with the School District to determine pipeline impacts to the school (refer to APM ALT-L).

Option K would increase impacts to biological resources by placing the pipeline within an area that has wetlands, vernal pools, and giant garter snake habitat. While Option L would not increase or decrease any of the impacts associated with the proposed pipeline, Option L was designed to decrease the magnitude of the risks to the planned elementary school and minimize impacts to biological resources that would result from implementing ~~one of~~ the other alternative option at this location.

In addition, please review Letter P from Hefner, Stark and Marois, representing Placer Vineyards Development Group, LLC, who indicate in comment P-8 that there is flexibility in the PVSP with regard to the elementary school. The comment indicates that "there may be some ability to relocate the elementary school site further south away from the pipeline by swapping the adjacent park site with the school site, thereby increasing the distance of the school site from Baseline Road to greater than 1,500 feet."

G-6 Section 15126.6 of the CEQA Guidelines states, "...an EIR shall describe a range of reasonable alternatives to the project or the location to the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation…" With regard to proximity to the planned elementary school site, the CSLC has considered a reasonable range of alternatives including the No Project Alternative, Option I, Option J, Option K, and Option L. The comment identified one alternative to be considered, the utilization of multiple smaller pipelines to deliver gas in lieu of the high pressure pipeline on Baseline Road, and to locate these away from school sites.

The primary design objective of the Project is to increase the capacity of the overall local transmission pipeline network serving the greater Sacramento Valley Region, including West Placer, Sacramento, and El Dorado counties. To meet this design objective, Line 407 must be large enough in diameter and operate at high enough

pressure to function as a major rib extension from PG&E's backbone pipeline system (Line 400 and Line 401) to transport gas from Line 406 into 12-inch/16-inch/24-inch Line 123 operating at 500 psig in West Placer County, and 12-inch/16-inch Line 119 operating at 500 psig in Sacramento County.

A range of sizes from 24- to 36-inch diameter and operating pressures of 800 psig and 975 psig were evaluated for Line 407 to identify the optimal design to increase the capacity of the integrated network and meet the long-term load growth projected for the system. A 30-inch diameter pipeline extending along the proposed route operating at a Maximum Allowable Operating Pressure (MAOP) of 975 psig for both Line 406 and Line 407 was identified as the design that provided the greatest overall system benefit at the lowest marginal cost and impact to the environment.

To replace the capacity of 30-inch Line 407, PG&E would need to install either two parallel 24-inch transmission pipelines, or four parallel transmission pipelines consisting of two 20-inch and two 16-inch pipelines, all operating at the same MAOP as Line 407. Installing multiple smaller diameter pipelines in lieu of a single 30-inch pipeline would increase the mileage of pipelines within the project area and would increase the impact on the environment, the risk of serious injury and fatality, as well as the cost of serving the load growth projected on the system.

The volume of gas that can flow through a pipeline depends primarily on the operating pressure differential, the pipe diameter, and the length of the pipeline. When the operating pressure or pipe diameter is reduced, the natural gas flow rate is also reduced. As a result, a reduction in the line diameter would require higher pressures in order to flow the required 180,000,000 cubic feet of natural gas per day. On the other hand, a reduction in the operating pressure would require a larger diameter line (or multiple lines) in order to flow the same volume. Specifically, a 30-inch line will flow nearly 20 times more natural gas than a 10-inch diameter line operating under similar conditions. In other words, almost twenty 10-inch diameter lines would be required to flow the same volume of natural gas as a single 30-inch line.

It is clear that substituting numerous smaller diameter natural gas transmission lines in a similarly developed residential and commercial area would pose a much higher risk to the public than the proposed single 30-inch diameter transmission line. Although the actual results would depend on the population density and other factors, the use of numerous (roughly 20) 10-inch diameter lines would pose a risk

on the order of 10 to 15 times that of a single 30-inch line flowing an equivalent volume of natural gas.

G-7 The CSLC recognizes that the Center Joint Unified School District supports Option I. Please refer to response to comment G-4.

G-8 CSLC recognizes Center Joint Unified School District's preference for Option J. Please refer to response to comment G-4.

G-9 CSLC recognizes Center Joint Unified School District's preference for Option K. Please refer to response to comment G-5.

G-10 ~~A risk analysis was completed for the proposed Project pipeline and all alternative options. Alternative Option L would significantly reduce or eliminate the likelihood of the line being damaged by third parties since the line would be installed using HDD techniques, well below normal excavation depths.~~

The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The planned school site is located along Line 407. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

As noted in Table 4.7-6 of the revised risk analysis attached to the Revised Final EIR as Appendix H-3, the impacts are very minor at distances greater than 800 to 1,000 feet. Since the planned elementary school site boundary is located approximately ~~1,350~~ 1,400 feet from the proposed pipeline alignment, it is unlikely that serious risks would be posed to the student body. At this distance from the pipeline, the consequences from a potential fire or explosion are not expected to result in any injuries. Option K would increase the magnitude of potential impacts to wetland features while not decreasing the risk. Option K would cross an additional vernal pool, vernal swale, seasonal swales, and seasonal wetland features and potentially result in direct impacts to special-status vernal pool branchiopods and plant species (refer to page 4.4-133 of the Draft EIR). Also, please see responses to comments F-4 and G-5.

G-11 As noted in Section 3.0 of the Draft EIR, a Northern Alternative (located north of the Center Joint Unified School District's proposed school sites) was considered but ultimately rejected from full evaluation. As discussed on page 3-6 of the Draft EIR, this alternative was eliminated because it would expose the proposed pipeline to the greatest risk from fault rupture, and result in greater impacts to biological resources, particularly vernal pool habitat, involve more than 40 waterway crossings, and impact local agricultural production more extensively than the proposed Project. Furthermore, the alternative would locate the natural gas supply further from many of the developments that are planned in the area that would receive service from the pipeline.

The Draft EIR fully evaluated four options to address the proposed Project's proximity to the future school sites: Option I, Option J, Option K, and Option L. Refer to responses to comments G-1, G-4, G-5, and G-10.

G-12 ~~PG&E plans to install remotely operated valves at the Capay Meetering Station and the Yolo Junction Pressure Limiting Station, which would help to control the flow of gas into Lines 406 and 407.~~ PG&E will be required to ~~also~~ install automatic shutdown valves in ~~three~~ all locations: Capay Metering Station, Yolo

Junction Station, Powerline Road Main Line Valve Station (which includes the Riego Road Regulating Station), Baseline/Brewer Road Main Line Valve Station, and Baseline Road Pressure Regulating Station.

The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, additional measures shall be implemented to further reduce risks of project upset. MM HAZ-2a and MM HAZ-2b have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

~~These measures include the use of modern pipe, regular internal inspections using a high resolution instrument (smart pig), corrosion mitigation, and the installation of automatic or remotely operated shut-down valves.~~

G-13 Please see responses to comments G-4 and G-5 for discussion of Options I through L. Methane sensors are not generally recommended because emission levels under normal pipeline operations should not be considered hazardous to the public. Per CPUC regulations, PG&E odorizes its natural gas. The level of odorization is such that it is generally detectable by human smell below levels that are considered hazardous. PG&E also performs leak surveys on its pipelines on either an annual or semi-annual basis, and hazardous leaks are repaired promptly.

With regard to the implementation of a "emergency hazardous materials release response action plan," PG&E will prepare and implement a hazardous substance control and emergency response plan as outlined in APM HAZ-2 and HAZ-6. The Mitigation Monitoring Plan (MMP) must be adopted with approval of the Project and certification of the EIR. The MMP includes monitoring and reporting procedures that PG&E, the CSLC, or the County CUPA must carry out.

G-14 All pressure regulating stations are located further than one-quarter mile (1,320 feet) from existing and proposed school sites. Within the Center Joint Unified School District, the Baseline Road Pressure Regulating Station would be located approximately 2,790 feet from the existing Coyote Ridge Elementary School (within Roseville's city limits) and approximately 3,170 feet from the closest planned school site. The Baseline/Brewer Main Line Valve Station would be located approximately 1,340 feet from the parcel boundary of a proposed high school site located in the PVSP. As described on pages 4.7-30 through 4.7-31 in Section 4.7, Hazards and Hazardous Materials, PG&E has indicated that a Public Safety Information Program

will be implemented during operation of the pipeline. As indicated on page 2-83 through 2-85 of the Draft EIR, PG&E would respond to emergencies in accordance with PG&E's Gas System Maintenance and Technical Support Emergency Plan Manual. This manual contains procedures, including pre- and post-emergency planning, on-scene response, and incident reports that are followed in the event of an emergency, to ensure prompt and effective response. Procedures within the manual have been designed in accordance with State and Federal regulations, including 40 CFR Park 265, Health and Safety Code (Chapter 6.95), and titles 19, 22, and 27 of the California Code of Regulations. The manual is reviewed annually with local agencies to ensure that it is current and that all personnel understand the plan and their responsibilities (please refer to Section 2.8, Project Description, subheading 2.8.1, Public Safety).

G-15 ~~Please refer to response to comment G-13 regarding methane detectors.~~ Pages 4.12-8 and 4.12-9 of the Draft EIR have been revised to correctly describe the Center Joint Unified School District. Furthermore, a discussion of the Elverta Joint School District has been added to correctly reflect school districts serving the Project area. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

G-16 References to the Placer County Unified School District on pages 4.13-19, 4.13-23 and 4.13-24 of the Draft EIR referring to the Placer County Unified School District have been revised to refer to the Center Joint Unified School District. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

G-17 The commenter provides text summarizing the comment letter. See responses to comments G-1 through G-16.

County of Yolo

BOARD OF SUPERVISORS

625 Court Street, Room 204
Woodland, California 95695-1268
(530) 666-8195 FAX (530) 666-8193
www.yolocounty.org

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County Administrator – Sharon Jensen
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June 12, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Re: Draft Environmental Impact Report for PG&E Line 406/407 Natural Gas Pipeline Project
State Clearinghouse No. 2007062091
California State Lands Commission EIR No. 740

Dear Ms. Spurr,

The County of Yolo appreciates the opportunity to review and provide comments on the Draft Environmental Impact Report for PG&E Line 406/407 Natural Gas Pipeline Project dated April 29, 2009. The proposed project involves construction of 40 miles of new pipeline spanning from western Yolo County to the City of Roseville, of which approximately 27 miles would be located in unincorporated Yolo County. The Board of Supervisors understands the necessity to increase and extend natural gas service to residential and commercial customers in Yolo County and the greater Sacramento Valley region. However, we do have comments and concerns with particular details of the proposed project. The county's comments and concerns are as follows:

Project Description

PG&E proposes to use a portion of the Clark Pacific site near the intersection of Best Ranch Road and County Road 100B (APN: 027-050-05) for pipe storage during the construction of Line 407 East and West segments of the project. Clark Pacific received a Use Permit (ZF #2007-078) in April 2008 to conduct their precast concrete business operations. The county requests that PG&E apply for a zone conformance letter with the Planning and Public Works Department to ensure that use of the site for pipe storage is consistent with the existing Use Permit for the property. Additional permits will be required for any grading and construction on the site, and a Use Permit modification may be required if the storage of pipe and estimated truck trips and traffic generation are found to be inconsistent with the Use Permit. H-1

Agricultural Resources

In general, the 27 mile stretch of the project that traverses Yolo County is designated Agriculture in the Yolo County General Plan. Yolo County has a longstanding history of implementing policies to encourage and enhance agricultural production within the county. Thus, the county is concerned that agricultural uses will be limited within the permanent easement. The pipeline is proposed to be constructed with 5 feet of soil coverage in order to allow farming activities such as discing or deep-ripping to continue within the permanent easment. As a result, the Project will limit the future use of approximately 152.81 acres of farmland to row crops, field crops, or crops that do not involve deep rooted plants. Deep rooted crops, such as orchards and vineyards (which are two of Yolo County's leading crops), would not be allowed within 15 feet in either direction of the pipeline centerline. The county disagrees with the analysis in the Draft EIR that H-2

assumes 3.1 acres of orchard is not a signficant impact because it can be converted to another type of shallow root crop. It is illogical to assume that it would be practical and profitable to plant row crop or field crop on 3.1 acres in the middle of a mature orchard. Thus, the removal of 3.1 acres of orchard is a significant impact that requires appropriate mitigation. H-2 Cont.

Biological Resources

PG&E has incorporated several Applicant Proposed Measures (APM) to mitigate for the loss of potential Swainson's hawk nesting and foraging habitat. However, the impact of potentially removing 206 trees within the Project site is of serious concern to the Yolo County Natural Heritage Program. Please contact Maria Wong, Habitat JPA Manager (530-405-4885), well in advance of any plan to remove or disturb trees or vegetation, and before construction of aboveground facilities, to ensure consistency with the Natural Heritage Program and its Swainson's Hawk Interim Mitigation requirements. H-3

Land Use and Planning

After the acquisition of ROW, please submit a clear and detailed map to the Planning and Public Works Department that shows the final route of the natural gas pipeline within Yolo County. The location of the pipeline and permanent easement will be necessary in order to make future land use decisions. H-4

Transportation and Traffic

Yolo County concurs with the minimum cover of 5 feet above the top of pipe for drainages, irrigation canals, and road crossings. However, the Draft EIR does not identify or discuss the proposed parallel distance of the pipeline from the county's right-of-way (ROW). The county requests that the edge of easement for the pipeline be placed at a minimum of 50 feet from the boundary of any existing county easement or ROW. This will ensure that the county can safely complete future road improvements and related excavations, as necessary. In addition, a 100 foot buffer from PG&E's easement to the edge of any bridge or parallel drainage crossing is also requested. H-5

Please refer to the Yolo County Improvement Standards when planning any work within or near road crossings or within the county ROW. Encroachment permits and road closure permits must be obtained from the Public Works Division in advance of any construction within the county's facilities. A Franchise Agreement will also be required. In addition, be advised that trenching and backfilling within the county ROW cannot be completed without observation and confirmation by a county inspector. H-6

For the safety of road crews and the general public, the county also requests that PG&E place well marked, permanent postings at all road and ditch crossings indicating the location of the high pressure gas line. H-7

Conclusion

Thank you for the opportunity to review this environmental document. If you have any questions about the items addressed in this letter, please contact David Morrison, Assistant Director of Planning and Public Works, by e-mail at david.morrison@yolocounty.org or by phone at (530) 666-8041.

Sincerely,

Mike McGowan, Chair
Yolo County Board of Supervisors

RESPONSE TO COMMENT SET H

H-1 PG&E will work with landowners and local agencies regarding the construction of the pipeline Project. The Draft EIR identifies existing agricultural or commercial/industrial yards that may be utilized during the construction of the proposed Project. PG&E would be required to work with the County on compatibility with local land use issues and existing permits. Also, PG&E will obtain ministerial permits for discreet locations where required.

H-2 PG&E has reduced the permanent easement restricted use area to 10 feet on either side of the pipeline, which is a total of 20 feet. The acreage of orchards converted to other types of crops would now be a total of 2.0 acres. Pages 4.2-24 and 4.2-25 in the Draft EIR have been revised. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

Attempting to determine that future uses of farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative for evaluation. The temporary impacts to the 511 acres of farmland would not result in a physical change to the environment for more than three weeks in any one area, or in the case of HDD, for more than four weeks. In addition, the amount of farmland permanently removed (2.55 acres) across all four counties, and the amount of farmland converted from deep-rooted plants to other types of crops (2.0 acres of orchard loss) located within Yolo County does not represent a significant regional loss. In addition, it is not an uncommon practice to plant commercial cover crops in vineyards and orchards between the rows, such as fava beans. Such shallow-rooted crops would be allowed within the 10 feet on either side of the pipeline.

H-3 Comment acknowledged. MM BIO-2a on page 4.4-89 of the Draft EIR has been revised to require consultation with Yolo County's Natural Communities Conservation Plan / Habitat Conservation Plan Joint Powers Agency manager prior to the removal or disturbance of trees or vegetation and before construction of aboveground facilities. Page 4.4-57 of Section 4.4 has been revised to include a discussion of the Yolo County Natural Heritage Program. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

H-4 PG&E has indicated that they will notify local jurisdictions of the final permanent 50-foot right-of-way and pipeline location prior to the commencement of construction. ~~The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the public meetings. The first decision will be whether to certify the EIR that was prepared for the project. The second decision to~~

~~be made by the CSLC will be whether to approve the proposed project, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, and any alternatives that were analyzed in the Draft EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.The Commission meeting record will contain the discussion and decision and the record will be placed on the website.~~

H-5 PG&E has indicated that they coordinate with County Public Works representatives on an ongoing basis as needed to ensure that County road construction and/or improvement projects are not adversely impacted by PG&E's gas line easements adjoining County rights-of-way (ROW). While the commenter suggests that a 50-foot buffer between the edge of County roadways and PG&E easements should exist, most County Public Works departments acknowledge that sufficient clearances exist for maintenance of each parties' respective facilities (gas lines and roads) where the public utility easement adjoins the edge of the ROW. Agricultural landowners argue that placement of a gas line easement 50 feet from the edge of roadway, within their fields, creates the potential for a 50-foot severance strip in their fields, for which extra compensation must be paid to them. Different environmental and economic factors also come into play when deciding to locate a gas line easement 50 feet from the edge of an existing roadway easement, such as the existence of wetlands or other environmental or economic factors. All of this requires that final decisions on placement of the gas line easement be made on an overall Project design basis.

Where PG&E's gas line easement runs parallel and contiguous to a County road, the gas line will be located in the center of a 50-foot easement, putting the gas line itself between 20 and 25 feet from the edge of the County ROW. County ROWs, in agricultural areas such as where the Project is located, are typically between 60 feet and 120 feet wide. The paved portions of roadways typically only occupy approximately 20 feet in the center of these rights of way. As a result, where PG&E's gas line easement runs parallel and contiguous with the County's ROW, the gas line will usually be located between approximately 45 feet and 65 feet from the edge of the paved roadway. Such clearances should be more than sufficient for the proper maintenance and repair of the roadways and gas lines within the Project area.

H-6 Yolo County is listed as a reviewing authority or regulatory agency in Section 1.0, Introduction, subsection 1.4, Permits, Approvals, and Regulatory Requirements. PG&E holds a franchise agreement with Yolo County for the "Laying, constructing and maintaining gas pipes, mains and appurtenances, dated June 7, 1948, Ordinance Number 212." PG&E has agreed to coordinate with Yolo County inspectors to ensure compliance with encroachment permit conditions.

H-7 PG&E intends to place pipeline markers at all road and ditch crossings indicating the location of the high-pressure gas lines. Additionally, pipeline markers will be spaced such that the next marker is within line of sight or no more then ½ mile away in accordance with DOT 192.707. Placement of pipeline markers may be impractical within class 3 and 4 areas because of street improvements, traffic, and landscaping and negative visual impacts. If so, PG&E will seek approval from property owners or the governmental agency involved prior to placing the markers.

MICROP LIMITED
TR MARTIN (MANAGER)
PO BOX 688
WINTERS CA 95694
530-795-2479-OFFICE
530-627-5602-CELL

June 3, 2009

California State Lands Commission
Attn: Crystal Spurr
100 Howe Avenue, Suite 100-South
Sacramento CA 95825

I do not agree with the proposed pipeline going through good farm land. Prime agricultural land is being lost around the world and the source of water for irrigating land has been shrinking by 1% per year. Water tables are falling in countries that contain ½ of the world's population, including the three largest grain producers-China, India and the US. Farmers also have the climate changes that impact the food production. Isn't there a possibility running the pipeline Through land that is not producing food (like the foot hills and along the free ways)? I-1

Sincerely,

TR Martin

RESPONSE TO COMMENT SET I

I-1 Section 3.0 of the Draft EIR provides a discussion of alternatives that were considered but eliminated from further evaluation (refer to Figure 3-1 of the Draft EIR). One of the main reasons for not locating the pipeline in the foothills is that it increases the risk of pipeline rupture due to faults and placing the pipeline within side-hills in that geographic area. One alternative included a northern route alternative. While this alternative would locate the pipeline in a less populated area, this alternative was eliminated from further evaluation because: 1) it would expose the proposed pipeline to the greatest risk from fault rupture due to much of the proposed right-of-way for the pipeline being located on side-hills adjacent to the county roads; 2) greater impacts to biological resources; more than 40 waterway crossings; and 3) impacts to local agricultural production would be more extensive than the proposed project. A second alternative included a southern route. This alternative was eliminated from further evaluation because: 1) it would require crossing Cache Creek and more tributaries of Steelhead Creek; 2) would require longer crossings over agricultural lands; and 3) would affect more people due to construction through the suburban communities of North Natomas and Elverta. A third alternative included a central route. This alternative was eliminated from further evaluation because it would cause significant impacts to local water features and to habitat utilized by special-status species.

Section 3.0 of the Draft EIR also evaluates a number of alternative options along the proposed pipeline alignment to reduce or avoid one or more impacts of the proposed Project. The proposed alignment crosses through agricultural fields containing crops only in locations where an alignment paralleling existing county road and farm roads would not reduce the environmental impacts, including those to agriculture. If the proposed pipeline were to follow a path along existing roadways rather than cross through agricultural fields, the pipeline would still be located within the agricultural fields along those roadways. There are jurisdictional requirements regarding the distance from roadways that the pipeline must be located. Paralleling roadways could result in an increase in the amount of land needed for the pipeline, and in some cases bring the pipeline closer to residences. As an example, Options D and E would increase the pipeline length by 860 and 3,480 feet, respectively, within those agricultural fields paralleling the roadways.

Please also refer to responses to comments B-1, B-3, and B-4.

DEPARTMENT OF TRANSPORTATION
DISTRICT 3 – SACRAMENTO AREA OFFICE
2800 GATEWAY OAKS DRIVE, MS 19
SACRAMENTO, CA 95833
PHONE (916) 274-0635
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June 11, 2009

Comment Set J
Page 1 of 1

09YOL0017
03-YOL/SUT-Various
Pacific Gas and Electric (PG&E) Line 406/407 Project
Draft Environmenta Impact Report

Ms. Crystal Spurr
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Dear Ms. Spurr,

Thank you for the opportunity to review and comment on the project's Draft Environmental Impact Report (DEIR). The proposed project includes construction of an approximately 40 mile long, 30 inch diameter natural gas pipeline (Lines 406, 407, and the Powerline Road Distribution Feeder Main) from the Esparto area in Yolo County east to Roseville in Placer County. Six above ground facilities are also proposed to be constructed by the project. The pipeline crosses State Highway System facilities including Interstate 5 (I-5) and State Route (SR) 113 in Yolo County, and SR 99 in Sutter County. Our comments are as follows:

- Any pipeline work to be performed within Caltrans Right of Way will require an Encroachment Permit. For permit assistance please contact Encroachment Permits Central Office at (530) 741-4403. J-1

- A Traffic Management Plan (TMP) should be prepared and submitted for Caltrans review to minimize traffic impacts to the State Highways during construction of the pipeline. The traffic control plan should discuss the expected dates and duration of construction, as well as traffic mitigation measures. We recommend that to the extent possible, the applicant should limit truck trips during morning and evening peak traffic periods (6-9 AM and 3-6 PM) to avoid exacerbating congestion. For TMP assistance, please contact John Holzhauser at (916) 859-7978. J-2

If you have any questions about these comments please do not hesitate to contact Arthur Murray at (916) 274-0616.

Sincerely,

Alyssa Begley

ALYSSA BEGLEY, Chief
Office of Transportation Planning - South

"Caltrans improves mobility across California"

RESPONSE TO COMMENT SET J

J-1 CSLC acknowledges that an encroachment permit for work within Caltrans' right-of-way will be required. Page 1-8 of the Draft EIR includes Caltrans in the list of reviewing authorities and regulatory agencies (refer to Section 1.0, Introduction). As stated on page 4.13-8 of Section 4.13, Transportation and Traffic, APM TRANS-2 and APM TRANS-3 indicate that PG&E will obtain encroachment permits from Caltrans, as well as Yolo, Sutter, Sacramento, and Placer counties. Furthermore, a Traffic Management Plan will be prepared prior to the issuance of encroachment permits and is subject to the local jurisdiction's review and approval. Accordingly, any work performed within Caltrans right-of-way would be conducted under an encroachment permit.

J-2 As indicated in response to comment J-1, a Traffic Management Plan will be prepared and provided to Caltrans for review and approval.

As indicated in APM TRANS-3 construction of the pipeline and associated truck trips would occur for 10 hours a day, 6 days a week, unless otherwise permitted by the local jurisdiction. As indicated on page 4.13-20 of the Draft EIR, approximately 80 vehicle trips are expected to occur daily as a result of the Project. These trips would include all construction-related commuting and hauling of equipment and would not simultaneously occur during peak traffic periods of 6 to 9 A.M. and 3 to 6 P.M.

PG&E is required to obtain permits from Caltrans where the pipeline crosses state highways. This occurs at Highway 505, Interstate 5, and Highway 70/99. PG&E will utilize HDD construction methods to minimize traffic impacts at those crossing locations.

CITY OF ROSEVILLE CALIFORNIA
Community Development
311 Vernon Street
Roseville, California 95678-2649

June 10, 2009

Crystal Spurr, Project Manager
CA State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Via: Email and Regular Mail spurrc@slc.ca.gov

Subject: PG&E Line 406 and Line 407 Natural Gas Pipeline Project (CSLC EIR 740) (SCH# 2007062091) – Draft EIR Comments

Dear Ms. Spurr:

Thank you for the opportunity to review and comment on the draft EIR for the above referenced natural gas pipeline project. The City of Roseville has reviewed the draft EIR and on June 5, 2009 met with PG&E representatives to discuss City concerns and explore pipeline design options that could serve to reduce potential conflicts with the City's proposed Sierra Vista Specific Plan. As expressed at our June 5th meeting the City has hazard/land use compatibility, design location and aesthetic concerns as discussed below.

Hazard/Land Use Compatibility
The City is currently processing the Sierra Vista Specific Plan (SVSP), an approximately 2,000-acre planning area located adjacent to and north of Baseline Road and the Line 407 alignment, west of Fiddyment Road, and south of the West Roseville Specific Plan area. The Plan includes a mix of housing types totaling nearly 6,655 units, commercial services, schools, parks and open space (see attached land use plan). Based on review of the draft EIR, discussions at our June 5th meeting and PG&E's follow up letter dated June 11, 2009, the City understands that in PG&E's opinion the SVSP planned land uses are compatible with the pipeline project. Because the pipeline has been designed to DOT standards developed for the nation's natural gas pipeline transportation system, the project's safety risk should be identified as acceptable in the final EIR.

K-1

Design Location Issues – Potential Conflict with Future City Utilities and Infrastructure
As discussed above, the City is currently processing the SVSP which is located adjacent and north of Baseline Road and the Line 407 East alignment. According to the draft EIR, within Line 407 East Segments 7, 8 and 9 (the Segments adjacent to the SVSP) the pipeline is proposed on the north side of Baseline Road, although the specific alignment and it's proximity to the final road right-of-way is not identified. Additionally, Segment 407 East 8 would include approximately 1,875 feet of HDD-installed pipe. This section would begin approximately 900 feet west of the Baseline Road/Watt Avenue intersection and would also contain the proposed Baseline Road Pressure Regulating Station.

K-2

The City's design concerns center on the need to coordinate the pipeline's horizontal and vertical alignment and related above ground facilities with future road alignments, final grades, landscaping, utility and infrastructure needs of the SVSP. These concerns were discussed at the June 5th meeting where the City and PG&E agreed to share design information and work together with the goal of developing compatible facilities. The City requests that the following design issues be considered as part of this ongoing effort:

- The future cover and therefore vertical alignment of the gas line may be influenced by activities associated with the SVSP including mass grading, installation of a future large diameter water

line, and deep foundations for signal poles and other required signal control apparatus planned for Baseline Road. The City is concerned that the proposed 5 feet of cover over the pipeline may not provide enough design flexibility to accommodate SVSP required future improvements. The City recommends installing the pipeline at a depth of 15 feet below existing grade to avoid conflict with future infrastructure needs including underground utilities and earthwork across and on top of the pipeline.

- The City's preference is for the pipeline's horizontal alignment to be located under Baseline Road pavement. This would provide better protection for the line and improve landscape design options within the future Baseline Road landscape easement. Other high pressure gas pipelines in the City have been located under road pavement.
- If the pipeline can not be located under Baseline Road pavement the alignment will need to be coordinated with the SVSP proposed Baseline Road widening so as to optimally site the easement in relation to planned roadside landscaping. This issue was discussed at the June 5th meeting including a concept that would locate the 50-foot pipeline easement immediately adjacent to the ultimate Baseline Road future back of curb. At this location the City's landscape easement would coincide with PG&E's pipeline easement. Within the combined easement the City could locate a Class I bikeway/pedestrian path above the pipeline as well as trees, shrubs and groundcover. As explained at our June 5th meeting, PG&E's design criteria would restrict deep rooted trees within 10 feet of the pipeline centerline. It has come to City staff's attention that at a recent project workshop it was stated that the deep root tree setback criteria was 15 feet on either side of the pipeline. The City feels it can maintain a deep root tree setback criterion of 10 feet and still implement a landscape plan that is comparable with other similar areas using the above approach. However any increase in deep rooted tree setback requirements beyond the 10 feet discussed at our meeting would erode the City's ability to implement an acceptable landscape plan. Should that occur, an alignment under the road pavement would need to be more seriously considered.
- The proposed location of the Baseline Road Pressure Regulating Station (PRS) conflicts with SVSP parcel CC-10. Parcel CC-10 is planned to be a regional shopping center. The City requests that the Baseline Road PRS be relocated westerly to future SVSP parcel OS-13 or other acceptable location (see attached land use plan). At the June 5th meeting it was agreed that SVSP land owner consultants would provide additional information related to this proposed relocation and that PG&E would further evaluate the proposal in relation to proposed HDD work and resource issues. In a subsequent email to the City PG&E indicated that there is some limited potential for adjusting the location of the station but there are issues that need to be addressed before the final location can be confirmed and that PGE is willing to work with the City of Roseville and the Sierra Vista developers to locate a mutually acceptable location once the design parameters firm up. The City looks forward to working closely with PG&E on this issue.
- The proposed underground cluster valve station was also discussed at the June 5th meeting. It was agreed that the City and PG&E would work together to locate this feature so that it is compatible with specific plan development.

K-2 (Cont.)

K-3

K-4

Aesthetics

Baseline Road is one of the gateway entrances to the City and with approval of the proposed SVSP will become even more prominent with large commercial centers planned for nearly the entire Baseline Road Frontage. Consistent with other specific plan areas in the City, to ensure high quality and aesthetically pleasing development the design of individual develop projects are required to be consistent with design guidelines approved as part of the specific plan. In addition to private development projects, City projects and utility infrastructure improvements are also subject to these guidelines. While the SVSP design guidelines have not been finalized, the City's design guidelines typically require masonry walls with enhanced decorative columns (stone, brick, etc.) and/or a trim cap and full screening of the enclosed infrastructure. The Hard Rock Substation (located at the Rocky Ridge/Eureka Road intersection) is an example of a prominently located City of Roseville Electric Substation where specific plan design guidelines were applied to the exterior walls. This is the type of design treatment the City would request for pipeline related above ground facilities. In the event that final design for the pipeline project needs to occur prior to approval of the proposed SVSP design

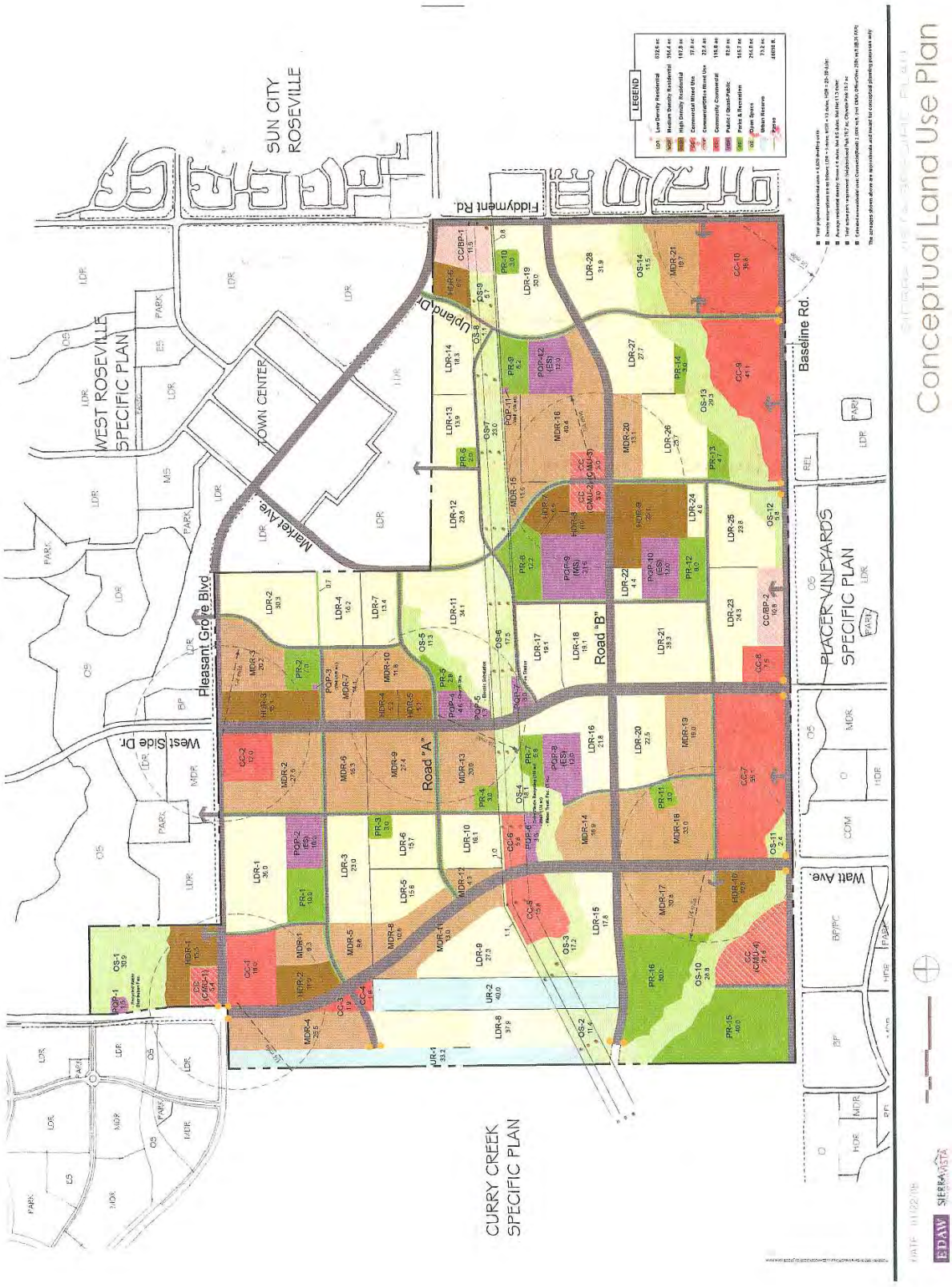
K-5

guidelines, the City will work with PG&E to develop a design that is as consistent as possible with any available draft guidelines. K-5 Cont.

Thank you for your consideration of our comments. Should you have any questions concerning this letter, please contact me at (916) 774-5334.

Sincerely,

Mark Morse
Environmental Coordinator


Conceptual Land Use Plan
SUN CITY ROSEVILLE
WEST ROSEVILLE SPECIFIC PLAN
TOWN CENTER
CURRY CREEK SPECIFIC PLAN
PLACER VINEYARDS SPECIFIC PLAN
Fiddyment Rd.
Baseline Rd.
Watt Ave.
Pleasant Grove Blvd
West Side Dr.
Market Ave
Upland Dr.
Road "A"
Road "B"
LEGEND
EDAW
SIERRA VISTA

RESPONSE TO COMMENT SET K

K-1 The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

The Sierra Vista Specific Plan (SVSP) is located along Line 407. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~The Draft EIR provides an analysis of the risks associated with current and planned land uses in the area of the proposed pipeline. A System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as a part of Appendix H of the Draft EIR. A detailed discussion of the risks can be found in Sections 4.7, Hazards and Hazardous Materials, and 4.9, Land Use, of the Draft EIR.~~

~~Natural gas could be released from a leak or rupture. If the natural gas reached a combustible mixture and an ignition source was present, a fire and/or explosion could occur. The Specific Plan areas (including the proposed SVSP) will be considered Class 3 areas per 49 CFR 192.5 once they are developed, and are shown as such on Figure 2-7 of the Draft EIR.~~

PG&E has proposed as a part of their Project to install the pipeline to meet or exceed the current pipeline regulations (49 CFR 192) (refer to pages 4.7-36 and 4.7-37 of the Draft EIR, as revised in Section 4.0 of this Revised Final EIR). The proposed pipeline's exceedance of the regulations is summarized as follows:

- PG&E intends to install minimum 0.375-inch wall thickness pipe on the 30-inch diameter segments. A large proportion of the proposed pipeline would consist of 0.375-inch-wall thickness steel pipe (Grade X-65) designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; a 0.375-inch wall thickness is proposed, 20 percent greater than the minimum required. For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; a 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required. For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; a 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required. ~~For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; 0.375-inch wall thickness is proposed, 20 percent greater than the minimum required. For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required. For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required. The additional wall thickness will provide added strength.~~

- The minimum regulated cover for transmission pipelines is 3 feet in Class 2, 3, and 4 areas. The Project as proposed would include 5 feet of cover in all class areas. This would provide increased protection from third party damage.

- PG&E proposes to "butt-weld" all pipeline sections (pipes are welded together without the ends overlapping). The project as proposed would include radiographic inspection of all circumferential welds. The minimum regulations (49 CFR 192.243) require only 10 percent, 15 percent and 100 percent nondestructive testing of welds in Class 1, Class 2, and Class 3 / 4 areas respectively. This additional testing will help to ensure structural integrity. Welds that do not meet American Petroleum Institute 1104 specifications would be repaired or removed. Once the welds are approved, the welded joints would be covered with a protective coating and the entire pipeline would be electronically and visually inspected for any faults, scratches, or other damage

prior to installation of the pipeline. ~~The Project as proposed would include full penetration circumferential welds of all pipe joints, radiographic inspection of all circumferential welds, and external coating of all weld joint areas to protect the pipe joint areas from external corrosion. The minimum regulations (49 CFR 192.243) require only 10 percent, 15 percent and 100 percent nondestructive testing of welds in Class 1, Class 2, and Class 3 / 4 areas respectively. This additional testing will help to ensure structural integrity.~~

- The Project as proposed would include inspections and testing for cathodic protection, valve testing, pipeline patrols, and leak surveys on a regular basis. High Consequence Area (HCA) risk assessment would be completed every seven years.

- A Pipeline Integrity Management Plan must be prepared for pipe within HCAs. This program must comply with 49 CFR 192 Subpart O.

The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, additional measures shall be implemented to further reduce risks of project upset. MM HAZ-2a and MM HAZ-2b have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

~~The project design features and the proposed mitigation measures in the Draft EIR (MM HAZ-2a and MM HAZ-2b, as amended in this Final EIR) reduce the risk by roughly 50 percent. The measures include the use of modern pipe, regular internal inspections using a high-resolution instrument (smart pig), corrosion mitigation, and the installation of automatic or remotely operated shut-down valves. However, the individual risk of fatality would still be approximately 1:30,000, which exceeds the individual risk significance threshold of 1:1,000,000 (used by the California Department of Education for school sites).~~

~~Measures have been implemented to reduce the risks of explosion, torch fires, and flash fires. However, the lead agency recognizes that the risks remain significant and unavoidable even after mitigation. The CSLC will need to balance the economic, legal, social, technological, or other benefits of the proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the EIR is certified by the CSLC, a statement of overriding~~

~~considerations will need to be adopted at the time of certification and approval of the Project (CEQA Guidelines Section 15093).~~

K-2 The following discussion is in response to the bulleted list included in the comment letter:

Response to Comment K-2, Bullet 1 PG&E indicated they have been working with the SVSP civil engineering firm of MacKay and Somps to coordinate the pipeline vertical and horizontal alignment with the future road alignments dictated by the City of Roseville. PG&E has used the best design information available in locating the pipeline. Currently the road improvement plans are limited to line work in plan view only. The Baseline Road design has not progressed to include future elevations, drainages or utility infrastructure. PG&E has designed the line with 8 feet of cover in known intersections. The proposed 5 feet of cover is generally adequate for driveway crossings. In the absence of final road improvement design drawings, PG&E has increased cover at major road crossing to 8 feet. It is PG&E's experience that 8 feet of cover will generally allow for typical road construction and utility crossings. PG&E would like to work with SVSP to coordinate design of underground utilities so that potential conflicts can be addressed prior to construction of the pipeline.

The commenter has indicated that the proposed pipeline should be buried with a cover of 15 feet to avoid conflicts with other utilities. A mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

Response to Comment K-2, Bullet 2 The industry best practice is to install transmission pressure pipelines in a private easement whenever possible. PG&E does have transmission pipelines under paved road surfaces in Roseville, but those lines were installed post road improvements when no suitable location existed beyond the paved surface.

The industry best practice is based upon public and worker safety. A private easement provides PG&E with additional control of co-occupants and uses. Patrols and maintenance activities can be accomplished without exposing workers to traffic. The pipeline can be exposed to add future taps to serve the communities or for inspection without damaging the road surface or impeding traffic.

Response to Comment K-2, Bullet 3 As noted above in response to Bullet 2, PG&E has utilized the best available information regarding the Baseline Road alignment. PG&E will adjust the pipeline alignment if feasible once the road design is finalized.

PG&E has located the 50-foot easement at the future Baseline Road back of curb per plans provided by the design firm of MacKay and Somps. This easement is planned to be contiguous with the proposed landscape strip.

PG&E indicated they communicated to the City of Roseville that locating a Class 1 bike path above the pipeline is acceptable and a compatible use. PG&E intends to locate the pipeline in the center of the 50-foot easement. PG&E's easement description does not exclude shrubs and groundcover, nor does it exclude all trees. Vegetation exclusion is limited to "deep-rooted trees" within 10 feet of the pipeline centerline

K-3 PG&E has indicated they advised City of Roseville representatives that the station location has some flexibility; however, the existence of sensitive resources, and operational constraints, will limit potential locations. PG&E representatives are available to work with both the City and the CSLC on this issue.

K-4 PG&E has indicated they advised City of Roseville representatives that these underground valves are existing equipment installed during a previous project and have discussed with the City allowable and compatible uses over and near these existing valves. PG&E representatives are available to work with the City on this issue.

K-5 The aesthetic impacts of the proposed Project are discussed in Section 4.1, Aesthetic and Visual Resources, of the Draft EIR. Furthermore, PG&E has indicated they met with City of Roseville representatives and has agreed to work with the City to enclose the proposed Baseline Road station in a manner, and using materials, compatible with the planned development and acceptable to both parties.

Placer County
AIR POLLUTION CONTROL DISTRICT

3091 County Center Drive, Suite 240, Auburn, CA 95603 • (530) 745-2330 • Fax (530) 745-2373
www.placer.ca.gov/apcd Thomas J. Christofk, Air Pollution Control Officer

RECEIVED
STATE LANDS
COMMISSION

June 10, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825
Via email to spurrc@slc.ca.gov on June 12, 2009

Subject: Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline /Notice of Availability of Draft Environmental Impact Report

Dear Mrs. Spurr:

Thank you for submitting the above referenced project to the Placer County Air Pollution Control District for review and comment. A portion of this project is located within the Sacramento Valley Air Basin (SVAB) portion of Placer County. The SVAB is classified as a severe non-attainment area for federal health based on ambient air quality standards for ozone. In addition, Placer County is also designated as a serious non-attainment area for State ozone ambient air quality standards and non-attainment for State particulate matter standards. L-1

The PCAPCD and the Sacramento Metropolitan Air Quality Management District (SMAQMD) have developed significance thresholds that are used to determine the severity of a project's construction and long term operational impacts. These significance thresholds are used in all California Environmental Quality Act (CEQA) documents prepared by jurisdictions within Placer County and Sacramento County to evaluate project level air quality impacts. When a project spans Placer and Sacramento County lines, the air districts recommend that the lead agency use the more stringent of the two CEQA Significance Thresholds. L-2

The proposed project has the potential to result in significant air quality impacts from construction equipment and activity. The California Environmental Quality Act (CEQA) Guidelines Section 15021 establishes a "duty for public agencies to avoid or minimize environmental damage where feasible." Therefore, an air analysis should be provided in environmental review process to quantify the project's short-term construction emissions and compared them to the air district's significant thresholds. If necessary, feasible mitigation measures should be identified and implemented by the project to prevent significant impacts. SMAQMD Road Construction 6.3.1 model is an acceptable planning tool recognized by the PCAPCD and SMAQMD to estimate roadway construction emissions. L-3

Based on the air quality analysis prepared for this project, the project's related ozone precursor emissions in the year 2010 construction phase are expected to exceed the PCAPCD's significant thresholds and will result in a temporary increase in local and regional air quality impact. Mitigation measures should be implemented by the project to ensure the project's construction emission impacts will remain below the significant level. L-4

In general, the District agrees with the analysis and conclusions provided in the Draft Environmental Impact Report regarding the project's air quality impacts. The District would also like to recommend that the following mitigation measures /conditions of approval be included within the scope of the

proposed project.

ap1 1a. The applicant shall submit a Construction Emission / Dust Control Plan to the Placer County APCD. This plan must address the minimum Administrative Requirements found in section 300 and 400 of APCD Rule 228, Fugitive Dust. The applicant shall not break ground prior to receiving APCD approval of the Construction Emission / Dust Control Plan.

1b. The prime contractor shall submit to the District a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower of greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated, beginning 30 days after any initial work on site has begun, and shall be submitted on a monthly basis throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the District with the anticipated construction timeline including start date, and name and phone number of the property owner, project manager, and on-site foreman.

1c. The applicant shall provide a plan to the Placer County APCD for approval by the District demonstrating that the heavy-duty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

Ap2 The contractor shall suspend all grading operations when fugitive dust exceeds Placer County APCD Rule 228 (Fugitive Dust) limitations. The prime contractor shall be responsible for having an individual who is CARB-certified to perform Visible Emissions Evaluations (VEE). This individual shall evaluate compliance with Rule 228 on a weekly basis. It is to be noted that fugitive dust is not to exceed 40% opacity and not go beyond property boundary at any time. If lime or other drying agents are utilized to dry out wet grading areas they shall be controlled as to not to exceed Placer County APCD Rule 228 Fugitive Dust limitations.

L-4 Cont.

Ap3 An enforcement plan shall be established, and submitted to the APCD for review, in order to weekly evaluate project-related on-and-off- road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180 - 2194. An Environmental Coordinator, hired by the prime contractor or property owner, and who is CARB-certified to perform Visible Emissions Evaluations (VEE), shall routinely evaluate project related off-road and heavy duty on-road equipment emissions for compliance with this requirement. Operators of vehicles and equipment found to exceed opacity limits will be notified by APCD and the equipment must be repaired within 72 hours.

Ap4 The prime contractor shall suspend all grading operations when wind speeds (including instantaneous gusts) exceed 25 miles per hour and dust is impacting adjacent properties.

Ap5 The contractor shall use CARB ultra low diesel fuel for all diesel–powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment.

Ap6 Pursuant to the Placer County Air Pollution Control District Rule 501, General Permit Requirements, the proposed project may need a permit from the District prior to construction. In general, any engine greater than 50 brake horsepower or any boiler with heat greater than 1,000,000 Btu per hour will need a permit issued by the District.

L-5

Thank you for the opportunity to review this proposal. If you have any question or comments please phone 530-745-2333.

Sincerely,

Angel Rinker

Angel Rinker
Placer County Air Pollution Control District
Associate Planner
Arinker@placer.ca.gov
(530) 745-2333

RESPONSE TO COMMENT SET L

L-1 The commenter provided some introductory remarks to preface the comment letter, as well as state designations for ozone and particulate matter. Table 4.3-1 on page 4.3-5 of the Draft EIR shows Placer County as nonattainment for ozone and particulate matter.

L-2 The Placer County Air Pollution Control District (PCAPCD) and Sacramento Metropolitan Air Quality Management District (SMAQMD) jurisdictions and thresholds are discussed on page 4.3-37 and 4.3-38 of the Draft EIR, in Section 4.3, Air Quality. As shown in Table 4.3-4, PCAPCD has the more stringent thresholds. As such, the PCAPCD's thresholds were applied to construction activity that would occur within Placer County, consistent with the PCAPCD's recommendation.

L-3 An air quality analysis was completed for the Project, the results of which were summarized in Section 4.3, Air Quality, of the Draft EIR. Please refer to Section 4.0 of this document for revisions to the Draft EIR, as well as the revised Air Quality Data and Methodology that are included in Appendix D-8 of this Revised Final EIR. Because of the type of information available, and the complexity of conducting an air quality analysis for a Project consisting of multiple pipelines and spanning multiple air districts, the CSLC determined that the most appropriate approach to completing the analysis would be to utilize a combination of hand-calculations using the OFFROAD emission factors and the URBEMIS default load factors for each equipment piece, and the URBEMIS model for the on-road hauling, dust generation, and operational emissions. Because a Project-specific construction fleet is not known for the Dunnigan Hills portion of Line 406, the URBEMIS default assumptions and values were used for these emissions estimates.

L-4 Pages ES-15, 4.3-47, 4.3-48, 4.3-63, 4.3-65, 4.3-67, 4.3-69, and 4.3-73 (Table 4.3-35) of the Draft EIR have been revised to include the suggested mitigation measure for construction work completed within the jurisdiction of the PCAPCD. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. MM AQ-1c is included in the revised Mitigation Monitoring Program provided ~~as Appendix F to~~ in this Revised Final EIR.

L-5 The commenter advised of PCAPCD's Rule 501 requirements, which requires a PCAPCD permit prior to construction and installation of stationary sources including any engine greater than 50 brake horsepower or any boiler with heat greater than 1,000,000 Btu per hour. CSLC acknowledges that a permit may be

required. The PCAPCD is listed in Section 1.4, Permits, Approvals, and Regulatory Requirements, on page 1-9 of the Draft EIR.

SACRAMENTO METROPOLITAN AIR QUALITY MANAGEMENT DISTRICT

Larry Greene
AIR POLLUTION CONTROL OFFICER

June 12, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento CA, 95825
spurrc@slc.ca.gov

Subject: Draft Environmental Impact Report for PG&E Line 406/407 Natural Gas Pipeline Project (SAC200901335)

Dear Ms. Spurr,

Thank you for giving the Sacramento Metropolitan Air Quality Management District (SMAQMD) the opportunity to comment on the project known as PG&E Line 406/407 Natural Gas Pipeline Project partially located within the Natomas Joint Vision area of the County of Sacramento along Powerline Road (Line DFM). The District has the following comments on the Draft Environmental Impact Report:

- APM AQ-1 and APM AQ-2 on page 4.3-39 deviates from District standard mitigation for heavy-duty construction vehicles (http://www.airquality.org/ceqa/StandardConstructionMitigationLanguage.pdf). The current measures lack oversight. Add the following mitigation measures:

    - For all work done within the SMAQMD, the project shall provide a plan, for approval by the lead agency and SMAQMD, demonstrating that the heavy-duty (> 50 horsepower) self-propelled off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NO_X reduction and 45 percent particulate reduction[1] compared to the most recent CARB fleet average at time of construction; and

      The project representative shall submit to the lead agency and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or

M-1

[1] Acceptable options for reducing emissions may include use of newer model year engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

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www.airquality.org

more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

- For all work done within the SMAQMD, the project shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and the lead agency and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.

  and/or:

  If at the time of construction, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation with SMAQMD prior to construction will be necessary to make this determination.

M-1 Cont.

- Table 4.3-7 located on page 4.3-44 states that construction emissions will exceed the SMAQMD's maximum daily threshold for oxides of nitrogen. However, it appears the maximum daily emissions are estimated for the whole line, and not the portion within the SMAQMD. Please clarify if 348.10 pounds per day is the maximum daily emissions expected to occur within the SMAQMD. If not, an analysis needs to be done to bifurcate emissions released in SMAQMD and emissions released in FRAQMD.

M-2

- MM AQ-1b on page 4.3-47 calls for the proponent to "pay a mitigation fee to the respective local air districts to offset NO_X emissions which exceed the applicable

M-3

thresholds after all other mitigation measures have been applied." Estimate the fee to be paid to SMAQMD by the proponent. If maximum daily emissions within the SMAQMD exceed 85 pounds of NO_X after mitigation is applied, emissions above the threshold can be offset though an off-site mitigation fee based on the Carl Moyer program cost effectiveness which is currently $16,000/ton of NO_X. The SMAQMD's fee calculator can be found at http://www.airquality.org/ceqa/ConstructionEmissionsMitigationFeeCalculator.xls. If a mitigation fee is not identified in the FEIR, the fee will be determined at the time of construction. All fees must be paid prior to initial ground disturbance. M-3 Cont.

- On page 7 of the MMP, specifically list the AQ-1b NO_X mitigation measures listed on page 4.3-47. M-4

- PuriNOx fuel is no longer available in the Sacramento Region. Please remove it as a mitigation option. M-5

- SMAQMD applauds the proponent for the applicant proposed measures starting on page 4.3-39. However, APM AQ-11 on page 4.3-40 which states that "Contractors will limit operation on "spare the air" days within each County" while laudable, may be difficult to implement effectively, since there are no goals or standards for limiting operation. Please either elaborate on how operations will be limited or remove the mitigation measure. M-6

- The document provides the results of an analysis of the construction-related CO_2E emissions in Table 4.3-12. For the DFM line which is in the SMAQMD's jurisdiction, the reported emissions are 181.30 MT CO_2E in 2010. In total, including the impacts created in other air districts, the project will generate 2,681.94 MT CO_2E over 4 years. The document seeks to reduce this impact to zero through the purchase of carbon offsets in Mitigation Measure 3. MMAQ3 currently reads "The applicant shall participate in a Carbon Offsets Program with CCAR, CARB or one of the local air districts, and will purchase carbon offsets equivalent to the projected project's GHG emissions to achieve a net zero increase in GHG emission during construction phase." M-7

  It's laudatory that the DEIR recognizes this impact and seeks to offset the impact to zero. The SMAQMD is working on a pilot off-site GHG mitigation program, but the program is not operational at this point. The SMAQMD recommends the carbon offsets be purchased through a bona-fide carbon market. We do not believe that CARB currently has such a market. The Climate Action Registry (CAR not CCAR) and the Chicago Climate Exchange have such markets.

  The SMAQMD recommends that the mitigation measure also state by when the fee should be paid. The SMAQMD suggests the following language: M-8

MMAQ-3 GHG Emission Offset Program. The applicant shall participate in a Carbon Offsets Program with CAR, Chicago Climate Exchange or another bona-fide provider of carbon offsets, and will purchase carbon offsets equivalent to the projected project's GHG emissions to achieve a net zero increase in GHG emission during construction phase prior to the beginning of construction.

M-8 Cont.

- This project will be subject to all SMAQMD rules applicable at the time of construction, including but not limited to those identified in attachment 1. Additional information on SMAQMD rules can be found at www.airquality.org or by calling the Compliance Assistance Hotline at (916) 874-4884.

M-9

SMAQMD staff thanks the State Lands Commission for the opportunity to present our comments and any questions may be sent to me at pphilley@airquality.org or by calling (916) 874-4882.

Sincerely,

Paul Philley
Assistant Air Quality Planner / Analyst

C: Larry Robinson, Program Coordinator, SMAQMD
Sondra Anderson, Air Quality Planner II, FRAQMD

Attachments:

1) SMAQMD Rules & Regulations Statement

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www.airquality.org

Attachment 1: SMAQMD Rules & Regulations Statement (revised 1/07)

The following statement is recommended as standard condition of approval or construction document language for all development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 417: Wood Burning Appliances. Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.

RESPONSE TO COMMENT SET M

M-1 Comment acknowledged. Pages ES-15, 4.3-47, 4.3-48, 4.3-62, and 4.3-73 (Table 4.3-35) of the Draft EIR have been revised to include the suggested mitigation measure for construction work completed within the jurisdiction of the SMAQMD. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. MM AQ-1d is included in the revised Mitigation Monitoring Program~~, Appendix F to~~ in this Final EIR.

M-2 The maximum daily emissions were not calculated based on location of construction activities, but rather based on what the "worst-case" day of construction would be for each pipeline (Line 406, Line 407 W, Line 407 E, and the DFM). For the construction of the DFM, maximum daily emissions shown in Draft EIR Table 4.3-7 would have the potential to occur along the entire length of the pipeline, including the portion of the Project within the SMAQMD (refer to page 4.3-44 of the Draft EIR). As shown in Table 4.3-7, 348.10 pounds per day is the maximum daily NO_x emissions that would be expected to occur within the SMAQMD.

M-3 The Draft EIR air quality analysis is based on the information available at the time of the analysis. There is an inherent uncertainty in the analysis that makes calculating the required mitigation fees too speculative and inaccurate to be provided at this time. For example, the construction equipment engine years are currently unknown; therefore, the off-road emission factors used for emissions calculations are statewide averages. Further, the amount of Project emission reductions achievable through implementation of the APMs and mitigation measure cannot be calculated at this time because the specifics of the project equipment will be unknown until a contractor has been hired for project construction. The mitigation fee component of MM-AQ-1b will be calculated closer to the time of construction to ensure that the calculation is as accurate as possible.

M-4 MM AQ-1b and the listed NO_x mitigation measure options are included in the revised Mitigation Monitoring Program~~, Appendix F to~~ in this Final EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to page 4.3-47 of the Draft EIR.

M-5 The reference to PuriNO_x fuel in MM AQ-1b has been removed and page 4.3-47 of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. MM AQ-1b is included in the revised Mitigation Monitoring Program~~, Appendix F to~~ in this Final EIR.

M-6 PG&E considers "Spare the Air" days as air quality constraints and will alert crews when a Spare the Air day is expected to occur. This will encourage carpooling and reinforce the need to avoid unnecessary running of equipment. On Spare the Air days, inspectors will identify equipment use that is not critical to the progress of the Project. APM AQ-11 (Page 4.3-40) of the Draft EIR has been updated to reflect measures taken on Spare the Air days. Please refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

M-7 Page 4.3-52 of the Draft EIR has been revised to modify MM AQ-3 to allow PG&E to purchase carbon offsets through existing carbon markets, and a timeline for compliance has been added. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. MM AQ-3 is included in the revised Mitigation Monitoring Program~~, Appendix F to~~ in this Revised Final EIR.

M-8 Please refer to response to comment M-7.

M-9 Comment acknowledged. Pages 4.3-25 through 4.3-29 of the Draft EIR included SMAQMD rules applicable at the time of the publication of the document.

FEATHER RIVER AIR QUALITY MANAGEMENT DISTRICT
Serving Sutter and Yuba Counties

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David A. Valler, Jr.
Air Pollution Control Officer

June 12, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825
Email: spurrc@slc.ca.gov

RE: DRAFT ENVIRONMENTAL IMPACT REPORT (DEIR) PACIFIC GAS AND ELECTRIC COMPANY (PG&E) LINE 406-407 NATURAL GAS PIPELINE.

Dear Ms. Spurr,

The Feather River Air Quality Management District (District) appreciates the opportunity to review and comment on the above referenced project. The District commends the commitment made in the DEIR to mitigate the impact to air quality to a less than significant level by using both on-site and off-site measures. The District shall assist the proponent in incorporating all feasible on-site mitigation measures and in determining the amount of off-site mitigation required to fulfill this commitment. N-1

The emissions calculated for the sections 407E, DFM, and 407W provided in Tables 4.3-6, 4.3-7, and 4.3-8 report emissions for the each portion of the project and are not county specific. The District recommends that county specific emissions are calculated due to the differing Significance Thresholds between the four counties. N-2

District staff are available to assist the Lead Agency and Project Proponent as needed. Please contact me at (530) 634-7659 ext 210 for assistance.

Sincerely,

SAndersson

Sondra Andersson
Air Quality Planner

Enclosures: None

File: Chron

RESPONSE TO COMMENT SET N

N-1 Comment acknowledged. The commenter commends the Draft EIR, Section 4.3, Air Quality, for the commitment to mitigate air quality impacts to less than significant using both onsite and off-site mitigation. The commenter advised that the Feather River Air Quality Management District (FRAQMD) will provide assistance for the implementation of the mitigation. No further response is necessary.

N-2 The maximum daily emissions was not calculated based on location of construction activities, but rather based on what the "worst-case" day of construction would be for each pipeline (Line 406, Line 407 W, Line 407 E, and the DFM). For the construction of portions of the pipeline in Sutter County, maximum daily emissions shown in Table 4.3-9 would have the potential to occur (refer to page 4.3-45 of the Draft EIR). As shown in Table 4.3-9, up to 707.96 pounds per day of NO_x emissions, 69.23 pounds per day of ROG, 201.76 pounds per day of CO, 159.06 pounds per day of PM_{10}, and 28.81 pounds per day of $PM_{2.5}$ emissions would be expected to occur during construction of the Project within the jurisdiction of the FRAQMD.

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June 12, 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Subject: **Pacific Gas and Electric Company Line 406-407 Natural Gas Pipeline - DEIR comments**

Dear Ms. Spurr,

The Yolo-Solano Air Quality Management District (District) appreciates the opportunity to review the Draft Environmental Impact Report (DEIR) for the above referenced project. The DEIR evaluates the potential environmental consequences from project construction and operations. In short, the project involves trenching, horizontal directional drilling, and construction and installation of approximately 40 miles of new natural gas pipeline spanning the four counties of Yolo, Sacramento, Sutter, and Placer including the construction of six above-ground facilities for pipeline maintenance and operational purposes.

The area in our District's jurisdiction includes all of Yolo County and the northeastern portion of Solano County. For all projects, impacts to air quality are a concern for various pollutants. This includes pollutants with regional impacts such as ozone, as well as pollutants with more localized impacts such as particulate matter (PM) and Hazardous Air Pollutants (HAPs). While the District has jurisdiction over stationary sources, a majority of air pollution in the region comes from vehicles, which are regulated by the State and Federal government. Since the District lacks direct authority over vehicles, the most effective tools for reducing vehicle emissions at the local level lay in the hands of local land use decision-makers. As a commenting agency under the California Environmental Quality Act, the District has reviewed the DEIR and is submitting the following comments:

1. Section 2.0 – Project Description, Page 2-74, Blow-Down and Purging Procedure, Lines 29-32: The DEIR states that "Data from PG&E's Department of Meteorological Sciences would be used in coordination with the SMAQMD, YSAQMD, PCAPCD, and FRAQMD to determine dates when air quality constraints would be minimal." Please provide clarification as to what conditions PG&E would qualify as an air quality constraint (i.e. Spare the Air day or some other activity). O-1

2. Section 4.3 – Air Quality, Page 4.3-5, Table 4.3-1: This table should be modified to reflect the Unites States Environmental Protection Agency's (EPA) recent designation for ↓ O-2

the District as "partial non-attainment" for Particulate Matter sized 2.5 microns or less in diameter ($PM_{2.5}$). O-2 Cont.

3. Section 4.3 – Air Quality, Page 4.3-6, Lines 26-28: This paragraph should be revised to include the EPA's recent "partial nonattainment" designation of the District for $PM_{2.5}$. O-3

4. Section 4.3 – Air Quality, Page 4.3-26, Lines 5-7: The Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan (Plan) was adopted by the various air district boards during January and February 2009. The California Air Resources Board (ARB) adopted the Plan in March 2009. Please revise the paragraph to reflect the most recent information regarding the processing/status of the Plan. O-4

5. Section 4.3 – Air Quality, Page 4.3-26, Lines 12-15: The lines should be revised to include the EPA's recent "partial nonattainment" designation of the District for $PM_{2.5}$. O-5

6. Section 4.3 – Air Quality, Page 4.3-37, Table 4.3-4: Please amend the table to reflect the current District NOx, ROG, and PM_{10} significance thresholds as shown in Table 1 of the District's *Handbook for Assessing and Mitigating Air Quality Impacts* (adopted July 11, 2007). This handbook can be accessed on the District's website at http://www.ysaqmd.org/documents/CEQAHandbook2007.pdf O-6

7. Section 4.3 – Air Quality, Page 4.3-40, Lines 3-4: The Applicant Proposed Measure (APM) AQ-5, addresses minimizing equipment and vehicle idling time to five minutes. The five-minute idling limit is a state requirement and is therefore not considered a means of mitigation. O-7

8. Section 4.3 – Air Quality, Page 4.3-43, Table 4.3-5 and Table 4.3-8: Please amend the tables to reflect the current District NOx, ROG, and PM_{10} significance thresholds as shown in Table 1 of the District's *Handbook for Assessing and Mitigating Air Quality Impacts* (adopted July 11, 2007). The link to the District handbook can be found in comment 6. O-8

9. Section 7.0 – Mitigation Monitoring Program, Table 7-2, APM AQ-1 through APM AQ-11 and AQ-1 through AQ-3: Please correct the acronym used for the District to read YSAQMD, not YSAWMD. O-9

10. Appendix D – Air Quality Analysis, Page 3: The District's current significance thresholds for NOx and ROG are not expressed in a pounds per day unit. The air quality analysis should be revised so that impacts to air quality are evaluated against the District's significance thresholds as described in the July 2007 version of the District's *Handbook for Assessing and Mitigating Air Quality Impacts.* The link to the District's handbook can be found in comment 6. O-10

Page 14, Table 8: Daily Construction Emissions for Line 406 (2009) shows the incorrect significance threshold for the District. Please amend accordingly using the District's current thresholds which can be found at the link provided in comment 6. Additionally, the District would like clarification as to where the emission numbers from the Grading – Dunnigan Hills activity can be found in the included URBEMIS outputs. O-11

Page 16, Table 10: The construction emissions resulting from the 407W activities should be compared to the District's thresholds, not just to Feather River Air Quality Management District (FRAQMD) thresholds. O-12

11. Appendix D – Air Quality Analysis, URBEMIS output, Section 407W: One of the assumptions included for this portion of the pipeline construction included a "Fugitive level of dust = Low" selection. The District would like clarification as to the reason for the "low" selection (perhaps based on the presence of the water truck to limit fugitive dust during construction, which is also listed in the assumptions).

    Additionally, the District was unable to locate any other off-road equipment used for construction of the 407W section other than the water truck. This is a discrepancy when compared to the off-road equipment selected for the 406 and 407E sections. Moreover, cut and fill activities are indicated yet it does not appear that equipment capable of conducting those activities is listed in the equipment list. Please clarify. O-13

12. The District understands the difficulty in compiling the data for the emissions due to the complexity of the project and its expanse through four counties, however, the District would like the consultant to provide more clarity in the location of the emissions outputs used from each of the models when inputting the data into the respective line section (406, 407W) tables. O-14

On behalf of the District, thank you for the opportunity to comment on the proposed project. If information in this letter requires clarification, please call me at (530) 757-3668. We look forward to working with you on the project.

Sincerely,

Matthew R Jones

Matt Jones
Supervising Air Quality Planner

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RESPONSE TO COMMENT SET O

O-1 Please refer to response to comment M-6.

O-2 Pages 4.3-5, 4.3-6, and 4.3-26 of the Draft EIR have been revised to reflect the current $PM_{2.5}$ attainment status of Yolo, Sutter, Sacramento, and Placer counties. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

O-3 Please refer to response to comment O-2.

O-4 Page 4.3-26 of the Draft EIR has been revised to reflect the most recent information regarding the status of the Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

O-5 Please refer to response to comment O-2.

O-6 Page 4.3-37, Table 4.3-4 of the Draft EIR has been revised to reflect the current Reactive Organic Gases (ROG), oxides of nitrogen (NO_x) and Particulate matter (PM_{10}) thresholds of the Yolo-Solano Air Quality Management District (YSAQ).

O-7 Comment acknowledged. The CSLC agrees with the commentor that the vehicle idling time of five minutes is a state requirement and not a mitigation measure. Since the CLSC will hire a third-party monitor for construction of the project to ensure all APMs and mitigation measures are implemented, we would like to keep the 5-minute idling limit as a part of APM AQ-5 to ensure it is monitored. ~~considers APMs to be components of the proposed Project. Where necessary to reduce impacts to less than significant levels, additional mitigation measures are proposed in the Draft EIR.~~

O-8 The Draft EIR has been revised to reflect annual (total tons) of ROG and NO_x emissions for the portion of the Project that would be located in Yolo County and includes the correct thresholds of significance for the YSAQMD. The revision to the NO_x significance threshold reduced NO_x to less than significant before mitigation. However, the revision to the PM_{10} significance threshold resulted in a change in PM_{10} to significant before mitigation. Implementation of existing MM AQ-1a would reduce the PM_{10} impact to less than significant. Page 4.3-38 has been revised to reflect the correct emission calculation methodology. Table 4.3-5 on page 4.3-43,

Table 4.3-8 on page 4.3-44, page 4.3-45, Table 4.3-11 on page 4.3-46, Table 4.3-14 on page 4.3-53, page 4.3-54, Table 4.3-16 on page 4.3-55, Table 4.3-18 on page 4.3-56, Table 4.3-20 on page 4.3-58, page 4.3-59, Table 4.3-22 on page 4.3-60 and page 4.3-61 of the Draft EIR have been revised. Page 4.3-47 of the Draft EIR has also been revised to reflect the mitigated Line 406 PM_{10} emissions. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

In addition, the air quality analysis appendix has been amended to include Appendix D-8, Yolo County Line 407 W Emissions, Appendix D-9, Line 406 Mitigated, and Appendix D-10, Alternatives Emissions Analysis - Yolo County. Revised Air Quality Data are included in Appendix D-8 of this Revised.

O-9 The acronym listed for YSAQMD in the Mitigation Monitoring Program has been revised~~, refer to Appendix F of~~ in this Revised Final EIR.

O-10 Please refer to response to comment O-8.

O-11 Please refer to response to comment O-8. The air emissions generated by the Dunnigan Hills grading portion of the proposed Project is provided in Appendix D-8 of this Revised Final EIR: URBEMIS Output, Line 406 file, Mass Grading Phase 5/04/2009 to 5/22/2009 - Dunnigan Hills.

O-12 Please refer to response to comment O-8.

O-13 The commenter is referring to the URBEMIS output that reads, “Fugitive Dust Level of Detail: Low”. The selection does not equate to a low level of fugitive dust emissions, but the level of input detail required for calculation. Within the construction module of the URBEMIS program, the modeler can select the following levels of detail dependent upon the type of project-specific information available: default, low, medium, and high. The purpose of the levels of detail is to customize the emission calculations with known project parameters.

The default level calculates fugitive dust emissions with a simple pounds per acre-day emission rate. The low level calculates fugitive dust emission based on the cubic yards of soil to be moved onsite and off-site. The medium level can be used if the daily hours of operation per day and the hours per day of off-site haulage are known. The high level of detail calculates fugitive dust based on the ton-miles per day of on-site and off-site soil haulage.

The low level of detail was selected to calculate fugitive dust emissions based on the cut and fill assumptions contained in Appendix D-8 of this Revised Final EIR.

Per the methodology provided in Appendix D-8 of this Revised Final EIR, emissions generated by most off-road construction equipment was hand-calculated using the URBEMIS emission rates and load factors for the year of activity, and the known equipment types, horsepower, and hours of use. The exceptions are for water trucks and the Dunnigan Hills grading phase, which were calculated using URBEMIS. URBEMIS was primarily used to calculate fugitive dust (hence the cut and fill components), on-road hauling, and paving emissions. The emissions generated by equipment that would conduct the cut and fill activities are contained in Appendix D-8 of this Revised Final EIR. See comment O-14.

O-14 The clarification for location of emissions outputs for construction of the propose Project segments is provided below:

Construction Emissions Output Sources

Construction Activity	Calculation Methodology	Output Location (within Appendix D-8 of this Revised Final EIR)
Grading - Dunnigan Hills	URBEMIS	Appendix D-3, Line 406 Output.
Trenching - Environmental Crew	Hand Calculation	Appendix D-2
Trenching - 18 Day Crews	Hand Calculation	Appendix D-2
Trenching - Tie-In Crew	Hand Calculation	Appendix D-2
Trenching - Hydro Test Crew	Hand Calculation	Appendix D-2
Trenching - Clean Up Crew	Hand Calculation	Appendix D-2
Trenching - Remaining	URBEMIS	Appendix D-3, early August fine grading phase
Pipe Hauling	URBEMIS	Appendix D-3, late August fine grading phase
HDD - Off-Road Emissions	Hand Calculation	Appendix D-2
HDD - URBEMIS Output	URBEMIS	Appendix D-3, early August fine grading phase
Paving	URBEMIS	Appendix D-3, paving phase
Jack and Bore - Off-Road Emissions	Hand Calculation	Appendix D-2
Jack and Bore - URBEMIS Output	URBEMIS	Appendix D-3, mid-August fine grading phase.

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June 12, 2009

Ms. Crystal Spurr
California State Lands Commission
100 Howe Ave, Suite 100-South
Sacramento, CA 95825

Via E-mail spurrc@slc.ca.gov
and Regular Mail

Re: Pacific Gas & Electric Company (PG&E Line 406/407 Natural Gas Pipeline)
Comments on Draft Environmental Impact Report

Dear Ms. Spurr:

Our firm represents the Placer Vineyards Development Group, LLC ("Owners Group"), which processed and obtained approval of the Placer Vineyards Specific Plan in Placer County (the "Placer Vineyards Specific Plan"). As you know, at the beginning of this year we provided comments on behalf of the Owners Group with respect to the initial study for the above described Line 406/407 Natural Gas Pipeline (the "Project"), raising concerns about the adequacy of the alternatives and the compatibility of the Project with the Placer Vineyards Specific Plan. We note that, as part of the Alternatives analysis in the Draft Environmental Report ("DEIR") for the Project, Options I, J, K and L, were included to avoid, or substantially lessen, the land use conflicts and risks to safety presented by locating the Project adjacent to the approved high school and within 1,500 feet of one of the approved elementary school sites in the Placer Vineyards Specific Plan. P-1

On behalf of the Owners Group, we are writing this letter to (i) again question the adequacy of the range of alternatives considered in the Alternatives analysis and, (ii) if no other alternatives are determined to be feasible, to support your determination that the Environmentally Superior Alternative to the Project, other than the No Project Alternative, is the Project with the incorporation of Options I and L. We further contend that incorporating Options I and L into the proposed Project would result not only in an Environmentally Superior Alternative, but also in a Project Superior Alternative that will better advance the purposes of this Project, and that the Project description should be revised to incorporate these Options so the environmental effects thereof can be fully addressed by the DEIR. P-2

Additional Alternatives to be Considered.

We note that the DEIR did not include any response to our prior comments regarding, or analysis of the potential feasibility of, modifying the Project to reduce the size and/or pressure of the line segments within Baseline Road adjacent to higher density urban developments. These additional alternatives should be addressed due to the potentially significant risk to health and safety caused by the Project as proposed, even with inclusion of all mitigation measures and mitigating Options. In Section 4.7 of the DEIR, the analysis of Impact HAZ-2 (starting on page 4.7-32), states that an unacceptable risk is defined as a one in a million chance of fatality from a natural gas leak or rupture. As noted in Table 4.7-5, the Project's overall risk of serious injury or fatality is estimated at approximately one in sixteen thousand (approximately 60 times greater than the accepted safety criteria); only the 10" DFM line reflects a safety risk that is less than the one in a million standard. And as noted on page 4.7-39, even after the proposed mitigation (to minimize corrosion and install shutdown valves) is incorporated into the Project, the residual risk of serious injury or fatality is only reduced to one in thirty thousand (approximately 33 times greater than accepted safety criteria). Given these significant risks to human health and safety, additional Alternatives that could reduce these potential impacts to acceptable levels must be seriously considered. P-3

In particular, additional engineering alternatives may be available that could further reduce the risk of serious injury or fatality, such as thicker piping, or deeper installations, or protective outer casings with warning beacons to reduce the potential risk of damage or upset to the actual gas pipeline. These potential alternatives need to be considered, particularly near higher planned concentrations of people and activities, to effectively mitigate the potential impacts of this pipeline on the environment. While it may not be feasible to incorporate heightened design features for the full length of the pipeline, the increased benefit associated with incorporating additional safety features adjacent to higher density developments may justify the feasibility of these measures adjacent to the planned urban developments.

Similarly, pipeline designs should be considered that would allow the installation of smaller diameter pipelines within urban development areas. As noted in the DEIR, the 10" DFM pipeline is the only segment of the Project that is estimated to pose acceptable levels of risk of injury and fatalities. To avoid running a large, high pressure gas line adjacent to urban development that poses unacceptable and unmitigable levels of risk to safety, for the easternmost segment, a terminus for the high pressure portion of the Project located west of the Placer Vineyards Specific Plan should be considered, with smaller, low pressure pipelines installed from such terminus, through intervening developments, to the junction of Fiddyment and Baseline Roads. Such multiple lines could be installed as service lines throughout the area, as development occurs and service needs expand. P-4

For purposes of preserving compatibility with planned land uses and reducing risks to safety, as demonstrated by the DEIR's analysis of acceptable risk levels, high pressure gas lines should not be located within existing or planned high density, urban environments. The risk of upset and the risk of damage and death are increased by orders of magnitude as and where these high pressure gas lines are located adjacent to and within high density urban developments. Once a gas pipeline is being located within a planned urban environment, the size of the pipeline should be adjusted accordingly, if at all feasible, to reduce the risk of damage and harm. The higher density urban developments also provide greater opportunities to locate low pressure gas lines throughout the developing area, both for distribution and service purposes.

P-4 Cont.

We note that one rejected alternative considered the feasibility of connecting smaller, low pressure gas pipelines throughout the entire Project within existing rights-of-way. Our request is to consider the feasibility of maintaining the high pressure line in the low density, agricultural areas, but locating multiple low pressure gas pipelines throughout the planned higher density, urban areas. The greater the density, the greater the concentration of people being exposed to the risks of upset and damage, including areas planned for even higher concentrations of people within commercial areas, schools, churches, and community centers.

P-5

To fully consider all feasible alternatives, including an alternative that could reduce the land use conflicts and risks to safety to less than significant levels, we respectfully request that the Alternatives Analysis include and address the feasibility of additional engineering alternatives that could incorporate improved safety features adjacent to planned urban areas and/or alternatives where networks of low pressure gas pipelines would be installed throughout planned higher density developments in place of the high pressure gas lines adjacent to approved urban density developments.

P-6

Environmentally Superior Alternative.

Subject to our above comments, assuming no additional engineering safety alternatives or low pressure network alternatives are feasible within the planned urban areas, we concur with your conclusion in the Environmentally Superior Alternative section of the Executive Summary that incorporating Alternative Options I and L into the proposed Project would result in an Environmentally Superior Alternative. (See page ES-32.) As noted in the DEIR, Option I is necessary in order to relocate the proposed gas pipeline at least 1,500 feet away from the high school planned in the Placer Vineyards Specific Plan. Although we appreciate that this Option I may involve some additional impacts to biological resources, we note that all of these additional biological impacts can be mitigated to a less than significant level; even though the DEIR concludes that the risk to safety and land use compatibility impacts will not be reduced to a less than significant level with Option I, it will significantly reduce the magnitude of these impacts with respect to the high school planned for this area. The location of the high school along Baseline Road is an essential element of the Placer Vineyards Specific Plan, designed to serve

P-7

the future population needs of both Placer Vineyards and surrounding areas. Since the high school cannot easily be relocated to achieve the 1,500 foot separation required by the State school siting requirements, either Option I or Option J are necessary to move the pipeline a sufficient distance from this planned high school in order to minimize the land use and risk to safety impacts. P-7 Cont.

With respect to the impacts of the Project on the planned elementary school, depending on the applicant's ability to work within the School District to resolve the District's safety concerns, the Owners Group supports either Option K or L to reduce these impacts to an acceptable level. If acceptable to the School District, Option L may be preferable since it would be less disruptive to biological resources; also, there may be some ability to relocate the elementary school site further south away from the pipeline by swapping the adjacent park site with the school site, thereby increasing the distance of the school site from Baseline Road to greater than 1,500 feet. (Any such relocation, of course, would be subject to approval by the Board of Supervisors, property owners, and School District.) Until any such relocation is approved, the Project applicant should assume that either Option K or L will need to be incorporated into the Project to reduce the potential impacts to the Project on the planned elementary school. P-8

We understand that the DEIR indicates that the impacts to land use and risk to safety will still be significant with or without the incorporation of these alternative options. However, since the other increased impacts associated with these alternatives can be mitigated to less than significant levels, and since these alternatives address an issue of statewide concern regarding the siting of schools near high pressure gas pipelines, the incorporation of Options I and L into the Project makes this an Environmentally Superior Alternative. The goal of this DEIR is to present feasible alternatives that still promote the goals of the Project, while avoiding or substantially lessening any of the significant impacts associated with the Project; incorporating Options I and L into the Project, which will substantially lessen the risk of safety to the school uses planned for the Placer Vineyards Specific Plan certainly make this the Environmentally Superior Alternative that the CEQA Guidelines require for selection. P-9

Given the significance of your determination that the Environmentally Superior Alternative requires the incorporation of Options I and L into the Project, this determination should be more prominently highlighted in the context of the DEIR and not relegated to the last page of the Executive Summary. At a minimum, in the description of the Alternatives to the proposed Project, before detailing the No Project Alternative and the various Option Alternatives, the Executive Summary could highlight that the Environmentally Superior Alternative has been determined to be the Project with the incorporation of Options I and L. Then, as readers of the DEIR review the balance of the Executive Summary and the overall document, they will be able to read and evaluate the various alternatives in context with the alternatives already deemed necessary to best mitigate the impacts of the Project.

Project Superior Alternative.

As noted on page ES-1 of the Executive Summary, two of the stated objectives for the proposed Project are (i) extend natural gas service to planned residential and commercial developments in Placer, Sutter and Sacramento Counties; and (ii) install Project facilities in a safe, efficient, environmentally sensitive and cost-effective manner (emphasis added). Both of these objectives are better promoted by the Project with the incorporation of Options I and L (or Options J or K, or a combination thereof).

In particular, since the goal of this Project is to extend service to serve planned residential and commercial developments in Placer County, then the Project should be designed to be compatible with, and not disruptive of, the approved plans for the area. The Placer Vineyards Specific Plan required almost two decades of planning and was approved in July of 2007; this Plan includes a high school site along Baseline Road and an elementary school site within 1,500 feet of Baseline Road. While the DEIR indicates that the risk to safety can be mitigated to some extent, the placement of the line as proposed by the Project would make it infeasible for the School District to acquire the high school site and difficult for the School District to acquire the elementary school site. The locations of these school sites within the Placer Vineyards Specific Plan are integral to the overall design of the Plan; installation of the Project as proposed, without Options I and L (or similar relocation options), would completely undermine the planning efforts that were involved to develop the Placer Vineyards Specific Plan. Instead of serving the development needs of the Placer Vineyards Specific Plan, the Project as proposed, without incorporating Options I and L (or similar options), would have the reverse impact of impeding and preventing the development of the approved Placer Vineyards Specific Plan. P-10

Also, as noted throughout the Report, Options I and L will substantially lessen the risk to safety impacts associated with the proposed location of the pipeline within 1,500 feet of the high school and elementary school sites. The mitigation measures proposed for the Project will not, in the absence of these alternative options, satisfy this necessary statewide school-siting requirement, which has been developed to specifically preserve and promote the safety of children gathering in higher density school environments. Without these alternative options being incorporated into the Project, the Project cannot meet its objective of installing the facilities in a safe manner, as dictated by applicable school facilities siting requirements.

Based on the foregoing, in addition to noting the environmental superiority of the Project with the incorporation of Options I and L, the DEIR should note that Options I and L will better promote the objectives of the Project than would be promoted by the Project without these alternative options. As noted on page 3-1 of the DEIR, CEQA requires consideration of a range of reasonable alternatives that could feasibly attain most of the basic Project objectives; with the

incorporation of Options I and L into the Project, this alternative will actually attain more of the Project objectives than would be accomplished by the Project as proposed.

P-10 Cont.

Description of Project.

Based on the above and the determination in the EIR that the Environmentally Superior Alternative is the Project with Options I and L, unless additional engineering alternatives and/or networks of low pressure gas lines can be incorporated as feasible alternatives within areas planned for greater urban density, we respectfully request that the Project be redefined to incorporate Options I and L at the outset. It seems appropriate that once the Environmentally Superior Alternative is identified through the EIR process, then the final Project should be fully analyzed with the incorporation of these alternatives. In this way, the approving body can be assured that all impacts associated with the Project, as mitigated by the incorporation of these alternatives, will be fully and adequately analyzed by the DEIR. The segments of the line being replaced by these alternative options could then be listed as alternatives, with a more summary explanation of why these originally proposed segments are inferior from an environmental and/or Project-based analysis.

P-11

Thank you for the opportunity to comment on your Draft Environmental Impact Report. If you have any questions regarding any of our comments, please feel free to call us.

Very truly yours,

HEFNER, STARK & MAROIS, LLP

By
Martin B. Steiner

MBS:sk
cc: Kent MacDiarmid, Placer Vineyards Owners Group
K:\Placer Vineyards Development Group LLC\DA - Project Representation (6785-0002)\PGE Gas Line\ltr spurr (061209).doc

RESPONSE TO COMMENT SET P

P-1 The proposed Line 407 is intended to serve the PVSP (approved by Placer County Board of Supervisors on July 16, 2007), and the SVSP (still in the planning stages).

Within the approved PVSP are seven dedicated school sites that will be developed by the Center Joint Unified School District. School sites are also proposed to be included in the SVSP, and a land use plan shows five proposed school site locations. Two dedicated school sites within the PVSP (one high school and one elementary) are located within 1,500 feet of the proposed Project pipeline.

Alternative Options I, J, K, and L were considered in order to reduce risks to proposed school sites (refer to pages 3-55 through 3-57 of the Draft EIR).

Both Option I and Option J would have greater impacts to biological resources, but these could be mitigated to less than significant levels. However, Option J would place the pipeline close to several residences, while Option I would go through agricultural land.

Option K would increase impacts to biological resources by placing the pipeline within an area that has wetlands, vernal pools, and giant garter snake habitat. While Option L would not increase or decrease any of the impacts associated with the proposed pipeline, Option L was designed to decrease the magnitude of the risks to the planned elementary school and minimize impacts to biological resources that would result from implementing one of the alternative options at this location.

P-2 One significant unavoidable impact~~s~~ (Class I Impact~~s~~) associated with the Project ~~are unique to a pipeline project and are~~ is related to air emissions during construction. ~~and exposure to people to unacceptable risk of upset/accident.~~ Other significant impacts that can be mitigated to less than significant levels (Class II) are related to the physical environment in which the pipeline would be placed such as biological and cultural resources, noise, water quality, etc.

Section 3.0 of the Draft EIR explains that CEQA requires consideration of a range of reasonable alternatives to the Project or Project location that: (1) could feasibly attain most of the basic Project objectives; and (2) could avoid or substantially lessen any of the significant impacts of the proposed Project. An alternative may not be eliminated simply because it is more costly or if it would impede the attainment of the Project objectives to some degree. The CEQA Guidelines also require the

selection of an environmentally superior alternative. The determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the Project objectives and how the alternative either reduces significant impacts or substantially reduces the impacts to the surrounding environment.

The Draft EIR described a reasonable range of feasible alternatives to the Project and to the Project location, including the No Project Alternative in Section 3.0. These alternatives were evaluated for their ability to attain most of the Project goals and to avoid or substantially lessen any of the significant impacts of the proposed Project. Three major alternative routes were evaluated and rejected, as stated in Section 3.2 of the Draft EIR, and one system-wide alternative was evaluated and rejected as stated in Section 3.2.4. In summary, the overall proposed Project route was found to have the fewest significant environmental impacts or magnitude of significant environmental impacts. Within the overall proposed Project route, an additional 12 alternatives (termed options) were developed. These options were designed to minimize risk; minimize impacts to biota, listed species, and wetlands; and respond to land owners' concerns. None of the options was found to reduce ~~a~~the Class I impact to a Class II impact~~; however, two options were found to decrease the magnitude of a Class I impact, risk of upset~~. However, two options reduced the magnitude of the safety risk associated with two planned schools. Those options, I and L, in conjunction with the proposed Project, represent the environmentally superior alternative, which was adequately evaluated in the Draft EIR.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

Since staff is recommending that the CSLC ~~can~~ approve the environmentally superior alternative, which includes ~~Project with~~ Option I and Option L, it is not necessary to revise the Project description to include options.

P-3 The Project objectives, purpose, and need are presented in Section 1.1, Project Objectives, Purpose and Need, of the Draft EIR. These Project objectives include increasing natural gas service reliability to existing customers in the Sacramento Valley region, including West Placer, Sacramento, and El Dorado counties and providing service to new residential and commercial developments over the next 25 years. The Project is needed, in part, to service the following growth areas: the Metro Air Park, the Sutter Pointe Project, the PVSP, the Curry Creek Community Plan, and the SVSP. In order to meet these objectives, Line 407 must be large enough in diameter and operate at a high enough pressure to function as a major rib extension from PG&E's backbone pipeline system (Line 400 and 401) to transport natural gas from Line 406 into the 12-, 16-, and 24-inch diameter Line 123, which operates at 500 psig in West Placer County and the 12- and 16-inch diameter Line 119, which operates at 500 psig in Sacramento County.

A range of sizes from 24- to 36-inch diameter and operating pressures of 800 psig and 975 psig were evaluated for Line 407 to identify the optimal design to increase the capacity of the integrated network and meet the long-term load growth projected for the system. A 30-inch diameter pipeline extending along the proposed route operating at a Maximum Allowable Operating Pressure (MAOP) of 975 psig for both Line 406 and Line 407 was identified as the design that provided the greatest overall system benefit at the lowest marginal cost and impact to the environment.

To address installation of smaller diameter pipeline:
A smaller diameter and/or lower operating pressure design would either limit, or prevent altogether, the pipeline from functioning as a major rib extension and fail to meet the primary design objective for the Project. Reducing the size and/or MAOP will reduce the capacity added to the system, require additional transmission pipelines be built in the future either in the same right-of-way as the Project, or in other locations, and reduce the operational flexibility to re-route gas on the system to maintain reliable service to customers during pipeline maintenance.

To replace the capacity of 30-inch Line 407, PG&E would need to install either two parallel 24-inch transmission pipelines, or four parallel transmission pipelines consisting of two 20-inch and two 16-inch pipelines, all operating at the same MAOP as Line 407. Installing multiple smaller diameter pipelines in lieu of a single 30-inch

pipeline would increase the mileage of pipelines within the Project area, and would increase the impact on the environment, the risk of serious injury and fatality, as well as the cost of serving the load growth projected on the system.

The volume of gas that can flow through a pipeline depends primarily on the operating pressure differential, the pipe diameter, and the length of the pipeline. When the operating pressure or pipe diameter is reduced, the natural gas flow rate is also reduced. As a result, a reduction in the line diameter would require higher pressures in order to flow the required 180,000,000 cubic feet of natural gas per day. On the other hand, a reduction in the operating pressure would require a larger diameter line (or multiple lines) in order to flow the same volume. Specifically, a 30-inch line will flow nearly 20 times more natural gas than a 10-inch diameter line operating under similar conditions. In other words, almost twenty 10-inch diameter lines would be required to flow the same volume of natural gas as a single 30-inch line.

The flow rate through a pipeline can be evaluated using the Weymouth formula; the flow rate is proportional to the pipe diameter to the 2.667 power ($D^{2.667}$). The public risks posed by these multiple lines in similar exposures, would be much greater than the proposed Project. Substituting numerous smaller diameter natural gas transmission lines in a similarly developed residential and commercial area would pose a much higher risk to the public than the proposed single 30-inch diameter transmission line. Although the actual results would depend on the population density and other factors, the use of numerous (roughly 20) 10-inch diameter lines would pose a risk on the order of 10 to 15 times that of a single 30-inch line flowing an equivalent volume of natural gas.

To address thicker piping:

The pipe as proposed has adequate thickness to resist damage from construction equipment beyond the size normally used in general construction. PG&E has proposed, as a part of their Project, to install the pipeline to meet or exceed the current pipeline regulations (49 CFR 192). Pipes with higher yield strengths than those proposed can suffer from metallurgical issues including excessive hardness, cracking, difficulty welding, etc. Thick-walled steel pipelines are typically used for extreme conditions such as subsurface sea floor lines or risers. During the manufacturing of thick-walled steel pipelines, the cooling rate at the time of quenching of the pipe becomes slow, particularly at the central portion due to its thickness, resulting in insufficient strength and toughness. This is because the cooling rate is slow, and there is a high probability that the pipe will be brittle.

As provided in the Project Description and on pages 4.7-36 and 4.7-37 of the Draft EIR, the following pipe wall thickness is proposed for the Project:

- For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; 0.375-inch wall thickness pipe is proposed, 20 percent greater than the minimum required.

- For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required.

- For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required.

The additional wall thickness will provide added strength. For example, the 0.375-inch to 0.406-inch thick pipe wall would resist a 73 ton machine and the 0.500-inch thick pipe wall would resist a 120 ton machine.

To address deeper installations:

As provided in the Draft EIR Section 3.0, Project Description, and as noted on page 4.7-36 of the Draft EIR, PG&E has proposed a minimum depth of cover of 60 inches (5 feet). 49 CFR 192.327 establishes the minimum depths of required cover. For Class 1 areas, a minimum of 30 inches of cover is required. For Class 2, 3, and 4 areas, a minimum depth of cover of 36 inches is required. As noted in the revised System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project and is included as ~~a part of~~ Appendix H-3 of this Revised Final EIR, ~~of the Draft EIR,~~ "Pipelines with a depth of cover of 48-inches or greater experienced a 30% reduction in third party caused incidents."

To address potential conflicts with other utilities, a mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

To address protective outer casings with beacons:

Installing the carrier pipe inside a casing pipe may reduce the potential for damage from third parties, but would cause other technical issues. For example, an outer casing has the potential to increase the risk due to external corrosion. A cased installation would increase the likelihood of external corrosion, since the cathodic protection system would be shielded from the carrier pipe. Should a leak develop, it would be difficult or impossible to locate, since the gas would be contained within the

casing and migrate to the casing vent. Inspection and repairs to the carrier pipe would also be problematic, since the pipe would not be accessible without first removing the casing.

To address lower pressure pipeline:

The proposed system ties into other line segments. As a result, the operating pressure must be high enough to be able to inject into the other segments and provide a great enough differential pressure to achieve the required flow rate. For example, Line 407-E would extend east from the junction of Line 407-W at Powerline Road and connect with Line 123 at the intersection of Baseline and Fiddyment Roads. In order for Line 407-E to feed the existing Line 123, the operating pressure in Line 407-E must be higher than Line 123, which operates at 500 psig. Otherwise, gas would flow from Line 123 into Line 407E, instead of the other way around. As a result, the Project objectives cannot be achieved by reducing the operating pressure of the proposed line segments without the construction of a compressor station.

Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset. MM HAZ-2a and MM HAZ-2b have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

The Project Design Features and the proposed mitigation measures in the Draft EIR (MM HAZ-2a and MM HAZ-2b) reduce the risk by approximately 50 percent. These measures include the use of modern pipe, regular internal inspections using a high resolution instrument (smart pig), corrosion mitigation, and the installation of automatic or remotely operated shut-down valves. ~~However, the overall Project individual risk of serious injury or fatality would still be approximately 1:30,000, which exceeds the individual risk significance threshold of 1:1,000,000 for serious injury or fatality (used by the California Department of Education for school sites).~~

~~Measures have been implemented to reduce the public risks. However, the lead agency recognizes that the risks remain significant even after mitigation. The CSLC will need to balance the economic, legal, social, technological, or other benefits of the proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the EIR is certified by the CSLC, a Statement of Overriding Considerations will need to be adopted at the time of certification and approval of the Project (CEQA Guidelines Section 15093).~~

P-4 Please refer to response to comment P-3.

P-5 Page 3-11 of the Draft EIR describes the "System/Facility Alternatives," which would construct approximately 15 separate projects within existing right-of-way (ROW) already owned by PG&E, to the extent feasible.

This alternative was rejected from consideration in the Draft EIR because of its additional length, the number of river crossings, and lack of offsetting benefits such as avoidance of biological or other resources. This alternative would also have generated greater construction impacts and would affect more people than the proposed Project because portions would be constructed in proximity to the towns of Yolo and Woodland.

PG&E provided information that to provide natural gas service to customers within the service territory without the construction of the proposed Lines 406, 407, and the DFM, the installation of 63 miles of new transmission pipelines would be required, at significant additional expense and increased risk to the public. In order to replace the capacity of the 30-inch transmission line, PG&E would need to install several smaller pipelines (refer to response to comment P-3). Installing multiple smaller diameter pipelines in lieu of a single 30-inch pipeline would increase the mileage of pipelines, thereby increasing impacts on the environment, the risk of serious injury and fatality, and the cost of serving the load growth projected on the system.

Below is an example of what PG&E would have to install for a systems alternative:

FAC ID	FACILITIES	Location	LENGTH MILES	DIAMETER INCHES	MAOP PSIG
L172	24" // 20" L172 from 40.07 to 49.28 (800 psig MAOP / 800 psig FDP)	Parallel E/O Hwy 5 from N/O Dunnigan to Zamora, Yolo Co	9.296	24	800
L172	24" // 20" L172 from 49.28 to 66.59 (800 psig MAOP / 800 psig FDP)	Parallel E/O Hwy 5 from Zamora to S/O Woodland, Yolo Co	16.427	24	800
L119	2.5 miles 8" Truxel DFM	North Natomas, Sac Co	2.500	8	720
L123	12" New DFM in Baseline Rd from L123 to Pleasant Grove Rd in Sutter Co (720 psig MAOP)	West Placer, South Sutter, North Sac Co	9.000	16	720
L116	24" // 12" L116 from MP 3.86 to MP 9.60 (720 psig MAOP / 720 psig FDP)	E/O Davis to West Sac across Yolo Causeway, Yolo Co	5.540	24	720
L119	16" // 12" L119 from Antelope Meter Sta - south	N/O Hwy 80, North Highlands, Sac Co	0.780	16	720
FLSM	16" // 12"in Palm and Madison btwn Hemlock DR and east of Fair Oaks Blvd	E/O Hwy 80, North Highlands, Carmichael, Citrus Heights, Fair Oaks	4.590	16	720
L173	12" // 8"/6" from MP 5.51 north to Penryn	N/O Hwy 80 north of Rocklin, West Placer Co	4.740	12	720
L173	12" // 6" Barton Rd DFM	N/O Hwy 80, Loomis, East Roseville	2.520	12	720
L173	12" // 6" from MP 12.48 to MP 16.58	N/O Hwy 80, Loomis, Penryn	3.540	12	720
L202	12" // 6/8" L202 in Grass Valley/Nevada City	Grass Valley, Nevada Co	3.000	12	720
L123	Replace 12" with 16" L123	S/O Lincoln, West Placer Co	4.200	16	720
	Totals		66.133		

P-6 Please refer to responses to comments P-2 and P-3.

P-7 Page ES-32 of the Executive Summary of the Draft EIR identifies the environmentally superior alternative to be incorporating Alternative Options I and L into the proposed Project alignment based on the decrease in the magnitude of ~~impacts to~~ safety risks to planned schools. Please refer to responses to comments G-5 and G-6 for a discussion of these options.

P-8 Both options K and L were considered due to proximity to the planned elementary school site in the PVSP area. Option K places the pipeline route outside the 1,500-foot study zone, while Option L has the construction of the pipeline within the proposed alignment for Line 407-E, within the 1,500-foot study zone, but at a depth of 35 feet to reduce the magnitude of the risk to the planned school. In Option L, PG&E would use HDD to place the pipeline at this increased depth (approximately 35 feet deep). PG&E has proposed to jointly develop a risk analysis with the School District to determine pipeline impacts to the school (refer to APM ALT-L).

Option K would increase impacts to biological resources by placing the pipeline within an area that has wetlands, vernal pools, and giant garter snake habitat. While Option L would not increase or decrease any of the impacts associated with the proposed pipeline, Option L was designed to decrease the magnitude of the risks to the planned elementary school and minimize impacts to biological resources that would result from implementing the other alternative option at this location.

The planned school site is located along Line 407. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

Please also refer to response to comment P-2.

P-9 The conclusion that the environmentally superior alternative is the proposed alignment with options I and L incorporated is described in the Executive Summary following the discussion of the proposed Project and all 12 of the options.

Text has been added to the Draft EIR on page 3-12, line 8 and page 3-58, line 25, identifying the environmentally superior alternative. The environmentally superior alternative is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive

of all project components, and Options I and L. Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

P-10 See responses to comments P-1 through P-9. Text has been added to the Executive Summary indicating that Options I and L, the environmentally superior alternatives, would better promote the objectives of the Project than the proposed alignment or other options (page ES-32, line 29). Refer to Section 4.0 of the Revised Final EIR for revisions to the Draft EIR.

It should be noted that a revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. The risk assessment included risk measurement terminology that was not defined in the document, which has resulted in some confusion. The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. The maximum risk posed by Line 407 in the area of the planned schools before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chances of fatality per year. This is less than the 1:1,000,000 threshold used by the California Department of Education for siting schools. The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

Societal Risk: Societal risk is the probability that a specified number of people will be affected by a given event. Several release scenarios were used that could impact both building occupants and vehicle passengers. The California Department of Education (CDE) approach for evaluating the risk to the student population uses two calculated parameters: an average individual risk across the depth of the campus site, and a site population risk indicator parameter. The CDE does not specify numerical criteria of acceptability or unacceptability for these indicators (CDE Guidance Protocol for School Site Pipeline Risk Analysis, 2007). The threshold values for societal risk vary greatly, depending on the agency or jurisdiction. There are no prescribed societal risk guidelines for the United States or the State of California. The Committee for the Prevention of Disasters and the Netherlands use an annual probability of 1.0×10^{-3} (1:1,000) or less. This criterion has been used to evaluate the proposed project. The societal risk posed by the proposed project is less than the significance threshold of 1:1,000 or less.

P-11 The environmentally superior alternative, that is the proposed alignment including Options I and L, was identified and adequately analyzed through the EIR process. Sections 4.0 through 4.14 of the Draft EIR provide a comprehensive analysis of the proposed alignment and the additional analysis with Options I and L is summarized in the Executive Summary. The rationale for selecting these options is provided in Section 3.0, Alternatives and Cumulative Projects, of the Draft EIR. No additional environmental evaluation of the Project or Project plus options is necessary. Please refer to responses to comments P-1 through P-7.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options and any alternatives that were analyzed in the EIR.

Klein Family Farms
913 Ridgeview Drive
Woodland, CA 95695

June 12, 2009

California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

Dear Crystal Spurr,

I would like to take this time to thank you and the California State Lands commission for giving our family the opportunity to speak on this issue that greatly impacts our family farm. I would like to begin by giving you and the commission a little background information about our family farming operation. This particular farm is being farmed by two 3rd generation brothers and their children. Today's family farm has been developed by many years of dedication and hard work. Our farm operations were started by our grandfather, John W. Klein, in 1962. He migrated up to the fertile and diverse ground in Yolo County from Indio California in hopes to satisfy a dream of starting a family farm to support himself and his future family. He started farming with a $2,500 loan, which he put his household furniture up for collateral (because this is all he had) for a production loan, to lease 200 acres of ground that no one else wanted to farm. Today our family farms approximately 5,000 acres of top quality land which produce tomatoes, wheat, sunflowers and almond trees. We employ approximately 20 full time employees and up to 300 contracted employees during the season for, planting, pruning, harvesting and hoeing weeds. Each year approximately 4,000 semi truck loads of commodities are delivered off our farm ever year. Q-1

If you know any farmers you know farming is one of those professions that it is not an 8am-5pm, 5 days a week job, it is a way of life. For this reason, I have great concern about the Natural Gas Pipeline 406 going right threw the middle of approximately 25% of our farm operation. We have talked to PG&E many times about moving the pipeline so it will be placed along side of the county road to minimize the impact to our family farm. PG&E's reply is that "it is too costly." This project is going to be a hardship for our farm. The project is going to affect our permanent crop plantings like almonds, also affect our producing of all crops that we have contracted to deliver. These contracts are earned over many years of showing we can produce quality and quantity. This pipeline will create an economic hardship on our family farm, not only to us personally, but also to the employees, contracted labor, fertilizer companies, chemical companies, seed companies, parts stores, equipment companies, fuel companies, etc. that we deal with on a daily basis. Q-2

The 406 pipeline also disrupts the infrastructure of our parcels when it comes to the most vital part of farming and that is water. During the growing season, we move water from one location to another by ditch or underground pipeline. It will be hard to move water when PG&E's pipe goes through a parcel. Q-3

There is also a concern of meeting federal, state, and local regulations in regards to chemical application. Our farm, not being organic, sprays pesticides, herbicides, fumigations and fungicides year-round. A lot of the chemicals we must use have restrictions such as, 72 hours before reentering parcel and up to 500 feet work zones. This restricts accessibility to or near parcels. Q-4

These may or may not be things PG&E has considered, but are items very important to us on a daily basis. I am sure it is easy for PG&E to only see that this project may effect a few, but will bring better service to many and more income to them. PG&E needs to know that this project they are proposing does not just affect a parcel of dirt, but 3 generations of literally hard blood and sweat that has been put into the soil, so others can simply go to the supermarket when they want to have food on their table. Q-5

I would like to close my letter by saying that PG&E has offered us a compensation package that does not even come close and is offensive to the land values and the economic loss we will have if this project goes through as planned. Please reconsider the project route and the compensation plan. Thank you for your time and if you have any more questions please feel free to call Chris anytime at 530-681-5607. Q-6

Sincerely,

Chris Ochoa & Mark Ochoa
Klein Family Farms

RESPONSE TO COMMENT SET Q

Q-1 The comment provides background information on the status of the Klein Farms including the number of acres farmed, number of seasonal and full-time employees, and number of truck trips associated with the operation.

Q-2 The statement and concerns regarding economic impact to farmland is included in the public record and will be taken into account by decision makers when they consider certification of the EIR and consider whether to approve the proposed Project.

The proposed Project would result in the loss of 2.0 acres of orchards located within Yolo County. The proposed Project would permanently impact 2.55 acres of farmland across all four counties. Most of the agricultural land along the proposed Project alignment is currently used for row or field crops; these uses could continue within the permanent pipeline easement. Temporary and permanent agricultural impacts are discussed on pages 4.2-23 through 4.2-25 of the Draft EIR.

Both temporary and permanent economic losses of normal farm operations are required to be compensated as stated in the California Code of Civil Procedure. PG&E is required to provide financial compensation for temporary and permanent loss of agricultural uses through the California Code of Civil Procedure, as follows:

- Section 1245.030(b) requires compensation for property damage, including crop damage, resulting from pre-construction project studies, testing, surveying, etc.

- Section 1263.210(a) requires all property improvements, including agricultural crops and associated facilities and infrastructure, in project land rights acquisition compensation.

- Section 1263.250(a) requires compensation for crop damage/losses resulting from project construction. It also requires scheduling project construction to avoid impacts to agricultural crops when possible.

Q-3 Page 4.2-22 of the Draft EIR has been revised to include APM AGR-1, which requires that PG&E provide advance notification of Project activity to adjacent landowners and tenant farmers to provide adequate warning of construction activity. This mitigation measure would ensure that all landowners along the alignment are notified of pending construction activity. APM AGR-1 requires PG&E to provide

advance notice (between two and four weeks prior to construction), by mail, to all landowners and tenant farmers along the pipeline right-of-way. This advance notice requirement would also require that a mechanism be set up for contacting PG&E and/or the construction contractor to ensure landowners and tenant farmers can coordinate scheduling. The inclusion of APM AGR-1 would ensure that adequate notice is provided to underlying or adjacent property owners who may be affected by project construction. Provision of such notice would allow concerned landowners or agricultural operators (such as Klein Family Farms) the opportunity to contact PG&E or the construction contractor to work out timing concerns.

PG&E has committed to working with landowners and their tenant farmers to avoid or minimize impacts to agricultural crops and disruption to crop irrigation systems during the proposed pipeline construction, including temporary or permanent re-configuration of crop irrigation systems to maintain irrigation to crops adjacent to the pipeline construction right-of-way. PG&E and their pipeline construction contractors will take reasonable measures to avoid damage to crop irrigation systems and will immediately repair all damage that does occur to crop irrigation systems during the proposed pipeline construction. MM HWQ-2 has been revised to also reflect these commitments. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

PG&E was able to download a copy of this letter from the CSLC website on June 17, 2009, has reviewed this comment, and is aware of the commenter's concern. PG&E has further committed to work with Klein Family Farms to ensure fair compensation if farming operations including irrigation, application of chemicals and harvest times are affected by the proposed pipeline construction work.

Q-4 PG&E has committed to working with landowners and their tenant farmers prior to and during construction of the proposed pipeline to coordinate the construction schedule with agricultural crop spraying schedules and harvest activities, and to minimize crop production losses. Please also refer to response to comment Q-3.

Q-5 Comment acknowledged. Please refer to response to comment Q-2.

Q-6 Comment acknowledged. Please refer to response to comment Q-2.

Sierra Vista Owners Group
1700 Eureka Road, Suite 140
Roseville, CA 95661

June 12, 2009

Crystal Spurr
California State Lands Commission
100 Howe Ave., Suite 100-South
Sacramento, CA 95825

Via E-mail and U.S. Mail

Re: CSLC EIR No. 740 (State Clearinghouse No. 2007062091) for PG&E Line 406 and Line 407 Pipeline Project Land Use Compatibility with Respect to the Sierra Vista Specific Plan

Dear Ms. Spurr:

Please accept this letter as a formal comment on the above-referenced Draft Environmental Impact Report ("DEIR") by the Sierra Vista Specific Plan Owners, developers of the Sierra Vista Specific Plan development project ("Sierra Vista"). Sierra Vista comprises approximately 2,064 acres at the northwest corner of Baseline and Fiddyment Roads in Placer County ("County"). The City of Roseville ("City") anticipates annexing Sierra Vista into the City limits. Sierra Vista will complement the West Roseville Specific Plan area with new neighborhoods, schools, office parks, retail opportunities and other urban land uses.[1] Unfortunately, the high-pressure natural gas pipeline (the "Line 407 Project") proposed by PG&E would place a potentially hazardous facility along the southern boundary of Sierra Vista, potentially endangering an elementary school, public parks, commercial areas and residential development. Therefore, we are submitting this letter to the State Lands Commission (the "Commission") during the comment period on the DEIR in order to document our concerns related to potential land use and engineering conflicts between Sierra Vista and the Line 407 Project.

R-1

The Sierra Vista project area has been targeted for urban development since 1994 when it was included as an Urban Study Area in the Placer County General Plan. The City of Roseville and Placer County then entered into a Memorandum of Understanding (MOU) which outlines a cooperative process for any development applications within the MOU area. The majority of the Sierra Vista project lies within this MOU area. The Sierra Vista project area was then added to the City of Roseville's Sphere of Influence in 2004 and the current Sierra Vista project began processing in 2005. The City of Roseville issued a Notice of Preparation (NOP) in March 2008 indicating that an EIR would be prepared for the Sierra Vista project

R-2

[1] More information about the Sierra Vista Specific Plan is available at the City's website: http://www.roseville.ca.us/planning/major_development_projects/sierra_vista_specific_plan.asp

Since proposing Sierra Vista in 2005, extensive planning and engineering work has been conducted which is reflected in a refined land use plan (attached hereto as Exhibit 1). This land plan was prepared with input from the City, and also takes into consideration comments from various public agencies collected during an initial environmental review period.[2] The land plan locates sensitive uses near Baseline Road, including various public parks, residential, commercial properties and an elementary school site.

R-2 Cont.

Engineers from MacKay and Somps representing Sierra Vista met with PG&E personnel on October 31, 2008 for an overview of the Line 407 Project. As you know, regional transportation plans show Baseline Road being widened to a six-lane arterial roadway. A portion of the ultimate right-of-way for Baseline Road (and a segment of the Line 407 Project) is located along the frontage of Sierra Vista. Therefore, PG&E has requested a 50' non-exclusive easement (measured from the future back of curb) along the Sierra Vista segment of Baseline Road. PG&E has also requested an additional easement near Fiddyment Road for facilities related to the Line 407 Project. Such easements cannot be granted until the ultimate alignment of Baseline Road has been determined by the City and County.

R-3

Our engineers are concerned that the proposed alignment of the Line 407 Project would likely conflict with future improvements along Baseline Road. The EIR indicates that the Line 407 Project would have a minimum of 5' of cover, this is not enough given that we have not yet designed the ultimate grades along Baseline Road to accommodate the widening of Baseline Road, future intersections and the necessary underground utilities to serve Sierra Vista. Given the high cost and great difficulty that would be associated with a future realignment, proper location of Line 407 is vital. Actual pipeline separation requirements, and horizontal and vertical clearances, cannot be known with precision until the ultimate location of underground utilities, roadway alignments and driveway locations are determined. Similarly, future utility crossings for water, sewer, and drainage improvements for Sierra Vista and the Baseline Road construction project must comply with the necessary horizontal and vertical clearances. Future dry utility crossings for electric, gas, and telecommunications lines, as well as vehicle ingress and egress, also cannot be determined until exact horizontal and vertical clearances are known. Finally, any restrictions on landscaping or setbacks along Baseline Road should be determined in coordination with the City.

R-4

We would also like the EIR to address impacts to our proposed land uses for any ancillary equipment needed to serve the Line 407 Project such as pressure reducing station and valve clusters. We need more information on any ancillary equipment to evaluate the best locations based on compatibility with the Sierra Vista land uses.

R-5

[2] In the spring of 2008, the U.S. Army Corps of Engineers released a Public Notice (No. 200601050) reflecting its intent to prepare an Environmental Impact Statement (EIS) for its evaluation of Sierra Vista under Section 404 of the Clean Water Act and NEPA. At the same time, the City released a Notice if Preparation (NOP) for an Environmental Impact Report (EIR), which initiated the City's review of environmental impacts under the CEQA.

We are requesting that the ultimate design of the Line 407 Project address the above-described concerns. In addition, in order to minimize the risk of the potentially hazardous facility and to reduce the risk of potential future conflicts we are requesting the following modifications to the Line 407 Project:

R-6

1. The pipeline be placed under the future pavement section of Baseline Road
2. Increase the minimum pipe cover to fifteen feet
3. The pipe be encased in concrete
4. Increase the pipe wall thickness
5. Install a gas sensor system for leak detection

In summary, the attached land plan represents the culmination of a long process of careful land use planning and engineering work, in which PG&E has not actively participated. At this point, the Commission's review of the Line 407 Project in the DEIR must take into account the school sites and other sensitive land uses that are planned within Sierra Vista near the Baseline Road frontage. The requisite easements, clearances, and potential conflicts associated with the pipeline cannot be identified until the ultimate right-of-way for Baseline Road has been determined. It is apparent that greater consultation between the Commission and the City regarding potential land use conflicts is in order.

R-7

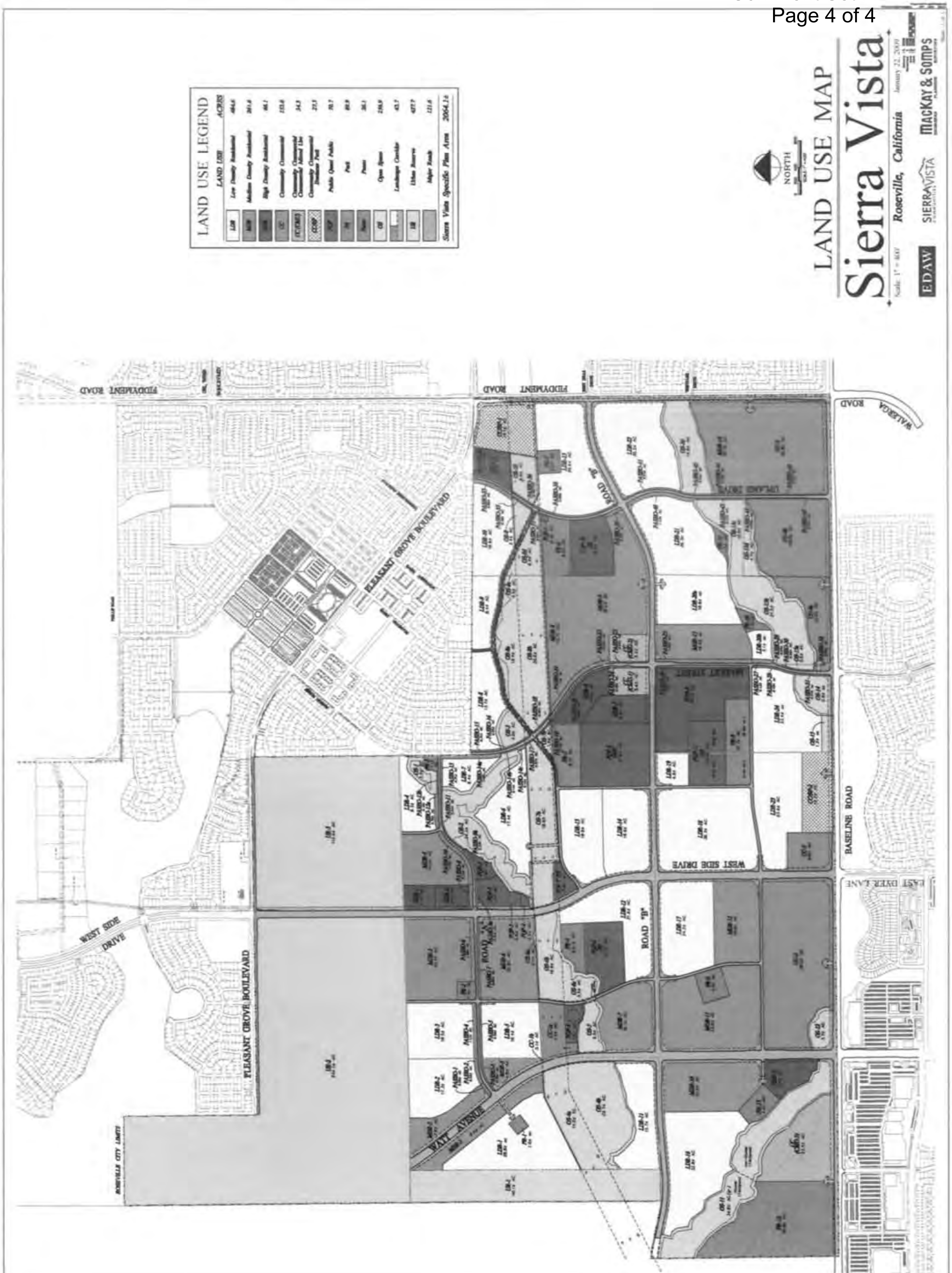
If you have any questions related to Sierra Vista, or desire additional information, please contact me at your earliest convenience. I can be reached at (916) 847-4482.

Sincerely,

Jeff Jones
Sierra Vista Project Manager

Enclosure

Cc: City of Roseville


LAND USE MAP
Sierra Vista
Roseville, California
LAND USE LEGEND
FIDDYMENT ROAD
PLEASANT GROVE BOULEVARD
WEST SIDE DRIVE
BASELINE ROAD
WATT AVENUE
EDAW

RESPONSE TO COMMENT SET R

R-1 Please refer to responses to comments K-1 through K-5 regarding the comment letter submitted by the City of Roseville. Their letter included comments regarding the SVSP.

The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

The Sierra Vista Specific Plan (SVSP) is located along Line 407. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

R-2 ~~Please refer to responses to comments G-1, G-2, and P-7.~~ The MOU between Placer County and the City of Roseville is discussed on page 4.9-17 of the Draft EIR, under the heading City of Roseville General Plan and Sphere of Influence. The Draft EIR considered the impact to potential land uses of the SVSP (refer to Impact LU-2 on page 4.9-20 of the Draft EIR). Pipeline inspections are required and would be completed by PG&E, including High Consequence Area (HCA) risk assessments, which would be completed every seven years that the proposed Project is in operation (refer to pages 4.7-36 and 4.7-37 of the Draft EIR).

In the Executive Summary of the Draft EIR and in Sections 4.3, Air Quality; 4.7, Hazards and Hazardous Materials; 4.9, Land Use and Planning; and 4.10, Noise, of the Draft EIR, school sites are identified as sensitive land uses. Sections 4.7, Hazards and Hazardous Materials, and 4.9, Land Use and Planning, of the Draft EIR also provide language regarding the California Education Code, section 17213, and the California Code of Regulations, Title 5, section 14010(h), regarding the 1,500-foot study zone between school sites and high-pressure gas pipelines. Page 3-3 of the Draft EIR considers potential land use conflicts associated with school siting requirements that require school districts to perform risk analyses when a school site is located within 1,500 feet of an easement for an underground pipeline as one of the reasons considered for looking at alternative locations. Safety risks to planned school sites are discussed in the Executive Summary and in Section 4.7, Hazards and Hazardous Materials and 4.9, Land Use and Planning, as revised in Section 4.0 of this Revised Final EIR.

School sites are proposed to be included in the SVSP, and a land use plan shows five proposed school site locations. One proposed school site within the SVSP (elementary school) is located approximately 1,500 feet north of the proposed Project pipeline. As noted in Table 4.7-6 of the revised risk analysis attached to the Revised Final EIR as Appendix H-3, the impacts are very minor at distances greater than 800 to 1,000 feet. Since the planned elementary school site boundary is located approximately 1,500 feet from the proposed pipeline, it is unlikely that serious risks would be posed to students and others at the school site. At this distance from the pipeline, the consequences from a potential fire or explosion are not expected to result in any injuries.

R-3 ~~Please refer to response to comment K-2 regarding the comment letter submitted by the City of Roseville.~~ PG&E has indicated that the industry best practice is to install transmission pressure pipelines in a private easement whenever possible. PG&E does have transmission pipelines under paved road surfaces in Roseville, but those lines were installed post road improvements when no suitable location existed beyond the paved surface.

The industry best practice is based upon public and worker safety. A private easement provides PG&E with additional control of co-occupants and uses. Patrols and maintenance activities can be accomplished without exposing workers to traffic. The pipeline can be exposed to add future taps to serve the communities or for inspection without damaging the road surface or impeding traffic.

PG&E indicated they have utilized the best available information regarding the Baseline Road alignment. PG&E will adjust the pipeline alignment if feasible once the road design is finalized. PG&E has located the 50-foot easement at the future Baseline Road back of curb per plans provided by the design firm of MacKay and Somps. This easement is planned to be contiguous with the proposed landscape strip.

R-4 ~~Please refer to response to comment K-2 regarding the comment letter submitted by the City of Roseville.~~ PG&E indicated they have been working with the SVSP civil engineering firm of MacKay and Somps to coordinate the pipeline vertical and horizontal alignment with the future road alignments determined by the City of Roseville. PG&E has used the best design information available in locating the pipeline. Currently the road improvement plans are limited to line work in plan view only. The Baseline Road design has not progressed to include future elevations, drainages or utility infrastructure. PG&E has designed the line with 8 feet of cover in known intersections. The proposed 5 feet of cover is generally adequate for driveway crossings. In the absence of final road improvement design drawings, PG&E has increased cover at major road crossings to 8 feet. It is PG&E's experience that 8 feet of cover will generally allow for typical road construction and utility crossings. PG&E has stated a willingness to work with SVSP to coordinate design and depth of underground utilities so that potential conflicts can be addressed prior to construction of the pipeline.

The commenter has indicated that the proposed pipeline should be buried deeper to avoid conflicts with other utilities. A mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

PG&E also indicated they communicated to the City of Roseville that locating a Class 1 bike path above the pipeline is acceptable and a compatible use. PG&E intends to locate the pipeline in the center of the 50-foot easement. PG&E's easement description does not exclude shrubs and groundcover, nor does it exclude all trees. Vegetation exclusion is limited to "deep-rooted trees" within 10 feet of the pipeline centerline

R-5 ~~Please refer to response to comments K-2, K-3, and K-4 regarding the comment letter submitted by the City of Roseville.~~ PG&E has indicated they advised City of Roseville representatives that the station locations have some flexibility; however, the existence of sensitive resources, and operational constraints, will limit

potential locations. PG&E representatives are available to work with both the City and the CSLC on this issue. PG&E has also agreed to work with the City to enclose the proposed Baseline Road station in a manner, and using materials, compatible with the planned development and acceptable to both parties.

PG&E has indicated they advised City of Roseville representatives that underground valves are existing equipment installed during a previous project and have discussed with the City allowable and compatible uses over and near these existing valves. PG&E representatives are available to work with the City on this issue.

R-6 ~~Please refer to responses to comments K-1, G-13, P-3, and U-12.~~

The industry best practice is to install transmission pressure pipelines in a private easement whenever possible. PG&E does have transmission pipelines under paved road surfaces in Roseville, but those lines were installed post road improvements when no suitable location existed beyond the paved surface. The industry best practice is based upon public and worker safety. A private easement provides PG&E with additional control of co-occupants and uses. Patrols and maintenance activities can be accomplished without exposing workers to traffic. The pipeline can be exposed to add future taps to serve the communities or for inspection without damaging the road surface or impeding traffic.

PG&E indicated they have been working with the SVSP civil engineering firm of MacKay and Somps to coordinate the pipeline vertical and horizontal alignment with the future road alignments dictated by the City of Roseville. PG&E has used the best design information available in locating the pipeline. Currently the road improvement plans are limited to line work in plan view only. The Baseline Road design has not progressed to include future elevations, drainages or utility infrastructure. PG&E has designed the line with 8 feet of cover in known intersections. The proposed 5 feet of cover is generally adequate for driveway crossings. In the absence of final road improvement design drawings, PG&E has increased cover at major road crossing to 8 feet. It is PG&E's experience that 8 feet of cover will generally allow for typical road construction and utility crossings. PG&E has stated a willingness to work with SVSP to coordinate design of underground utilities so that the potential conflicts can be addressed prior to construction of the pipeline.

The commenter has indicated that the proposed pipeline should be buried with a cover of 15 feet to avoid conflicts with other utilities. A mitigation measure (MM LU-

1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

With regard to protective outer casings, installing the carrier pipe inside a concrete casing or casing pipe may reduce the potential for damage from third parties, but would cause other technical issues. For example, an outer casing has the potential to increase the risk due to external corrosion. A cased installation would increase the likelihood of external corrosion, since the cathodic protection system would be shielded from the carrier pipe. Should a leak develop, it would be difficult or impossible to locate, since the gas would be contained within the casing and migrate to the casing vent. Inspection and repairs to the carrier pipe would also be problematic, since the pipe would not be accessible without first removing the casing.

PG&E has proposed as a part of their Project to install the pipeline to meet or exceed the current pipeline regulations (49 CFR 192) (refer to pages 4.7-36 and 4.7-37 of the Draft EIR, as revised in Section 4.0 of this Revised Final EIR). PG&E intends to install minimum 0.375-inch wall thickness pipe on the 30-inch diameter segments. A large proportion of the proposed pipeline would consist of 0.375-inch-wall thickness steel pipe (Grade X-65) designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; a 0.375-inch wall thickness is proposed, 20 percent greater than the minimum required. For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; a 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required. For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; a 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required.

Methane sensors are not generally recommended because emission levels under normal pipeline operations should not be considered hazardous to the public. Per CPUC regulations, PG&E odorizes its natural gas. The level of odorization is such that it is generally detectable by human smell below levels that are considered hazardous. PG&E also performs leak surveys on its pipelines on either an annual or semi-annual basis, and hazardous leaks are repaired promptly.

R-7 Please refer to comments R-1 through R-6. ~~Please refer to responses to comments K-1, through K-5 regarding the comment letter submitted by the City of Roseville.~~

Pacific Gas and Electric Company®

2730 Gateway Oaks Drive, Suite 220
Sacramento, CA 95833

June 12, 2009

Ms. Crystal Spurr, Project Manager
California State Lands Commission (CSLC)
Division of Environmental Planning and Management
100 Howe Street, Suite 100-South
Sacramento, CA 95825-8202

Subject: Comments on PG&E Line 406/407 Natural Gas Pipeline Draft EIR (DEIR)

Dear Ms. Spurr:

The following are PG&E's comments regarding the DEIR.

EXECUTIVE SUMMARY

Clarification of Temporary Use Area **Page ES-2, lines 13-15**

The DEIR accurately reflects the temporary use area (TUA) requirements for construction of the 30-inch pipeline on lines 9-13. However, it then goes on to state: "A 60-foot wide TUA would be used for construction in constricted workspaces and would require that excavated soil be transported to an adjacent TUA." (DEIR, p. ES-2, lines 13-15.) While PG&E recognizes that the TUA may be reduced due to lack of available space or environmental constraints, such restrictions should be made on a site-specific basis, rather than making a blanket assumption that the TUA would be reduced to 60 feet, since unnecessarily constricting the workspace will result in a longer duration of impacts. Therefore, PG&E proposes that the quoted language be deleted. S-1

HDD Locations **Page ES-2, lines 15-17**

HDD equipment will be set up at the entry points in the temporary use areas. At the exit points, no additional temporary use area is required. PG&E will be able to keep all equipment at the exit points within the right-of-way and temporary construction easement (i.e., TUA). Therefore, PG&E suggests the following change: S-2

> "Each of the twelve proposed Horizontal Directional Drilling (HDD) locations would require an additional 18,750-square-foot temporary use area for equipment that would be set up at the proposed entry ~~and exit~~ points."

Alternatives to Proposed Project **Page ES-4, lines 21-23**

The DEIR explains why the Line 406 central alternative was eliminated from further analysis, but it does not include a number of reasons that render this alternative unsuitable. PG&E suggests that this language be modified as follows: S-3

> Line 406 alternative was eliminated from further analysis because this proposed pipeline alternative alignment would <u>be longer than the preferred alternative (resulting in greater impacts) and would require crossing a greater amount of potential foraging habitat for Swainson's hawk, nesting habitat for burrowing owls,</u>

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and other habitats utilized by special-status species. These alternatives would also require construction along sidehills, which would present additional engineering, construction, and maintenance considerations ~~parallel an ephemeral stream passing through natural habitats to CR-14A~~.

S-3 Cont.

Environmentally Superior Alternative **Page ES-31, lines 29-31**

The DEIR contains confusing language regarding the environmentally superior alternative. Although it recognizes that under the No Project Alternative, PG&E may not be able to provide reliable service to its customers, it concludes that the No Project alternative is the environmentally superior alternative." (DEIR, p. ES-31, lines 29-31.) However, on the following page, it states: "The environmentally superior alternative would be incorporating Alternative Options I and L into the proposed Project alignment." (DEIR, p. ES-32, lines 25-26.)

The No Project Alternative would render PG&E unable to comply with its public utility obligations to provide natural gas service to its customers and would trigger the construction of other projects. (See, e.g., section 451 of the Public Utilities Code, which provides: "Every public utility shall furnish and maintain such adequate, efficient, just, and reasonable service, instrumentalities, equipment, and facilities . . . as are necessary to promote the safety, health, comfort, and convenience of its patrons, employees, and the public.") Therefore, PG&E proposes to modify the DEIR as follows:

S-4

The No Project alternative would not result in any of the impacts associated with the proposed Project. ~~Therefore, the No Project alternative is considered the environmentally superior alternative.~~ However, the No Project Alternative would not meet the Project objectives because PG&E would be unable to meet its public utility obligations to provide natural gas service to its customers in accordance with the California Public Utilities Code and associated orders, rules, and tariffs.

SECTION 1.0. INTRODUCTION

Purpose and Scope of EIR **Page 1-4, lines 1-23**

In this section, the DEIR identifies the role of other agencies with jurisdiction over various aspects of the Project. However, it omits any reference to the California Public Utilities Commission (CPUC), which has exclusive jurisdiction over the design and construction of the pipeline. PG&E proposes that the paragraph starting on line 21 be modified to reflect the CPUC's jurisdiction:

S-5

The California Public Utilities Commission (CPUC) has exclusive jurisdiction over the design and construction of the pipeline. The proposed Project would also require approvals and/or review by a number of Federal, State, and local agencies as noted in Section 1.4 - Permits, Approvals and Regulatory Requirements. However, as a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and no local discretionary permits are required for the Project.

Efficient and Cost-Effective Planning **Page 1-3, lines 4-5**

S-6

PG&E suggests the following modification to correct an error in the description of the new pipeline referenced on lines 4-5:

. . . transmission pipeline that extends from Lines 400 and 401 and travels in a ~~north-south~~ east-west direction paralleling County Road (CR) 85 near Esparto to Line 172A . . . S-6 Cont.

Permits, Approvals, and Regulatory Requirements **Page 1-8, lines 28-29**

To clarify what other permits are required for the Project, PG&E requests the following modifications:

> As a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and local discretionary permits are not required for the Project. However, ~~In addition to action by the CSLC,~~ the proposed Project may ~~will~~ require permits or approvals from the following reviewing authorities and regulatory agencies: S-7

Permits, Approvals, and Regulatory Requirements **Page 1-9, line 13**

PG&E is not required to get local reclamation district permits. Therefore, the last bullet point on page 1-9 should be deleted. S-8

SECTION 2.0. PROJECT DESCRIPTION

Wall Thickness and Grades **Page 2-16, lines 2-9**

PG&E proposes the following changes to accurately reflect the design of the pipeline system.

> "The proposed pipeline traverses several different class locations, requiring different wall thicknesses and grades of steel pipe ~~(Grade X-60)~~ designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). The 10-inch DFM would be designed for a MAOP of ~~500 psig to~~ 975 psig. ~~Industry standards for pipeline sections installed via Horizontal Directional Drill (HDD) technology require a pipe diameter to wall thickness ratio (D/t) of 50 or below.~~ Refer to Table 2-2 for pipe wall thickness specifications required in each class location." S-9

Depths to Cover **Page 2-17, Table 2-1**

The proposed depth of the Sacramento River crossing is 80 feet. Therefore, Table 2-1 needs to be corrected to reflect a 35 to 80 proposed depth in the last row on the table (Water Crossings). S-10

Pipeline General Area Class Specifications **Page 2-18, Table 2-2**

PG&E has identified the following errors in the DFM column in Table 2-2: S-11

- The proposed grade of the 10-inch DFM is 52,000, not 60,000.
- The seam type for the 10-inch DFM is Electric Resistance Welded (ERW), not DSAW.
- The percent SMYS at MAOP of the 10-inch DFM is 40.3, not 40.

Aboveground Facilities **Page 2-31, line 18**

S-12

The DEIR needs to be corrected to accurately reflect the fact that the Yolo Junction Pressure Limiting Station will be ten feet in height, not five feet as stated in the DEIR.

Pipeline Right of Way **Page 2-37, lines 1-3; Figures 2-9 and 2-10**

The DEIR correctly describes the 100-foot wide temporary use area (TUA) for the 30-inch pipeline segments. However, the 60-foot wide TUA referenced on the top of page 2-37 should refer to the 10-inch pipeline segments for distribution feeder mains (DFM), not constricted workspaces. Constricted work spaces should be determined on a site-specific basis. Therefore, PG&E suggests the following modifications: S-13

> A 60-foot wide TUA would be used for construction of the 10-inch pipeline segments for the distribution feeder mains ~~in constricted workspaces and would require that excavated soil be transported to an adjacent TUA~~ (see Figure 2-10)."

In addition, Figure 2-9 should be labeled as the configuration for the 30-inch pipeline construction right-of-way. Figure 2-10 should be labeled as the configuration for the 10-inch DFM pipeline construction right-of-way.

Typo **Page 2-37, line 15**

S-14

Change the term "DMF" to "DFM."

Planting in the Right-of-Way **Page ES-2, line 19; Page 2-16, line 27; Page 2-37, line 20; Page 4.1-14, line 4 Page 4.2-22, line 32; Page 4.2-24, line 29**

S-15

PG&E requests that the DEIR be corrected to reflect PG&E's current policy to prohibit planting of deep-rooted plants with 10 feet of the pipeline centerline, not 15 feet as stated in the above-referenced portions of the DEIR.

Staging Areas **Page 2-37, line 26**

The DEIR correctly reflects the fact that the primary staging areas will be in existing industrial and commercial yards. PG&E requests the following modification to the DEIR plans to clarify that staging areas along the Project ROW will be within the 100-foot TUA. S-16

> Staging areas along the Project right-of-way would be within the TUA ~~would generally be approximately 300 feet by 200 feet~~.

Agency Representative at Meeting **Page 2-49, line 8-9**

PG&E requests that the following modification be made to reflect the fact that there will be different types of meetings with various participants. S-17

> Also, PG&E would hold ~~a~~ preconstruction meetings with ~~between~~ permitting entities and ~~the~~ construction crews.

Protective Coatings **Page 2-55, lines 21-22**

PG&E requests that the referenced language be modified as follows to allow the use of protective coatings other than epoxy. S-18

> The pipe sections would be welded together, x-rayed, and a protective abrasion resistant coating ~~epoxy~~ applied to the joints.

Horizontal Directional Drilling **Page 2-55, lines 31-33**

The DEIR states: "The Project pipeline would be installed a minimum of 60 feet underneath the bed and banks of any navigable water body and a minimum of 35 feet below any other feature to be crossed by HDD technology." However, it is unclear which crossings are considered by CSLC to be navigable waterways. PG&E requests that the language in the DEIR be modified as follows: S-19

> The Project pipeline would be installed ~~a minimum of 60 feet underneath the bed and banks of any navigable water body and~~ a minimum of 35 feet below any ~~other~~ water feature to be crossed by HDD technology.

Pipe Buoyancy **Page 2-71, lines 16-18**

The DEIR contains information previously provided by PG&E regarding its design to control buoyancy in the Yolo bypass. However, since that time, PG&E has progressed with its buoyancy control design. PG&E requests the following revision of the language to reflect the new design: S-20

> To address the potential for scour within the Yolo Bypass, cover would be increased from 5 feet to 7 feet. A slurry backfill will be placed in the ditch around the pipeline to a depth of 2 feet above the pipeline (5 feet below grade). The slurry will have a minimum weight of 120/lbs/cubic foot to provide the required downward force to prevent buoyancy. ~~a concrete coating would be applied to provide a downward force of 10 lbs/ft or 2-inch minimum thickness whichever is greater (PG&E 2008).~~

Construction Schedule **Page 2-80, lines 11-23**

PG&E suggests that the information regarding the construction schedule be updated as follows: S-21

> Construction of Line 406 would begin as soon as all agency approvals have been obtained ~~in September or October 2009~~ with the targeted ~~proposed~~ in-service date scheduled for November ~~February~~ 2010. The Line 407 East, Line 407 West, and DFM segments ~~would~~ may be constructed in two ~~different~~ phases as dictated by the

added load on the transmission system. ~~Current projections are that Phase 1, consisting of Line 407 East and the DFM, would be constructed in May 2010 with an in-service date of September 2010. However, PG&E acknowledges that Phase 1 installation may need to occur in advance, as early as 2009, of several road improvement projects associated with developments along Baseline Road and Riego Road. Phase 2, consisting of Line 407 West, is projected to be required in 2012,~~Construction of the Line 407 segments is projected to begin in 2012 ~~but may be required earlier depending upon load growth in the area~~.

Construction would typically occur between 6:00 a.m. and 6:00 p.m., Monday through Saturday, except for the HDD operations, tie-ins, and hydrostatic testing, which may occur around the clock. . . . "

S-21 Cont.

GPS Coordinates **Page 2-83, lines 9-12**

The DEIR reflects information contained in PG&E's application that indicates that PG&E will take GPS coordinates at all pipe welds. Since submitting the application, however, PG&E has refined its GPS plans and requests that the referenced language be modified as follows:

S-22

. . . PG&E would take Global Positioning System (GPS) coordinates periodically along the route and tie the as-built pipeline drawings back to the original survey. Locations with GPS coordinates include tie-ins, angle points, HDD entry and exits points, class location changes, and wall thickness and pipe grade changes ~~at the locations of all pipe welds~~ in order to maintain an accurate location of the proposed pipeline once it is in the ground.

High Consequence Area **Page 2-84, lines 28-34**

The DEIR discusses the steps that must be taken where a pipeline is within a High Consequence Area (HCA). The Department of Transportation regulations (49 CFR 192, Subpart O) sets forth two methods for determining HCAs, and PG&E has utilized method 2 to identify potential HCAs along the Project route. One potential HCA exists along Line 407E at 3700 Riego Rd, Elverta CA (Western Wood Fabricators) and one is confirmed at the Baseline Road Pressure Regulating Station (BRS). Therefore, PG&E suggests that the DEIR be modified as follows:

S-23

Operators are also required to devote additional efforts and analysis in HCAs to ensure the integrity of the pipelines. A potential HCA exists along Line 407 East and one HCA is confirmed at Fiddyment Road. ~~The portions of the Project within Class 3 areas, including Line 407 East and the Powerline Road DFM, would be within an HCA.~~ When HCAs are confirmed, or as population density creates new HCAs, those ~~Certain~~ portions of the Project would be required to be included in PG&E's Pipeline Integrity Management Plan, which provides for the assessment and mitigation of pipeline risks in an effort to reduce both the . . . .

SECTION 4.2 AGRICULTURAL RESOURCES

County Designated Compatible Williamson Act Land Uses **Page 4.2-19, lines 1-8**

S-24

As a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and PG&E is not required to obtain local discretionary permits, including minor

use permits referenced in this paragraph. The first paragraph on page 4.2-19 is in error and should be deleted. S-24 Cont.

SECTION 4.3 AIR QUALITY

Spare the Air Days **Page 4.3-40, lines 19-20 (AMP AQ-11)**

To clarify steps that PG&E will take on "spare the air days," PG&E suggests that this provision be modified as follows: S-25

> On "spare the air" days within each County, PG&E will enact measures to promote carpooling by Project employees and limiting emissions and equipment operation that does not otherwise impede Project progress ~~Contractors will limit operation on "spare the air" days within each County.~~

Greenhouse Gases (GHGs) **Page 4.3-49 to 4.3-52**

The DEIR acknowledges that "[t]he CLSC does not currently have a defined threshold of significance for climate change or GHG emission impacts." (DEIR, p. 4.3-37, lines 17-18.) It calculates the GHG impacts associated with construction and operation of the pipeline (primarily worker vehicles and construction equipment). While it concludes that the operational impacts are "less than significant" (DEIR, p. 4.3-51, line 10), it directs PG&E to purchase carbon offsets equivalent to the project's GHG emissions during construction to achieve a net zero increase. (DEIR, p. 4.3-52, lines 6-10, MM AQ-3.) This analysis regarding the GHG impacts associated with construction is flawed in three ways.

First, the calculation of GHG emissions does not take into account that PG&E's fleet meets new CARB standards for vehicle emissions. As a result, the GHG impacts associated with vehicle use during construction are overstated, and it is unclear whether the proposed mitigation would apply to projected or actual impacts. S-26

Second, although the DEIR acknowledges PG&E's participation in three programs designed to reduce climate change impacts (DEIR, pp. 4.3-49, lines 16-28), it completely ignores the impact of these programs.

Third, there is no basis for the CSLC's assumption that the impacts must be mitigated to achieve a "net zero" impact. The California Public Utilities Commission, which has primary jurisdiction over the design and construction of public utility projects, has not adopted this standard. Moreover, CEQA authorizes a lead agency to impose mitigation only to "substantially lessen or avoid significant impacts on the environment." (CEQA Guidelines, §15041(a).) If an impact is not significant, there is no authority to mitigate.

PG&E understands that there is currently uncertainty among state agencies as to the appropriate way to deal with GHG emissions before CARB's GHG programs are fully implemented. However, PG&E suggests that CSLC adopt the same kind of approach it uses for other environmental impacts. Specifically, it should: (1) calculate the GHG impacts before mitigation measures are applied; (2) calculate the impacts after mitigation; and (3) determine whether those impacts are significant. If not, no additional mitigation should be required. If so, additional mitigation would be appropriate to reduce those impacts to a less than significant level – not to reduce the impacts to zero.

SECTION 4.4 BIOLOGICAL RESOURCES

Dwarf Downingia Status **Page 4.4-21, line 17-18**

PG&E suggests the following modification to the referenced language to reflect the listing status for dwarf downingia: S-27

> Dwarf downingia (*Downingia pusilla)*, a CNPS List 2 species ~~strict endemic of the vernal pool hydrologic regime~~, is a strict endemic of the vernal pool hydrologic regime and an annual member of the bellflower family (*Campanulaceae*).

Presence of Fairy Shrimp **Page 4.4-26 and 4.4-27 (Table 4.4-3)**

The DEIR erroneously concludes that fairy shrimp "(*Branchinecta lynchi*) was not found during any of the wet season surveys and is presumed absent from the project site." In fact, *Branchinecta lynchi* was present in two wetland features during wet season surveys conducted in 2007-2008. In addition, unidentified *Branchinecta sp.* eggs were present in several features during the dry season surveys. Therefore, *B. lynchi* is assumed present in the project area, and the above language should be modified accordingly. S-28

Local Conservation Plans and Policies **Pages 4.4-55, 4.4-86, and 4.4-91**

As a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations. Therefore, the EIR should be modified as follows to reflect the proper jurisdictional status of various local agencies: S-29

Page 4.4-55, lines 5-8.

> Local conservation plans and policies are included below. County General Plan goals, policies, and objectives were also evaluated in preparation of this DEIR; however, due to their length they are appended to this DEIR (see Appendix E-14). Although PG&E is not subject to local conservation plans, these plans and policies are taken into consideration in evaluating Project impacts and mitigation measures.

Page 4.4-86, lines 9-13

> A qualified ecologist shall dictate the following procedures to ensure that they will be consistent with ~~applicable local jurisdiction requirements, such as County Tree Ordinances, and with~~ any additional permit conditions imposed by ~~the local agency as well as~~ CDFG and other state or federal agencies. S-30

Page 4.4-91, lines 4-6

> At that time, a report shall be submitted to ~~the local jurisdiction, and~~ CDFG, if requested, summarizing the results. S-31

Vegetation Clearing **Pages 4.4-81, 4.4-85, and 4.4-94**

The DEIR requires that vegetation be cleared only from areas scheduled for immediate construction work (within 10 days). The intent of the 10-day restriction for clearing vegetation is not entirely clear, but PG&E surmises that it is to minimize the potential for S-32

erosion, sedimentation, and the spread of invasive weeds that could result if soil is left barren for an undue length of time. This risk would only occur during the rainy/wet season. Since most vegetation clearing will take place during the dry season, PG&E suggests that this measure only be applicable for work that may occur during the wet season. In addition, vegetation clearing is often necessary more than 10 days prior to construction. Therefore, PG&E proposes the following modification to replace the 10-day limit with a 30-day limit and to restrict its applicability to the typical wet season of November through April. S-32 Cont.

Page 4.4-81, lines 22-25

Vegetation clearing and/or installation of mats shall be conducted only from areas scheduled for immediate construction work (within 30 ~~10~~ days) and only for the width needed for active construction activities. The 30-day requirement only applies in the wet season (November through April). S-33

Page 4.4-85, lines 26-27

Existing vegetation shall be cleared only from areas scheduled for immediate construction work (within 30 ~~10~~ days). The 30-day requirement only applies in the wet season (November through April). S-34

Page 4.4-94, lines 10-12

Existing vegetation shall be cleared only from areas scheduled for immediate construction work (within 30 ~~10~~ days) and only for the width needed for completion of activities within each active construction area ~~activities~~. The 30-day requirement only applies in the wet season (November through April). S-35

Wetland Avoidance and Restoration **Pages 4.4-81 to 4.4-83 (MM BIO-1a)**

Several of the mitigation measures require flagging, mapping, and/or fencing of sensitive resources found within or near the work areas. In PG&E's experience, it is often more effective and safer for the resource to flag or fence the edge of the limit of work area at an Environmentally Sensitive Zone rather than flag or fence the resource itself. This approach actually causes less resource or buffer area disturbance. We recommend clarifying the following portions of the DEIR to specify that either the resource or the limits of the work area be flagged and fenced in the areas where avoidable resources are to be protected. In addition, since the USACE has determined that active rice fields are considered jurisdictional wetlands, a number of these measures should apply to the natural area wetlands, but would not be appropriate for cropped wetlands or rice fields. To address these issues, PG&E recommends the following clarifications: S-36

Page 4.4-81, lines 6-7

Maximum avoidance of jurisdictional wetlands as determined in consultation with USACE and RWQCB by fencing either the wetlands and appropriate buffer zones that can be avoided or the limits of the work area adjacent to those areas to ensure that no inadvertent encroachment occurs into these areas. S-37

Page 4.4-81, lines 10-11

Consultation with the USACE and RWQCB for any unavoidable wetland impacts, obtaining the appropriate permits, and implementation of the conditions of those permits. S-38

Page 4.4-81, line 16, through page 4.4-82, line 5

Avoidance will consist of fencing any ~~the~~ wetlands that are to be avoided within the ROW, including appropriate buffer zones, to minimize impacts to wetland vegetation types. If construction work areas and/or associated overland travel in wetlands in a saturated or ponded condition is unavoidable, all equipment, vehicles and associated construction materials shall be placed on protective mats to avoid soil compaction, such that they do not make direct contact with the wetland. This requirement is not intended for use in dry soils, where the risk of compaction is low. Vegetation clearing and/or installation of mats shall be conducted only from areas scheduled for immediate construction work (within 30 ~~10~~ days) and only for the width needed for completion of activities within each active construction area ~~activities~~. The 30-day requirement only applies in the wet season (November through April). Mats are not required for work in cropped areas (e.g., rice fields). S-39 Mats shall be removed immediately following completion of activities within each active construction area. During pipeline construction, the 12 inches of topsoil shall be salvaged (or less where topsoil is less than 12 inches deep), stored in an upland location, and replaced wherever the pipeline is trenched in wetlands. Prior to permit issuance and final design, project construction plans shall depict appropriate measures for topsoil protection and storage that will allow survival of existing seed within the topsoil. Topsoil shall be placed at the surface on top of fill material and not be used to backfill the trench, and excavated trench spoils or excess fill shall be placed on top of the pipeline under topsoil and not dispersed onto the surface of the ROW. Implementation of these measures prior to and during construction will be supervised and verified by the Environmental Monitor (see APM BIO-6).

Page 4.4-82, Lines 21-23

A discussion demonstrating how maximum practicable avoidance has been accomplished and why the wetlands proposed to be impacted cannot be avoided. S-40

Page 4.4-82, Lines 24-30

Methods proposed for restoring the affected wetlands, including topsoil preservation (inclusive of restoration of an impermeable layer, i.e., hardpan, if approved) and backfilling, soil and grade preparation such that there is no change in pre-construction contours, regionally native seed and/or plant materials to be used and installation methods, and maintenance measures, including weed control (does not apply to rice fields and cropped wetlands). S-41

Page 4.4-82, Lines 31-32

Minimum 1:1 replacement ratio (in-kind ~~in-land~~, on-site) for area and function of temporarily damaged wetland areas. S-42

Page 4.4-83, lines 1-7

A minimum five-year monitoring program with detailed success criteria regarding species cover, species composition, species diversity, wetland area and depth as compared with pre-construction conditions documented prior to construction by a qualified biologist such that the function of the affected wetland and hydrology is fully restored, the methods and results of which shall be described in the Plan. (These measures and the monitoring program below do not apply to work in rice fields or other cropped wetlands, since those will be returned to their agricultural crops.) S-43

Page 4.4-83, Lines 17-21

Detailed contingency measures in case of restoration failure, as determined by the responsible agencies following the five-year monitoring period, requiring additional off-site wetland creation at a minimum ratio of 2:1 for created wetland acreage or as otherwise determined in the USACE 404 and RWQCB 401 water quality certification. S-44

Riparian Avoidance and Restoration **Pages 4.4-85 to 4.4-87 (MM BIO-1c)**

PG&E recommends the following modifications to reflect the fencing practices discussed above in BIO-1a, and to clarify that plants used in restoration efforts should be compatible with preconstruction conditions. (Pre-construction conditions may include undesirable non-native species. and therefore matching those conditions will not always be appropriate.) S-45

Page 4.4-85, lines 5-6

Fencing limits of work where riparian vegetation is adjacent to work areas to prevent impacts S-46

Page 4.4-85, lines 11-13

Riparian habitat within the ROW shall be identified by a qualified ecologist; mapped on construction plans; and where avoidable, fenced prior to construction/ S-47

Page 4.4-86, lines 31-32

Proposed native tree and shrub species that are compatible with pre-construction conditions. S-48

Rare Plant Avoidance **Pages 4.4-120 (MM BIO-5)** S-49

PG&E suggests the following modifications to be consistent with the fencing practices discussed above:

Lines 13-14

~~Flagging, mapping, and fencing to protect any special-status plant species within the 200-foot-wide study area during construction.~~ S-50

Lines 26-31

Any rare plant species within the study area (including the 100 foot-wide right-of-way and a 50 foot-wide buffer zone on each side of the right-of-way, work areas, staging areas, and/or launcher/receiver stations) will be flagged~~,~~ and accurately mapped on S-51

construction plans, and fenced along the edge of the construction working limits to protect the area occupied by the species during construction, per APM BIO-3. S-51 Cont.

Vernal Pools and Swales **Page 4.4-79, lines 25-28**

PG&E has committed to avoiding all vernal pools and swales during construction by using HDD or bore crossing methods to install the pipeline under these features, or by narrowing the ROW to avoid these features. Direct surface impacts to vernal pools or swales are not anticipated to result from clearing, grading, or trenching activities. Therefore, PG&E suggests deleting the reference to vernal pools and swales as follows: S-52

> . . . however, ~~several vernal pools and swales and~~ numerous seasonal wetlands, riparian wetlands, and other jurisdictional water features would be disturbed by trenching during project construction.

Review of Grading Permit **Page 4.4-84, lines 1-3**

As PG&E is not required to obtain discretionary local permits, including grading permits, from county agencies, although it is required to obtain ministerial grading permits. Therefore, the referenced language should be modified as follows: S-53

> Prior to construction, responsible agencies (including the RWQCB, CDFG, and USACE~~, and County agencies~~) shall evaluate soil and grade restoration measures to be implemented along the ROW.

Invasive Species Control Program **Page 4.4-93, lines 19-21 (MM BIO-3)**

PG&E agrees and commits to ensuring that vehicles used in pipeline construction off maintained roads will be cleaned prior to being used on the project, and again if taken from the project for use off-road prior to returning to the project. However, the requirements for vehicle steam-cleaning at each county border are impractical and unnecessary. There are no existing steam cleaning stations set up at these borders, nor would it be necessary or helpful to re-clean vehicles for instance at the Sacramento/Yolo County border where similar vegetation and crops are found to either side of the border, and vehicles will be moving continuously along the ROW across that border. Therefore, MM BIO-3 should be modified as follows: S-54

> Prior to Project initiation, all construction equipment shall be ~~steam~~ cleaned ~~before the equipment crosses any county border~~ to remove potential soil and/or water-borne contaminants before the equipment comes onto the Project and again if the equipment is used off-road before returning to the Project.

Typo **Page 4.4-93, lines 33-35**

The referenced provision should be modified as follows: S-55

> Weed management procedures will be developed and implemented to monitor and control the spread of ~~week~~ weed populations along the pipeline.

Weed-free Certification **Page 4.4-94, lines 7-9 (MM BIO-3)**

In MM BIO-3, the DEIR requires: "Fill material, soil amendments, gravel, etc. required for construction/restoration activities on land shall be obtained from a source that can certify the soil as being 'weed free.'" This mitigation measures is not feasible. There are no existing weed-free certification programs for soil or gravel, other than nursery potting soil. Since fill material will be from on-site re-use of excavated soils, coming from soil stockpiled for a given area, this measure is not needed nor practical, since the existing soils are not weed-free and should therefore be deleted. S-56

Valley Elderberry Longhorn Beetle **Page 4.4-102, lines 1-7 (MM BIO-4a)**

MM BIO-4a identifies mitigation measures to avoid or reduce impacts to the Valley Elderberry Longhorn Beetle. However, because this issue will be addressed in the permit from the U.S. Fish and Wildlife Service, PG&E suggests that the DEIR be modified as follows to allow PG&E and USFWS to determine the exact buffer zones that will be required in Temporary Use Areas. In addition, the proposed changes to the fencing requirements will be consistent with mitigation measure BIO-1a, discussed above, regarding wetland avoidance.

> Elderberry shrubs shall be avoided to the greatest extent feasible. According to the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999), complete avoidance is assumed when a 100-foot (or wider) buffer is established and maintained around elderberry shrubs. PG&E's biological surveys indicate that the pipeline route will not come closer than 30 feet to any elderberry shrub, and the buffer zones in Temporary Use Areas will be coordinated with the U.S. Fish and Wildlife Service. For all shrubs that would be avoided, the following measures are required: S-57
>
> 1. Buffer areas for elderberry shrubs will be fenced along the edge of construction work limits. The fencing shall be located in buffer zones coordinated with the USFWS. ~~Protective fencing shall be erected around each elderberry shrub that would be avoided. The fencing shall be located no greater than 100 feet from the greatest dripline of the shrub~~.

Swainson's Hawk Monitoring **Page 4.4-104, lines 8-13**

The DEIR requires construction to be halted within 0.25 miles of any nesting Swainson's hawks until the young have fledged. PG&E will obtain an Incidental Take Permit under section 2081 of the Fish and Game Code from the CDFG that will cover the potential for incidental take of Swainson's hawk. Therefore, PG&E suggests that the language be replaced as follows: S-58

> If nesting Swainson's hawks are found~~, project activities~~ within 0.5 ~~0.25~~ miles of the project, PG&E will implement any necessary protection measures as required by the CDFG in the Section 2081 Incidental Take Permit, to prevent nest abandonment or forced fledging as a result of Project activities ~~will be delayed until the young have fledged. Swainson's hawk nest sites within 0.5 mile of active construction will be monitored by a qualified biologist to evaluate whether the construction activities are disturbing nesting hawks~~.

Construction Windows in Mitigation Lands — **Page 4.4-105, lines 1-3 (MM BIO-4b); Page 4.4-105, lines 10-12 (MM BIO-4b); Page 4.4-105, lines 15-17 (MM BIO-4c); Page 4.4-105, lines 26-29 (MM BIO-4c)**

The DEIR limits construction activity in the Natomas Basin mitigation lands and the Sacramento River Ranch Conservation Bank mitigation lands to the period November through February when Swainson's hawk is not present. However, construction within giant garter snake habitat is limited to the period between May 1 and October 1. (DEIR, page 4.4-68, lines 6-9.) Since the two habitats may overlap, PG&E cannot possibly comply with the construction windows for both species. However, reverting to Alternative Option H, as suggested on page 4.4-105, lines 10-12 and 26-29, is not a viable option and may even increase impacts to Swainson's hawks and other nesting birds; as noted on page ES-10, Option H would result in an increase in the number of trees, wetlands, and riparian woodlands that would be impacted. S-59

Because mitigation for the protection of nesting Swainson's hawks is addressed in MM BIO-4a, the construction windows for Swainson's hawk is unnecessary and requests that the provisions in MM BIO-4b and MM BIO-4c referenced above be deleted.

Rare Plant Avoidance — **Page 4.4-120, lines 15-17 (MM BIO-5)**

PG&E is not doing any roadway construction as part of this project. Therefore, the following bullet is confusing and should be deleted. S-60

> ~~Limiting all proposed roadway construction to the existing roadway surface(s) where adjacent special-status plant species occur.~~

SECTION 4.5 CULTURAL RESOURCES

Area of Potential Effect — **Pages 4.5-4 through 4.5-39**

This section of the DEIR repeatedly uses the phrase "Area of Potential Effect." This is a term that is typically seen in documents referring to the National Historic Preservation Act term. To be consistent with other CEQA documents, PG&E recommends using the phrase Project Area or Study Area instead. Following are specific cites to places in the DEIR that use this language: S-61

page 4.5-4, line 5
page 4.5-8, lines 20-21
page 4.5-21, line 31
page 4.5-22, lines 10, 13- 14, 17
page 4.5-23, line 33
page 4.5-24, line 16
page 4.5-25, line 15
page 4.5-28, line 24
page 4.5-35, line 31
page 4.5-36, line 5
page 4.5-39, line 4

Cultural Resource Studies — **Page 4-5.1, line 10**

This section states that three separate cultural resources studies were completed for the project, but it goes on to list six different studies. PG&E recommends changing the word "Three" to "Several" at the beginning of line 10. S-62

Field Surveys **Page 4.5-3, lines 21-29**

This section of the DEIR discusses pedestrian field surveys, but it does not address how sites were recorded. PG&E suggests the following revisions to provide a more complete and accurate description of the process:

> All of the field surveys were conducted by qualified archaeologists meeting the Secretary of the Interior's Standards. Newly recorded resources were documented on California Department of Parks and Recreation form DPR 523 (1998), following *Instructions for Recording Historical Resources* (Office of Historic Preservation 1995). Any previously documented cultural resources within or immediately adjacent to the Project study area ~~Area of Potential Effects (APE)~~ were revisited during the surveys to confirm their locations and assess their present status. In some cases, the sites had been destroyed by modern development; in other instances, they were found not to extend into the Project area. Existing site records were updated on California Department of Parks and Recreation form DPR 523, as necessary. If existing documentation was adequate, or if the resources had been previously evaluated, the resource record was not updated. Historic linear features were recorded only if they possessed integrity; such features lacking integrity (such as modern roads overlain on historic-period roads, or upgraded power lines and railroad grades) or destroyed altogether were not recorded. ~~Ten new site records were created for ten buildings recorded during the architectural survey.~~"

S-63

Public Consultation **Page 4.5-11, line 16, to page 4.5-12, line 3**

This section regarding public consultation appears to be misplaced in the Results section; PG&E suggests that it be moved to the methodology section.

S-64

Eagle Hotel **Page 4.5-36, lines 13-19 (APM CR-3)**

PG&E suggests the following modifications to this language to provide more specific information regarding the geo-archaeological study and monitoring activities:

> PG&E will complete a geo-archaeological study of areas identified as sensitive for buried resources, as well as backhoe testing at ~~test~~ the reported location of the historic Eagle Hotel, and other areas identified as sensitive for buried archaeological remains identified by a geo-archaeologist, prior to construction ~~by backhoe trenching~~. All trenching will be supervised by a qualified professional archaeologist and/or geo-archaeologist. If the study is not completed by construction, an archaeologist will monitor any ground disturbing activities in these areas. If resources ~~any buried materials~~ are identified during either the geo-archaeological study or during construction ~~uncovered~~, work will stop temporarily at that location, until a qualified archaeologist ~~the monitor~~ can assess the find and determine the appropriate action.

S-65

Impacts to Paleontological Resources **Page 4.5-40 and 4.5-41**

In the Project Description of the DEIR, it states that CSLC has identified mitigation measures throughout section 4 that are "required to reduce potentially significant impacts to less than significant levels." (Page 2-81, lines 4-5.) In most cases, the DEIR states that the mitigation measures would reduce the impacts to less than significant. However, in the cultural

S-66

resources section, the DEIR does not make an explicit statement to that effect. This oversight can be corrected by adding the following clarifying language: S-66 Cont.

Page 4.5-40, lines 20-21 (PALEO-1)

. . . These tasks would enhance subsequent evaluation and curation by the chosen repository. With incorporation of MM PALEO-1, impacts to potential resources would be less than significant. S-67

4.5-41, lines 25-26 (PALEO-2)

. . . be properly curated and available to present and future generations of research scientists and students. With incorporation of MM PALEO-2, impacts to potential resources would be less than significant. S-68

Impacts to Unknown Cultural Resources **Page 4.5-43, lines 5-21 (MM CR-1)**

PG&E has already surveyed most of the alternatives where it had access. In addition, implementation of APMs CR-1 through CR-5 clearly identify steps to be taken if any unknown resources are identified. Therefore, PG&E suggests the following revisions to MM CR-1:

Alternative Option Pre-Construction Cultural Resource Surveys. If an Alternative Option becomes the preferred route, to ~~To~~ ensure protection of undiscovered cultural resources, pedestrian field surveys will be conducted for areas ~~all Alternative Options~~ that were not included in the ~~original~~ field survey efforts. The surveys will be conducted by qualified archaeologists meeting the Secretary of the Interior's Standards and utilizing appropriate transect intervals, typically 15 to 20 meters, walked in a zigzag pattern to ensure complete coverage of the Alternative Options ~~Area of Potential Effects (APE)~~. Previously recorded cultural resources located within or immediately adjacent to the Alternative's ~~APE~~ would be re-located and their current condition described and recorded on Department of Parks and Recreation (DPR) update forms. Any previously unknown cultural resources discovered during the course of the Alternative Options surveys would be evaluated for historic significance if the resource will be impacted by the Project ~~and recorded on appropriate DPR forms~~. In cases where significant impacts would be unavoidable, resource specific, appropriate mitigation would be required to reduce these impacts to less than significant levels as described in APMs CR-1 through CR-5. S-69

Impacts of Alternatives **Page 4.5-43, lines 22-23; page 4.5-44, lines 3-4 page 4.5-45, lines 25-26; page 4.5-47, lines 3-4 page 4.5-47, lines 19-20; page 4.5-48, Table 4.5-2**

On page 4.5-43 line 5, the DEIR describes pre-construction surveys to be conducted for all alternative options not already surveyed, and concludes that with implementation of the APMs and CR-1, the impact for Options would be less than significant (page 4.5-42, line 29). The DEIR concludes that the cultural resource impacts of Options A, B, D, E, and H would be greater than under the proposed project. However, the basis for this conclusion is unclear since surveys have not been conducted for these options. The DEIR also indicates that Options F, I, and J would have fewer cultural/historic impacts than for the proposed Project. However, since the proposed Project does not have any known cultural resources S-70

impacts after mitigation, it is unclear why these three options would have even fewer impacts. PG&E recommends that the referenced statements be deleted and that Table 4.5-2 be updated to reflect these changes. S-70 Cont.

SECTION 4.6 GEOLOGY AND SOILS

Earthquake Faults **Page 4.6-39, line 3, to page 4.6-40, line 8 (MM GEO-1)**

The DEIR acknowledges that the pipeline is not in designated earthquake fault zones (page 4.6-23, lines 24-27) and that that the area has a historic record of low to moderate seismicity (page 4.6-39, lines 4-5). However, Mitigation Measure GEO-1 would require further seismic field investigations to evaluate surface fault rupture hazard and the development of a computer model to evaluate pipeline design. The DEIR overlooks the fact that the CPUC has sole and exclusive jurisdiction over pipeline design standards. Moreover, the requirement for further field studies appears to be based on a misunderstanding of the potential surface impacts of these types of faults. The main seismic design concerns for this pipeline are potential stresses due to traveling wave effects and potential strains due to liquefaction-induced permanent ground displacements, not displacement on buried faults at depth.

The DEIR notes that Willows fault is not considered "active" or even "potentially active." (See page 4.6-23, lines 1-5.) It also notes that the Dunnigan Hills and Great Valley faults do not reach the surface. (Page 4.6-38, lines 23-25.) As such, these faults, at most, would be associated with broad tilting of the land surface rather than discrete surface fault rupture. Modern pipelines are designed to withstand such distributed deformation, and further field investigations is unlikely to yield any benefit.

As stated elsewhere in the DEIR (page 4.6-23, lines 19-27), and illustrated on Figure 4.6-4, the ground shaking hazard for the pipeline alignment is based on the probability of earthquakes on all faults in the region, not the three faults crossed by the pipeline. Any pipeline route proposed in this area would experience similar ground shaking hazard. Therefore, PG&E proposes the following changes to the language in Impact GEO-1, Mitigation Measure GEO-1, and the supporting rationale to specify the type of analysis that should be performed: S-71

> Due to the regional tectonic setting ~~proposed pipeline crossing of the three faults~~, the Project area is subject to ground shaking due to earthquakes. Historically, the area has experienced a low to moderate seismicity. The Project could be exposed to ground motion due to a seismic event or any resulting phenomenon such as liquefaction or settlement that could substantially damage structural components.
>
> MM GEO-1 Site Specific Seismic Analysis ~~Field Investigation~~
>
> To determine the traveling wave effects PG&E will develop calculations for the pipe bending stresses due to traveling seismic waves in long straight runs of the pipeline using industry accepted procedures (American Lifelines Alliance "Guidelines for the Design of Buried Steel Pipe", PRCI "Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines, and ASCE, "Guidelines for the Seismic Design of Oil and Gas Pipeline Systems").

To determine the effect of liquefaction, PG&E will undertake buried pipeline deformation analysis to assess the effects of liquefaction-induced permanent ground displacements for various scenarios. The various scenarios will be dependent on soil conditions and depth of cover, pipe-soil spring properties, amplitude and distribution of the ground displacement profile due to liquefaction and the location of any significant geometry change features along the alignment in the areas of interest. The maximum pipe tension and compression strains developed in the analysis models will be compared to appropriate strain limits (PRCI, "Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines") to develop a demand vs. capacity assessment.

If the analysis yields results below the designed pipelines specified minimum yield strength, the analysis will be summarized and concluded. If the stresses are above the SMYS, further review will be required. Further review may include reviewing the current pipeline design criteria or performing further site-specific seismic field investigations.

~~PG&E shall perform a site-specific seismic field investigation as part of its detailed design phase for the proposed Project. The field investigation would determine whether any engineering/design solutions are needed to mitigate against any hazards of seismic displacements along the fault crossings. If the field investigation determines the presence of any active faults in project location, then the following shall be completed:~~

S-71
Cont.

~~PG&E shall determine the engineering/design solutions that are appropriate to mitigate against the hazard of seismic displacements along any active faults.~~

~~PG&E shall develop a computer model to determine the soil-pipe interaction with the proposed applied displacement. The model would evaluate various combinations of pipe wall thickness and pipe grade to determine which pattern yields the best performance under displacement conditions. The design shall also incorporate additional methods as necessary.~~

PG&E shall design the proposed pipelines and any other proposed facilities using ~~industry~~ CPUC standards for seismic-resistant design in liquefaction-prone areas.

PG&E shall provide a copy of the final design, as well as any related geotechnical information, to the CSLC before construction of the proposed Project.

A certified engineering geologist shall observe the construction excavation in the vicinity of the fault crossings to verify the presence or absence of surface deformation ~~that the design assumptions are valid and the design measures (if any) are centered in the correct location~~.

Rationale for Mitigation

~~The seismic field investigation would determine whether engineering/design solutions are needed to mitigate against any hazards of seismic displacements along the fault crossings. Any necessary~~ Standard industry design features would ensure strength and ductility of the pipeline facilities in order to reduce the potential impacts associated with displacement caused by surface faulting and liquefaction.

Typo **Page 4.6-5, line 25**

S-72

. . . feature created by the displacement of this unit extends to within less than ~~then~~ 2 miles of. . .

Typo **Page 4.6-19, lines 13-14**

S-73

. . . these stresses cause strain to build up in the earth's crust ~~curst~~ until enough strain has built up to exceed the strength along a fault and cause ~~case~~ a brittle fracture. The slip . . .

Typo **Page D.4.6-23, line 7**

S-74

. . . discontinuous tonal ~~total~~ lineaments near the base of the northeast-facing escarpment of . . .

SECTION 4.7 HAZARDS AND HAZARDOUS MATERIALS

System Safety **Pages 4.7-32 to 4.7-37 (MM HAZ-2)**

The DEIR uses a statistical approach to analyze the potential impact of serious injury and fatalities due to project upset, but the accuracy of the results is highly dependent on the underlying assumptions. PG&E has contracted for an independent review of the DEIR's System Safety and Risk of Upset Report, which is attached as Appendix A. This report finds that the CSLC's risk assessment to be generally credible, but it identifies some data inconsistencies and some statements that appear to be in error. PG&E suggests that CSLC and its consultant review the attached report and rerun the risk calculations on Table 4.7-5 to reflect these comments.

The DEIR references a protocol developed by the California Department of Education to perform a risk assessment for schools to evaluate the risk associated with PG&E's Project. (DEIR, page 4.7-32, lines 16-17.) However, this approach is not widely accepted in the pipeline industry because it is not suited for use with a linear facility. The Office of Pipeline Safety, Department of Transportation (DOT) Pipeline and Hazardous Materials Safety Administration (PHMSA), which has primary jurisdiction over safety standards for pipelines, uses a population density approach to establish design standards. PG&E has designed the Project to meet federal standards and strongly believes that those standards are sufficient to ensure public safety.

S-75

In addition, the DEIR uses DOT reportable incidents to determine the frequency rate of various types of incidents. (DEIR page 4.7-6, lines 8-30.) However, this approach does not adequately take into account the specific attributes of the proposed project. Incidents reported to the DOT include all types and vintages of transmission pipelines. Advances in construction materials and techniques, such as modern coatings and radiographic inspection of welding, as well as improvements in cathodic protection monitoring and integrity management plans, render PG&E's proposed project much less susceptible to risk. While the DEIR recognizes the advantages of modern pipelines, it is not adequately reflected in the calculation of risk. In the absence of data sufficient to quantify the difference in incident frequencies based upon pipeline attributes, it would fall to reason that the proposed modern pipeline would far exceed the national average for incident rates of $1X10^{-5}$

fatalities per mile year. Yet the result of the study is $6.1X10^{-5}$, which is roughly 6 times greater then the national average.

For example, in addition to the pipeline inspection frequencies listed in Table 4.7-7, PG&E will install remote monitoring of cathodic protection potentials at approximately one-mile intervals along the route. This will provide real time data of the cathodic protection system and allow for a timely response to make corrections. This application of technology is very recent. The risk of incident due to corrosion utilized in the DEIR's analysis should be significantly reduced when applied to the proposed project since the vast majority of the pipelines in the data set would not have remote CP monitoring capability. S-75 Cont.

Determining High Consequence Area **Pages 4.7-14 and 4.7-15**

PG&E requests that the DEIR be clarified as follows to reflect that PG&E has adopted method two for determining High Consequence Areas: S-76

Page 4.7-14, lines 13-14

> The HCAs may be defined in one of two ways. Both methods are prescribed by 49 CFR 192.903. PG&E adopts method two (Potential Impact Circle) as its chosen method for determining HCAs in relation to its transmission system. S-77

Page 4.7-15, lines 6-7

> In the second method (PG&E's adopted method), an HCA includes any area within a potential impact circle that contains: S-78

Pipeline Design Requirements **Page 4.7-18, lines 10-20**

As a CPUC-regulated public utility, PG&E must comply with state and federal pipeline design requirements and is not bound by other guidelines. Therefore, PG&E requests that the above-referenced language be deleted from the DEIR. S-79

Emergency Plans **Page 4.7-31 (MM HAZ-1)**

As written, this mitigation measure would require clearing 25 feet outside of the permanent right-of-way and the temporary use area. In addition, minor corrections need to be made to the referenced operational stations. PG&E recommends correcting this mitigation measure as follows: S-80

Lines 11-13

> Maintain all areas clear of vegetation and other flammable materials for at least a ~~50~~ 25-foot-radius of any welding or grinding operations, or the use of an open flame. S-81

Line 27-29

> Require the contractor to use dedicated fire watch during all hot work within the existing operational stations (e.g., ~~Concord~~ Capay or ~~Sacramento~~ Yolo Station). S-82

Pipe Grade **Page 4.7-36, lines 9-12**

The DEIR should be corrected as follows to reflect the correct pipe grade:

S-83

> . . . A large proportion of the proposed pipeline would consist of 0.375-inch-wall thickness steel pipe (Grade X-~~60~~ 65) designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). . . .

Corrosion Mitigation **Page 4.7-37, lines 12-17 (MM HAZ-2a)**

PG&E strongly disagrees with the requirement to perform a baseline smart pig inspection within the first six months of placing the pipeline into operation. PG&E's Integrity Management plan, in full compliance with the State of California's General Order 112E and 49 CFR Part 192.921 Subpart O, states that newly installed pipe that are HCA's or newly identified HCA's must be scheduled for assessment within 10 years from the date the pipe is installed or the new HCA identified. For new pipe, a post-installation pressure test per subpart J of 192 should be used as the baseline assessment. Therefore, PG&E proposes the following modification;

S-84

> PG&E shall prepare and implement an Operation and Maintenance Plan in accordance with the requirements in Title 49 CFR part 192. The plan shall include a post installation pressure test per 192 subpart J ~~Within the first 6 months of placing the pipeline into operation, PG&E shall conduct a baseline internal inspection with a high resolution instrument (smart pig) of the pipeline~~ in order to obtain baseline data for the pipeline.

Corrosion Mitigation **Page 4.7-37, lines 18-23 (MM HAZ-2a)**

PG&E takes exception to this section of MM HAZ-2a as it relates to baseline inspections and intervals. The DEIR's proposed inspection requirements are unwarranted under the federal law cited by the DEIR in their request for ILI inspections. Additionally, by focusing limited state authorized funding for discretionary pipeline inspections on our newest pipeline, the DEIR's proposal will have the unintended consequence of increasing risk on the rest of our transmission system.

The proposed requirements are unwarranted because there is no requirement in the cited 49 CFR Part 192 to perform regular subpart O assessments of pipelines in non HCA areas. There is no requirement in 49 CFR Part 192 to perform assessments of HCA area piping within 6 months of identification of an HCA. There is no requirement in 49 CFR Part 192 to perform an assessment within 6 months of another assessment (PG&E's pressure testing of the line prior to placing it into service will meet the assessment requirements of 49 CFR Part 192) It is a violation of 49 CFR Part 192 to select an assessment technology for HCA assessments without regard for the potential threats as the DEIR proposes. 49 CFR §192.921 requires "An operator to select the methods best suited to address the threats identified to the covered segment."

S-85

Only a few very small areas around the proposed pipelines meet the requirements of high consequence areas as defined by 49 CFR §192.903 method 2. Other inspections of this pipeline are discretionary. Non-mandatory inspections of at risk lines are authorized by the state through a program that focuses on the most at risk pipelines within the PG&E system. The program funding is also authorized by the state, but it is not unlimited. These brand new line pipelines are clearly and obviously not the most at risk lines within the PG&E system. By

using the limited funding available for non mandatory inspections to assess brand new pipelines, the DEIR is increasing the risk of failure for older, more at risk pipelines. S-85 Cont.

Installation of Automatic Shutdown Valves Page 4.7-38, lines 10-20 (MM HAZ-2b)

The proposed mitigation measure requires PG&E to install Automatic Shutdown Valves in three locations. PG&E has evaluated the use of remote control valves and automatic shut-off valves (RCV-ASV) as required by code section (§192.935(c)) for any high consequence areas, which states:

> (c) *Automatic shut-off valves (ASV) or Remote control valves (RCV).* If an operator determines, based on a risk analysis, that an ASV or RCV would be an efficient means of adding protection to a high consequence area in the event of a gas release, an operator must install the ASV or RCV. In making that determination, an operator must, at least, consider the following factors—swiftness of leak detection and pipe shutdown capabilities, the type of gas being transported, operating pressure, threat of potential release, pipeline profile, the potential for ignition, and location of nearest response personnel.

After completing the review, PG&E agrees that installing such valves may be an efficient means of adding protection. However, PG&E strongly believes that using RCV's rather the ASV's is a better approach. Use of ASV's does not yield any additional protection beyond that realized by RCV's, and ASV's pose a concern of an unintended closure, which could lead to greater safety and reliability problems. S-86

Lines 406 and 407 are part of a transmission pipeline network, which experiences a wide range of flow and pressure variations during normal operations. Since an ASV's are programmed to operate based upon flow and or pressure variations, the ASV could operate during normal conditions, causing an unplanned outage of customers in Yolo, Sacramento, El Dorado, Placer, Sutter, Yuba, and Nevada counties served by the proposed project. Large outages present the threat of customers relighting their own pilots, which could result in higher risks resulting from improper re-lights by customers

Additionally, activation of an ACV limits the response scenarios available to PG&E. With RCV's, PG&E personnel can lower the operating pressure of the pipeline to reduce the threat of damage while activating alternative supplies. PG&E can also provide temporary supplies downstream of the incident that could support customers, and then shut down the line after these supplies are in place. If the pipeline must be shut down, deferring this shutdown for a short period of time is sometimes prudent so that customers can be shut down in an orderly and safe manner.

Based upon the above, PG&E suggests the following changes.

> PG&E plans to install remote operated valves at the Capay Station and the Yolo Junction Station, which would help to control the flow of gas into Lines 406 and 407. PG&E shall install ~~automatic~~ remote operated shutdown valves in three locations: Power Line Road MLV Station No. 752+00 (which includes the Riego Road Regulating Station), Baseline Road/Brewer Road MLV Station No. 1107+00, and Baseline Road Pressure Regulating Station No. 1361+00. These ~~automatic~~ remote operated shut

down valve locations would enhance public safety protection in the planned populated areas, which include schools and other existing and planned developments. S-86 Cont.

SECTION 4.8 HYDROLOGY AND WATER QUALITY

Unanticipated Release of Drilling Fluids **Page 4.8-18, line 17 (MM HWQ-1)**

The DEIR requires PG&E to monitor turbidity downstream of the drill site. PG&E is required to obtain a permit from the Regional Water Quality Control Board, which will specify the required monitoring. Therefore, PG&E suggests the following modification to this mitigation measure: S-87

> Monitor water quality including turbidity in accordance with applicable Regional Water Quality Control Board permits. ~~downstream of the drill site~~

Unanticipated Release of Drilling Fluids **Page 4.8-18, lines 25-26 (MM HWQ-1)**

The DEIR requires PG&E to use non-toxic fluorescent dye in the drilling mud to allow easier identification of frac-outs." However, drilling fluid is often used by farmers as an additive to their soils, and the addition of fluorescent dye will render the drilling fluid unusable to the farmers. Therefore, PG&E requests that this requirement be deleted. S-88

Verify Well Locations **Page 4.8-20, lines 18-31 (MM HWQ-2)**

The DEIR contains a mitigation measure to protect the supply of water in the vicinity of construction. PG&E suggests that this mitigation measure be modified as follows to enable PG&E to use a professional hydrogeologist to identify wells that need to be tested.

> Prior to construction of the proposed Project, well locations within 200 feet of the excavation, construction staging areas, and aboveground facility locations shall be verified by PG&E through field surveys to determine if private water wells and water pipelines are currently in use and if their area of influence intersects the proposed Project site. This survey will be conducted by a licensed professional Hydrogeologist, who will determine any potential impacts from construction. Based on his professional opinion, wells will be tested as needed. ~~With the landowner's permission, PG&E shall test the wells to determine the baseline flow conditions and monitor these wells during construction of the proposed Project.~~ If, through monitoring, it is determined that Project construction is affecting well production, PG&E shall cease construction activities or arrange to supply water at the well location and consult with the landowner. Surveys shall be conducted by PG&E prior to construction to ensure that any unidentified springs are avoided during construction. S-89

Flood-Proof Facilities **Pages 4.8-21, line 23, to 4.8-22, line 2 (HWQ-3)**
Page 4.8-34, lines 30-34; Page 4.1-13, lines 15-18

The DEIR requires PG&E to place any pump stations and valve housing that are located within the 100-year flood zone at least 1 foot above the 100-year storm floor profile level. Because the stations have been designed to prevent an overpressure of the pipeline system in the event of a flood, PG&E requests that the requirement for elevating structures be S-90

deleted. The text of the HWQ-3 should be modified, along with corresponding changes in chapter 4.1: S-90 Cont.

Pages 4.8-21, line 23, to 4.8-22, line 2

. . . Mitigation is proposed below to flood-proof any structures proposed to be constructed within a 100-year floodplain. Both proposed structures would be no more than 10 feet in height ~~without the flood-proofing. Flood-proofing would require the structures to be raised approximately 1 foot above the 100-year storm flood profile level~~.

S-91

Mitigation Measures for Impact HWQ-3: 100-Year Floodplain

MM HWQ-3 Flood-Proof Pump Houses Within 100-Year Floodplain. If any structures (pump stations, aboveground valve housing) associated with the buried pipeline are placed within the 100-year flood zone, the structure shall be "flood-proofed" in their ~~foundation~~ design ~~and raised in elevation to a minimum of 1 foot above the 100-year storm flood profile level,~~ to reduce the risk that they would be damaged during such an event.

Page 4.8-34, lines 30-34

. . . MM HWQ-3 would require the flood proofing of any structures associated with the above ground stations~~, including but not limited to, the elevation of structures to 1 foot above the 100-year storm flood profile level~~. Implementation of MM HWQ-3 in both the proposed project and Option H would reduce impacts to less than significant. S-92

Page 4.1-13, lines 15-18

Regulating Station and the Powerline Road Main Line Valve structures would be constructed within the 100-year floodplain and would be no more than 10 feet in height ~~without the flood-proofing. The mitigation requires that the structures be raised approximately 1 foot above the 100-year storm flood profile level~~. S-93

Thank you for the opportunity to comment on this DEIR. If you have any questions or would like to discuss these comments please contact me at your convenience.

Sincerely,

Chris Ellis, AICP
Principal Planner
Pacific Gas and Electric Company

Enclosure

Kiefner & Associates, Inc.

June 12, 2009

Mr. Scott Clapp
Gas Transmission Systems
130 Amber Grove Drive, Suite 134
Chico, California 95973

Re: Review of EIR for PG&E Lines 406 & 407

Dear Mr. Clapp:

In accordance with your request, I have reviewed certain documents that are part of the Draft Environmental Impact Report (EIR) for Pacific Gas & Electric (PG&E) Lines 406 and 407 proposed for construction between Esparta, Yolo County and Roseville, Placer County, CA. Lines 406 and 407 are to be constructed from 30-inch OD line pipe and will transport natural gas at a pressure of 975 psig. The pipeline route will cross primarily Location Class 1 (rural) areas, although it will also traverse Location Class 2 and Class 3 areas having greater amounts of development in the vicinity of the pipeline. The Location Classes are determined by the amount of land development in the vicinity of the pipeline as defined by Federal pipeline regulations contained in Code of Federal Regulations Title 49 – Transportation, Part 192 – Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards (49, CFR 192, or "Part 192"). The intrastate Lines 406 and 407 are under the jurisdiction of the California Public Utility Commission (CPUC) which has adopted 49 CFR 192 and enforces to its provisions. The pipelines will be designed, constructed, operated, and maintained accordingly.

The focus of my review was a risk assessment performed by EDM Services, Inc. Overall, I found that the results of the risk assessment were credible and not inconsistent with other risk assessments that have been performed by other parties concerning similar pipelines. However, I also discovered some data presented in EDM's analysis that was inconsistent with other sources of data, and some statements or opinions that I did not fully agree with and which reasonable people might hold a difference of opinion over. Although these variances in raw data or interpretation imply that some numerical results might change, these would not necessarily alter the overall conclusions or invalidate the assessment. S-94

The Table 1 below lists specific data presented, or statements made, in the Draft EIR dated April 13, 2009 and my comments in response. Additional tables summarize some data I used to evaluate EDM's analysis. S-95

Table 1. Comments on the Draft EIR Risk Assessment

Reference page or section	Comment
Section 2.1.2 bottom of page 2	Add closing statement: "Other portions of the regulations are prescriptive."
Section 4.1.1, page 11	5,000 Btu/ft^2-hr, 1% mortality corresponds to 30 seconds unabated exposure. An able-bodied person would take actions to increase the separation distance or seek cover during that 30 seconds. 3,500 Btu/ft^2-hr, 10-second exposure does not correspond to 15% probability of fatality. According to Hymes (1983) a 45-second exposure corresponds to 1% mortality.
Section 4.1.2, page 13-14	Reference to 1970-1984 pipeline incident data is arguably not relevant because the data is 25-39 years old and standards and regulations for both new construction and the operation of existing lines have changed substantially. Changes are notable in the areas of fracture control for new pipe, routine use of ILI, adoption of damage prevention practices, and integrity management planning for high consequence areas, none of which were prevalent in 1970-1984.
Section 4.1.2, page 14-15	We get values that are close but not identical to those reported by EDM. For 1988-2008, we see 0.037 injuries and 0.0064 fatalities per 1,000 mi-yrs, compared with 0.040 and 0.010 reported on page 14 for 1986-2007. PHMSA's data web page for 1988 through 2008 tallies 382 "significant" incidents (same criteria as "reportable" incidents) for onshore gas transmission (323) and gathering (59) lines. This is much less than the 761 incidents stated on page 15 for 2002-2007. We get 0.18 incidents per 1,000 mi-yrs instead of the 0.42 incidents per 1,000 mi-yrs on page 16. However we get 0.019 injuries and 0.0033 fatalities, about the same as the 0.019 and 0.004 stated on page 15.
Figure 4.1.2-1, page 16	Using the tallies on PHMSA's data web page, the upper curve should vary between just above 0.10 and just below 0.30.
Page 17	We get 0.18 reportable incidents per 1,000 mi-yrs, not 0.29 for onshore gathering and transmission lines.
Pages 18-20	The US and CA hazardous liquid pipeline incident data may not be appropriate for evaluating the risk or threat associated with natural gas pipelines. Certainly pipelines in both categories are constructed from similar materials and to a layman would appear to present similar issues. However, they differ significantly in terms of operation, characteristics of transported products, failure modes, and consequences of a

S-95
Cont.

	failure.
Page 21	Many of the factors in the bulleted items can be reasonably attributed to features associated with older pipelines and construction methods. Frequencies of these factors should be adjusted to reflect rates of occurrence appropriate to the features of modern pipeline design and construction.
Page 23	The first paragraph provides for a 30% reduction in damage by outside forces based upon the added depth in the pipeline design. Additional reductions should be included to address other relevant issues such as resistance to immediate penetration from equipment afforded by the heavy wall thickness and large pipe used with this project, as well as the overall record of new large-OD pipe in Class 3 areas. Refer to discussion for Page 57, below.
Page 27	PG&E will be installing remote monitoring of cathodic protection potentials at approximately 1-mile intervals along the route. This will provide real time data of the cathodic protection system and allow for a timely response to make corrections. The risk of incident due to corrosion should be significantly reduced.
Pages 29-30	It is unclear why LPG pipelines are discussed (page 30). PHMSA's incident data for LPG pipelines are not intermixed with data for natural gas lines, nor are LPG pipelines part of the proposed construction. Does Table 4.1.3-2 (page 29) include LPG lines, and if so, why?
Page 30	The assertions that a release in an urban area is likely to cause more significant impacts to humans than a release in a rural area, and that the risk is understated for an urban area and overstated for a rural area both seem correct at first glance but appear to overlook some important factors. It is true that a worst-case scenario in an urban location would have greater consequences than a worst-case scenario in a rural location. But the probability of a worst-case scenario is greater in a rural location due to the higher operating stress levels and typically thinner wall pipe used in rural areas. It is noted for example that Class 3 lines comprise 11% of total gas pipeline mileage and 14% of gas pipeline reportable incidents, but there has only been one fatality caused by a Class 3 pipeline since 1989. Since 2002, there have been no fatalities in Class 3 or 4 and only one in Class 2. The heavier wall and lower operating stress does affect the susceptibility to failure and can affect its mode. Most major natural gas pipeline failures in the US have occurred in rural areas, e.g. Carlsbad. Also, Class 3 would automatically be designated a High Consequence Area (HCA)

S-95
Cont.

	and therefore would be subject to special integrity management planning rules that most portions of Class 1 and 2 lines would not be.
Baseline Frequency, page 31	We would use 0.18 incidents per 1,000 mi-yrs.
Indoor explosions, page 43	This does not reflect real modes of failure. Migration of gas to interiors of occupied buildings is primarily a concern with distribution piping systems which exist in close proximity and relatively low pressure. A leak at the operating pressure of 975 psig would blow a hole in the soil and vent the gas. Also, a leak would not tend to precede a rupture of the pipe.
Page 49, bottom of page	Statement that the "frequency of serious injuries or fatalities …are extremely low due to the rural areas..." implies that the expected frequency would be greater in the more developed areas which is not supported by the data.
Page 52, first full paragraph	Statement that "should population or traffic volumes increase…the likelihood of serious injuries and fatalities would increase accordingly" does not account for changes in pipe wall, HCA designation, and IMP activity that offset increased risk by reducing likelihood of an incident. Note zero fatalities in Class 3 and 4 areas.
Page 55, HAZ-1a	A stated mitigation is for pipe to be manufactured in year 2000 or later. 49 CFR 192 currently requires pipe to comply with 43rd (2004) or 44th (2008) editions of API 5L. Pipe mills currently only monogram pipe to 44th Edition, so pipe must be 2008 vintage or newer. From a practical standpoint, it will be brand new pipe.
Page 57, third-party damage	30-inch OD x 0.375-inch WT X65 pipe provides resistance to immediate penetration by equipment at the 98th percentile in terms of size or weight (about 73 T). The 0.500-inch WT specified for Class 3 areas would resist an even larger machine (120 T) that is not used in general construction. It is noted that the one fatal incident in Class 3 pipe that occurred in 1997 had 0.281-inch WT which is resistant to machines only up to 45 T which are more common.

S-95 Cont.

Some supporting data from PHMSA's website data summary page or downloadable data is summarized below. Table 2 summarizes "reportable" or "significant" incident data from 2002-2008 for natural gas onshore gathering and transmission (G&T) lines. Incidents for lines of all ages and sizes are reported. The average rate of occurrence per 1,000 mi-yrs is given at the bottom of the table. Also listed is a tally of those that occurred in post-1980 large pipe (20-inch OD and larger) and small pipe (smaller than 20-inch OD). Because national mileage could not be easily broken down by both size and age (either size or age is readily done but not both), no average rates per mile-year are shown. However, it is noted that post-1980 pipe comprises 27%

S-96

of the total onshore G&T mileage, but the total number of incidents (50) and fatalities (1) in both post-1980 size ranges is only 13% and 14% of the total, respectively, indicating half the rate of occurrence for post-1980 pipe on a per mile-year basis. This reflects the improved technology associated with modern pipelines, relative to the aggregate US natural gas pipeline system which has a mileage-weighted average age of 40 years.

S-96 Cont.

Table 2. Natural Gas Onshore G&T Pipeline Incidents, 2002-2008, All and Post-1980

Year	All G&T pipe incidents			Post 1980, D=>20"			Post 1980, D<20"		
	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries
2002	40	1	5	3	0	0	4	0	0
2003	62	1	8	3	0	0	6	0	0
2004	44	0	3	2	0	0	6	0	0
2005	68	0	7	0	0	0	2	0	0
2006	62	3	5	4	1*	0	3	0	0
2007	55	2	7	6	0	0	6	0	0
2008	54	0	5	0	0	**	5	0	**
TOTAL =>	385	7	40	18	1	0	32	0	0
Avg/yr =>	55.000	1.000	5.714	2.571	0.143	0.000	4.571	0.000	0.000
Avg/1000 mi-yr	0.1833	0.0033	0.0190						

*1982 vintage pipe
**4 injuries reported for post-1980 pipe but pipe size not stated

Table 3 below compares the occurrences of incidents for all ages and sizes of natural gas G&T pipelines from 2002 through 2008 sorted by Location Class. The proportionate representations of total system mileage of Location Classes 1, 2, 3, and 4 are 77.4%, 10.9%, 11.4%, and 0.3%, respectively. These proportions of system mileage were used to estimate average rates per 1,000 mile-years, shown below. It is apparent that rates of reportable incidents varies widely by class, but rates of fatalities in Class 1 and 2 are similar to each other, and rates of fatalities in Class 3 and 4 are low (zero in the sample period). A longer sampling period also shows near-zero fatality rates for Class 3 lines (there are no Class 4 lines in the proposed project). This illustrates the effectiveness of the risk-informed design basis for pipelines by Location Class, as well as the focus of integrity management planning on high-consequence areas.

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Table 3. Natural Gas Onshore G&T Pipeline Incidents, 2002-2008, by Location Class

Year	All Class 1			All Class 2			All Class 3			All Class 4		
	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries	Total	Fatalities	Injuries
2002	31	1	2	2	0	0	7	0	1	0	0	0
2003	50	1	4	5	0	2	7	0	1	0	0	0
2004	32	0	2	5	0	0	7	0	1	1	0	0
2005	52	0	5	4	0	0	10	0	1	1	0	0
2006	47	3	3	5	0	1	8	0	1	0	0	0

2007	39	1	4	5	1	1	10	0	1	0	0	0
2008	40	0	5	1	0	0	2	0	0	1	0	0
TOTAL	291	6	25	27	1	4	51	0	6	3	0	0
Avg/yr	41.571	0.857	3.571	3.857	0.143	0.571	7.286	0.000	0.857	0.429	0.000	0.000
Avg/1000 mi-yr	0.1790	0.0037	0.0154	0.1198	0.0044	0.0178	0.2128	0.0000	0.0250	0.3106	0.0000	0.0000

S-97
Cont.

This concludes my review of the draft EIR for PG&E Lines 406 and 407. If you have further comments of questions, please feel free to contact me.

Sincerely,

Michael J. Rosenfeld, PE
President

RESPONSE TO COMMENT SET S

S-1 Comment acknowledged. Page ES-2, lines 13 through 15, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-2 Comment acknowledged. Page ES-2, line 17, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-3 The comment suggests that additional explanation for the rejection of Line 406 Central Alternative is needed. Additional text is inserted on page ES-4 of the Draft EIR in the middle of Line 22. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-4 The proposed additional text has been added to the Draft EIR on page ES-31 to clarify that the No Project Alternative would not meet the Project objectives. The CEQA Guidelines section 15126.6(e)(2) states that if the environmentally superior alternative is the "no project" alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives. Furthermore, in response to comment P-10, text has been added to the Draft EIR on page ES-32, indicating that the incorporation of Options I and L would better promote the objectives of the Project than the proposed alignment or other options. Refer to Section 4.0 of this Draft EIR for revisions to the Draft EIR.

S-5 Comment acknowledged. Page 1-4, lines 21 through 23, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-6 Comment acknowledged. Page 1-3, lines 4 through 5, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-7 Comment acknowledged. Page 1-8, lines 28 through 29, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-8 PG&E requested that the reclamation districts be removed from the list of permitting/approving agencies on page 1-8 of the Draft EIR. Upon contacting the reclamation districts, it has been understood that a PG&E representative has been in contact with the reclamation districts regarding required encroachment permits. The

reclamation districts indicated that they did not want to move forward with the permitting until the EIR process was completed. Accordingly, the reclamation districts have not been removed from page 1-8 of the Draft EIR.

S-9 Comment acknowledged. Page 2-16, lines 3 through 5, and page 2-18, Table 2-2, of the Draft EIR have been revised to properly reflect that the DFM would be designed for a maximum allowable operating pressure (MAOP) of 975 psig. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

The sentence "Industry standards for pipeline sections installed via HDD technology require a pipe diameter to wall thickness ratio (D/t) of 50 or below," has not been removed because these are general guidelines that also need to be followed by PG&E.

S-10 Comment acknowledged. Table 2-1 on page 2-17 and Table 2-3 on page 2-49 of the Draft EIR have been revised to reflect the appropriate depth of the Sacramento River crossing. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-11 Comment acknowledged. Table 2-2 on page 2-18 of the Draft EIR has been revised to correctly reflect the DFM's attributes. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-12 Comment acknowledged. Page 2-31, line 18, and page 4.10-27, line 11 of the Draft EIR have been revised to correctly reflect the Yolo Junction Pressure Limiting Station height. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-13 Comment acknowledged. Page 2-37, line 1 through 3, of the Draft EIR has been revised. Figure 2-9 and Figure 2-10 have been relabeled. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-14 Comment acknowledged. Page 2-37 of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-15 Comment acknowledged. The following revisions have been made to reflect that deep-rooted plants would not be allowed to be planted within 10 feet of the pipeline centerline, rather than within 15 feet as stated in the Draft EIR: Page ES-2, line 19; Page 2-16, line 27; Page 2-37, line 20; Page 2-38, line 23; Page 4.1-14, line 4; Page 4.2-22, lines 22 through 23; and Page 4.2-24, line 29.

Because the planting limitation zone decreased in size, estimates of the acreage of affected agricultural land was recalculated and pages 4.2-24,lines 28 through 36; page 4.2-25, lines 1 through 15; page 4.2-31, line 14; page 4.9-18, lines 23 through 31; and page 4.9-31, lines 25 and 29, of the Draft EIR have been revised accordingly. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-16 Comment acknowledged. Page 2-37, line 26, and page 4.13-22, line 27, of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-17 Comment acknowledged. Page 2-49, lines 8 and 9, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-18 Comment acknowledged. Page 2-55, lines 21 through 22, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-19 Comment acknowledged. Page 2-55, lines 31 through 33, of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-20 Comment acknowledged. Page 2-71, lines 16 through 18, of the Draft EIR has been revised to provide the option of using slurry backfill instead of concrete coating in order to address the potential for scour, providing that methods are approved by a California licensed civil engineer. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-21 Comment acknowledged. Page 2-80, lines 11 through 23; page 3-59, lines 15 through 17; page 2-20, lines 18 through 19; and page 2-38, lines 8 through 12; of the Draft EIR have been revised to reflect the correct construction schedule.

The updated construction schedule affects the air quality analysis included in Section 4.3, Air Quality. Accordingly, page 4.3-38, lines 3 through 14, have been updated to explain that the construction schedule has changed, but the original construction period was used in the air quality analysis because it offers a more aggressive, worst-case scenario analysis. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

Furthermore, the following pages have been updated to indicate that continuous construction would take place at tie-in locations: Page 4.1-15, line 8; page 4.1-15, line 15 (MM AES-2); page 4.4-62 (APM BIO-8); Page 4.10-26, line 18 (APM NOI-2); page 4.10-34, lines 25 through 29; page 4.10-35, line 13 (MM NOI-1a); page 4.10-35, lines 24 through 27 (MM NOI-1b); page 4.10-36, lines 4 through 33 (MM NOI-1c); page 4.10-37, lines 12 through 15; page 4.10-40, line 19; and page 4.12-23, line 18. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-22 Comment acknowledged. Page 2-83, lines 9 through 12, of the Draft EIR has been revised to better explain the locations at which GPS coordinates would be taken. The text was revised as requested, with the exception of requiring GPS coordinates at pipe welds. The new text indicates that GPS coordinates will be taken at a few reference pipeline welds. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-23 Comment acknowledged. Page 2-84, lines 28 through 34, of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-24 The CSLC acknowledges that, as a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and is thereby not required to obtain local discretionary permits, including minor use permits. However, it is pertinent to disclose local jurisdiction regulations regarding the compatibility of the proposed pipeline and Williamson Act lands. As such, the first paragraph on page 4.2-19 has not been deleted. However, additional text has been added to page 4.2-19, line 2, of the Draft EIR in order to clarify PG&E's role as a CPUC-regulated public utility in regards to local land use and zoning regulations. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-25 Please refer to response to comment M-6. A portion of the text in the Draft EIR has been revised to clarify measures PG&E will enact on spare the air days for APM AQ-11. Page 4.3-40 of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-26 While greenhouse gas (GHG) emissions would not be significant on a project level, they are considered to be cumulatively significant and require mitigation. It is currently not feasible to calculate greenhouse gas (GHG) emission reductions achievable through compliance with fleet standards and the ARB's off-road in-use fleet rules. However, MM AQ-3 is applicable to actual impacts

(projected impacts after incorporation of mitigation). As stated in the Draft EIR (refer to pages 4.3-51 and 4.3-52), APMs have the potential to reduce construction-generated GHGs. However, there are insufficient details and/or lack of methodologies to quantify the reductions. When quantification of those reductions becomes feasible, then MM AQ-3 would be applied to the actual projected Project-generated emissions after incorporation of the APMs and mitigation measures.

The three programs identified on page 4.3-49 of the Draft EIR do not affect GHGs generated by construction equipment. As discussed in the Draft EIR, the EPA's Natural Gas ENERGY STAR Program improves operational efficiency and reduces methane emissions from pipeline projects. Operational methane emissions were not calculated and were not included in the Impact AQ-3 emissions analysis. Therefore, reductions attributable to the Natural Gas STAR Program are not applicable. PG&E's ClimateSmart™ Program is similarly not applicable to Impact AQ-3 as presented in the Draft EIR. The ClimateSmart™ Program reduces offsets emissions generated by the end use of natural gas conveyed by PG&E. GHG emissions from end use consumption (burning) of natural gas to be conveyed by the proposed Project were not calculated and did not factor into the significance determination. The California Climate Action Registry (CCAR) enables members to measure, verify, and publicly report their GHG emissions. However, CCAR does not require that specific emission reductions be achieved or that specific emission reduction measures be implemented. Although CCAR provides a mechanism for verification and publication, participation would not result in GHG emission reductions associated with the proposed Project.

S-27 Comment acknowledged. Page 4.4-21, lines 17 through 18, of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-28 Comment acknowledged. Page 4.4-27 and page 4.4-28 (Table 4.4-3) of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. Page 4.4-13 of the Draft EIR discusses the existence of jurisdiction vernal pools and vernal swales within the project area, which are habitat for species including the vernal pool fairy shrimp (*Branchinecta lynchi*). Applicant proposed measures (APM BIO-21 through APM BIO-24) and mitigation measures MM BIO-1a and MM BIO-1b address impacts to vernal pool species.

S-29 Comment acknowledged. Page 4.4-55, lines 5 through 8, of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-30 Comment acknowledged. Pages 4.4-84 through 4.4-87 (MM BIO-1c), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-31 Comment acknowledged. Pages 4.4-89 through 4.4-91 (MM BIO-2a) of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-32 The commenter requests a revision of the vegetation clearing restriction period from 10 days to 30 days and that the restriction be limited to the wet period. The purpose of the 10-day restriction is to minimize impacts to sensitive habitats and features such as seasonal wetlands and riparian habitat, it also minimizes the spread of invasive species or soil pests throughout the construction window (refer to Section 4.4, Biological Resources, of the Draft EIR). Therefore, the 10-day requirement has been retained for construction activities in wetlands, riparian areas, and other sensitive habitats, but not for agricultural areas and other non-sensitive habitat features. Page 4.4-94, lines 10-12 (MM BIO-3), of the Draft EIR have been modified accordingly. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-33 Please refer to response to comment S-32.

S-34 Please refer to response to comment S-32.

S-35 Please refer to response to comment S-32.

S-36 This comment provides background information and orientation for comments S-37 through S-44. Please refer to individual responses to comments S-37 through S-44.

S-37 The commenter requests modification of language regarding fencing of wetland features. A portion of the requested text has been implemented. Page 4.4-81, lines 6-7, (MM BIO-1a) have been revised to indicate where jurisdictional wetlands should be fenced for maximum avoidance. Refer to Section 4.0 of this Revised Final EIR for revisions of the Draft EIR.

S-38 Comment acknowledged. Page 4.4-81, lines 10 through 11 (MM BIO-1a), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-39 Comment acknowledged. Page 4.4-81, line 16 through page 4.4-82, line 5 (MM BIO-1a), page 4.4-85, lines 23 through 25 (MM BIO-1c), and page 4.4-94, lines 13 through 16 (MM BIO-3), of the Draft EIR have been revised to provide additional clarification about the conditions under which protective mats shall be used and/or the amount of topsoil that shall be salvaged. Suggested modifications to the vegetation clearing were revised based on the rationale provided above in response to comment S-32. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-40 Comment acknowledged. Page 4.4-82, lines 21-23, (MM BIO-1a), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-41 Comment acknowledged. Pages 4.4-81 through 4.4-83, (MM BIO-1a), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-42 Comment acknowledged. Pages 4.4-81 through 4.4-83, (MM BIO-1a), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-43 Comment acknowledged. Page 4.4-83, lines 1 through 7 (MM BIO-1a), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-44 Comment acknowledged. Page 4.4-83, lines 17 through 21 (MM BIO-1a), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-45 The commenter requests a revision of the fencing practices discussed in MM BIO-1a and to clarify that plants used in restoration efforts be compatible with pre-construction conditions. Language regarding fencing practices was revised to require fencing of sensitive resources within the 100 foot ROW and a 50-foot wide buffer on either side of the ROW, or as determined in consultation with USACE, USFWS, or CDFG. Please refer to individual responses to comments S-46 through S-51.

S-46 Comment acknowledged. Page 4.4-85, lines 5 through 6 (MM BIO-1c), of the Draft EIR has been revised according to response to comment S-32. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-47 Comment acknowledged. Page 4.4-85, lines 11 through 13 (MM BIO-1c), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR. Mitigation Measure BIO-1c outlines the measures for avoidance or, if riparian habitat cannot be avoided, restoration.

S-48 Comment acknowledged. Page 4.4-86, lines 31 through 32 (MM BIO-1c), of the Draft EIR has been revised to clarify when matching pre-construction conditions are appropriate. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-49 Please refer to response to comment S-45.

S-50 Comment acknowledged. The commenter requests that a portion of MM BIO-5 be removed. Instead, the text on page 4.4-120, lines 13 through 14, of the Draft EIR is revised to be consistent with page 4.4-120, lines 26 through 31, which states that any rare plant species within the study area (including the 100 foot-wide right-of-way and a 50 foot-wide buffer zone on each side of the right-of-way, work areas, staging areas, and/or launcher/receiver stations) will be flagged, accurately mapped on construction plans, and fenced to protect the area occupied by the species during construction, per APM BIO-3. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-51 Comment acknowledged. The commenter requests that a portion of MM BIO-5 be modified. This requested revision was not implemented because it would render MM BIO-5 inconsistent with fencing requirements stated elsewhere in Section 4.4, Biological Resources. However, page 4.4-120, lines 26 through 31, were revised to clarify fencing requirements. Refer to Section 4.0 of this Revised Final EIR for revision of the Draft EIR.

S-52 Subsequent to this comment being made, PG&E revised its Pipeline Crossing Summary Table to add the vernal feature that was not identified in the original summary table as a new line item. Accordingly, Table 2-5, starting on page 2-56 of the Draft EIR has been updated and is included in Section 4 of the Revised Final EIR. PG&E is currently working with the USFWS to determine the appropriate crossing method to minimize impacts to vernal pools. An HDD has been proposed

to minimize impacts to the vernal feature inadvertently omitted from the original summary table, as well as the seasonal wetland complex surrounding this feature. However, until these details are worked out such that the crossing method to minimize impacts to vernal pools is identified and agreed to with the resource agencies, the text on page 4.4-79 of the Draft EIR will remain intact.

S-53 Comment acknowledged. Page 4.4-84 (MM BIO-1b) of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-54 Comment acknowledged. Page 4.4-93, lines 19 through 21 (MM BIO-3), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-55 Comment acknowledged. Page 4.4-93, lines 33 through 35 (MM BIO-3), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-56 Comment acknowledged. Page 4.4-94, lines 7 through 9 (MM BIO-3), of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-57 Comment acknowledged. The commenter requests that a portion of MM BIO-4a be modified. This requested revision was not implemented because it would render MM BIO-4a inconsistent with fencing requirements stated elsewhere in Section 4.4, Biological Resources. However, page 4.4-102, lines 1 through 7 were revised to clarify the buffers required for elderberry shrubs. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-58 Comment acknowledged. The commenter requests modifications to the portion of MM BIO-4a that addresses potential impacts to Swainson's hawk. However, CDFG also provided comments on the potential impacts to Swainson's hawk that conflict with this request. CDFG's recommendations regarding MM BIO-4a have been incorporated into the Draft EIR (refer to response to comment X-3). Therefore, only a portion of the text changes referencing the need to obtain a Section 2081 Incidental Take Permit have been implemented on page 4.4-104, lines 8 through 13 (MM BIO-4a). Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-59 Comment acknowledged. Page 4.4-105, lines 1 through 3 and page 4.4-105 (MM BIO-4b), lines 15 through 17 (MM BIO-4c) have been revised to remove the language limiting construction work to the period November through February due to the conflict with construction windows for work within giant garter snake habitat and the fact that mitigation for impacts to Swainson's hawk is addressed in MM BIO-4a. Implementing Alternative Option H if all suitable Swainson's hawk trees cannot be avoided within the conservation areas is acknowledged to potentially result in greater impacts to biological resources. Therefore, revisions have been made to page 4.4-105, lines 10 through 12 (MM BIO-4b) and page 4.4-105, lines 26 through 29 (MM BIO-4c). Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-60 Comment acknowledged. Page 4.4-120, lines 15 through 17 (MM BIO-5), of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-61 Comment acknowledged. Although it is acceptable to use the phrase Area of Potential Effect (APE) in CEQA documents, instances where APE was used in the Draft EIR have been changed to "cultural study area" in order to reduce confusion with the Project study area. The specific places where changes have been made are as follows: Section 4.5, Cultural Resources, page 4.5-3, line 24; page 4.5-4, line 5; page 4.5-8, lines 20 through 21; page 4.5-21, line 31; page 4.5-22, lines 10, 13 through 14, and 17; page 4.5-23, line 33; page 4.5-24, line 16; page 4.5-25, line 15; page 4.5-28, line 24; page 4.5-35, line 31; page 4.5-36, line 5; and page 4.5-39, line 4. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-62 Comment acknowledged. The word "Three" has been changed to "Several" on page 4.5-1, line 10 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-63 Comment acknowledged. Page 4.5-3, lines 21 through 29, of the Draft EIR has been revised to provide a more complete and accurate description of the pedestrian field survey process. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

The commenter also requested that the following text be inserted: "If the existing documentation for previously recorded resources was adequate, or if the resources had been previously evaluated, the resource record was not updated." This

sentence was not inserted because site records were updated for adequately documented and previously evaluated resources. For example, YOL-HRI-4/114 Herman Ricter House DPR Update form in Appendix D of Appendix F-5 of the Draft EIR.

S-64 Comment acknowledged. Page 4.5-11, line 16, through page 4.5-12, line 3, have been moved to page 4.5-1 of the Draft EIR, beginning under the subheading Methodology. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-65 Comment acknowledged. Page 4.5-36, lines 13 through 19 (APM CR-3), of the Draft EIR has been revised to provide more specific information regarding the geo-archaeological study and monitoring activities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-66 Comment acknowledged. Please refer to responses to comments S-67 and S-68.

S-67 Comment acknowledged. Page 4.5-40, lines 20 through 21 of the Draft EIR have been updated to include the suggested sentence. Refer to Section 4.0 of this Revision Final EIR for revisions to the Draft EIR.

S-68 Comment acknowledged. Page 4.5-41, lines 25 through 26 of the Draft EIR have been updated to include the suggested sentence. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-69 Comment acknowledged. Page 4.5-43, lines 5 through 21 (MM CR-1), of the Draft EIR have been revised to clearly identify steps to be taken if any unknown resources are identified. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-70 Pages 4.5-43 through 4.5-46 of the Draft EIR state that the *potential* Cultural Resource impacts associated with Alternative Options A, B, D, E, and H would be greater than under the proposed Project because these alternative options occur in areas that have not been previously surveyed. As such, MM CR-1, in association with APM CR-1 through CR-5, would be required to be implemented for these alternative options to reduce impacts to less than significant levels.

Pages 4.5-45 through 4.5-48 have been revised and Table 4.5-2 updated to reflect that Alternative Options F, I, and J would have similar impacts on cultural resources

as the proposed Project. Furthermore, similar text changes have been made on page ES-9, lines 13 through 16; page ES-11, lines 11 through 14; page ES-12, lines 11 through 13; and page ES-24, Table ES-2. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-71 The geotechnical report prepared for the proposed Project notes that the pipeline alignment crosses three documented faults: the Great Valley, Dunnigan Hills, and Willows faults. The three faults are thought to exist at depth and do not reach the surface where they cross the proposed alignment; however, the Great Valley and Dunnigan Hills faults are considered active. The geotechnical report for the proposed Project does not provide conclusive evidence that there are no fault movements or that the faults will not become active at or near the pipeline alignment. Therefore, a site specific seismic analysis is needed for the proposed pipeline alignment in the area of the documented faults. CSLC has considered PG&E's proposed changes to the language in Impact GEO-1 and MM GEO-1. A portion of Impact GEO-1 on Page 4.6-39 of the Draft EIR has been revised. MM GEO-1 on page 4.6-39 and 4.6-49 of the Draft EIR has also been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-72 Comment acknowledged. The word "then" has been changed to "than" on page 4.6-5, line 25 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-73 Comment acknowledged. The word "curst" has been changed to "crust" and "case" to "cause" on page 4.6-19, lines 13 through 14 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-74 Comment acknowledged. The word "total" has been changed to "tonal" on page 4.6-23, line 7 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-75 The document entitled Review of EIR for PG&E Lines 406 and 407, prepared by Kiefner and Associates, dated June 12, 2009 (included as an appendix to Comment Set S) on behalf of PG&E has been reviewed. The responses are included in the responses to comments S-94 through S-97 below. A revised System Safety and Risk of Upset report is included as Appendix H-3 of this Revised Final EIR. ~~This review did not result in any changes to the quantitative risk assessment presented in the System Safety and Risk of Upset report, included in Appendix H of~~

~~the Draft EIR. As a result, no revisions to Table 4.7-5 of the Draft EIR are necessary.~~

The applicable federal pipeline regulations (49 CFR 192) use a population density approach to develop design, operations, and maintenance standards for natural gas pipelines. More rigorous requirements are imposed on pipelines in more densely populated areas than those in rural areas. However, these standards should not be confused with a qualitative or quantitative risk assessment. Such assessments, using the approach methodology presented in the Revised System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project, and is included as ~~a part of~~ Appendix H-3 of the ~~Draft~~ Revised Final EIR, are routinely used to evaluate and quantify the risks posed by linear pipeline projects. These risk assessments estimate the likelihood of a variety of consequences that may result from a given facility while the federal and state pipeline regulations provide standards for design, operation, and maintenance.

PG&E's comments that the approach does not adequately take into account the specific attributes of the proposed pipeline, especially those attributes that relate to the vintage of the facility (e.g., advances in construction materials and techniques such as external coatings, radiographic inspection of weld joints, improvements in cathodic protection system monitoring, integrity management plans, etc.).

As stated in the revised System Safety and Risk of Upset report, located in Appendix H-3 of ~~the Draft~~ this Revised Final EIR, newer pipelines do incur reportable incidents less frequently than pipelines constructed prior to about the 1940s. (See Table 4.1.2-2 of the System Safety and Risk of Upset report.) However, many of the causes of unintentional releases are to some extent time dependent. For example, an older line is more likely to experience a release caused by external corrosion, since it takes time for external corrosion to develop a through wall pit, resulting in a release. As stated in the Draft EIR, during the early years of operation, we would expect the rate of external corrosion caused incidents from the proposed pipe segment to approach zero. However, the baseline probability of reportable releases is intended to reflect the average rate over a 50-year project life. Using data from pipelines recently constructed, as the commenter suggests, would not accurately represent the average performance over the pipeline life. These data might be useful in predicting the frequency of releases from the proposed pipeline during its early years of operation, but they would not be representative of the proposed pipeline over its 50-year project life.

PG&E provided data for another pipeline project (Line 108) which indicated that for gas transmission pipelines constructed after 1990, the frequency of reportable releases is reduced by less than 30 percent. (These data have not been independently verified.) The Line 406/407 Draft EIR used a baseline frequency of USDOT reportable unintentional releases of 0.196 incidents per 1,000 mile-years, before mitigation. This value is roughly two-thirds (35 percent reduction) of the actual reportable incident rate from 2002 through 2008 for onshore gas transmission pipelines (0.30 incidents per 1,000 mile-years). The baseline incident rate used in the Line 406/407 Draft EIR reflects a reduction to account for the "modern" pipeline being proposed by PG&E. The methodology for making these adjustments is presented in ~~on pages 21 through 27 of~~ the revised System Safety and Risk of Upset report. This reduction (35 percent reduction) closely matches the data provided by PG&E for their Line 108 project (30 percent reduction). The baseline frequency was further reduced 50 percent to account for the proposed mitigation (e.g., modern line pipe, thicker pipe wall, use of marker tape in Class 3 areas, increased depth of cover, etc.). The mitigated frequency of unintentional releases used in the quantitative risk assessment was 0.098 incidents per 1,000 mile-years, which is roughly one-third the frequency of reported releases from onshore gas transmission pipelines from 2002 through 2008 (0.30 incidents per 1,000 mile-years).

The commenter suggests that the safety associated with the proposed modern pipeline segments should far exceed the national average fatality rate of $1x10^{-5}$ fatalities per mile-year. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. The EDM report findings are summarized in the Introduction to this section (Section 3.0) of the Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, regarding the risk analysis are provided in Section 4.0 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and erroneously reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of

specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

Section 4.1.4 of the Draft EIR correctly stated that a commonly accepted individual risk significance threshold is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~And in fact, the analysis presented in the Draft EIR results in a fatality rate roughly one-seventh the national average suggested by the commenter, versus six times the national average as stated by the commenter.~~

~~In making the comparison, the commenter has made a mathematical error by not taking into account the length of the proposed pipeline segments when comparing the national fatality rate to the findings presented in the Draft EIR. Using the data presented above and the methodology suggested by the commenter, one might expect the frequency of fatalities to be reduced by roughly one-third, from the national average of 1.0×10^{-5} fatalities per mile-year (actual USDOT data from 1988 through 2008) to 0.67×10^{-5} fatalities per mile-year for the proposed Project. Using this value and multiplying by the proposed 42-miles of new pipeline, the qualitative annual likelihood of fatalities from the proposed Project would be 2.8×10^{-4} fatalities per year (0.67×10^{-5} fatalities per mile-year x 42 miles = 2.81×10^{-4} fatalities per year). Using the commenter's qualitative approach correctly would yield a result almost five times higher that the result presented in the Draft EIR (2.81×10^{-4} versus 6.08×10^{-5} fatalities per year).~~

~~The predicted frequency of fatalities presented in the Draft EIR is 1.45×10^{-6} fatalities per mile-year (6.08×10^{-5} fatalities per year/42 miles = 1.45×10^{-6} fatalities per mile-year). This frequency is roughly one-seventh the frequency of fatalities suggested by the commenter (1×10^{-5} fatalities per mile-year), which is the national average for the period from 1988 through 2008. However, based on the population density along the pipeline (the majority of the pipeline lies in very rural areas, with an extremely low population density), among other factors, the result presented in the Draft EIR is appropriate.~~

~~The frequency of fatalities on domestic onshore gas transmission pipelines was 3.4×10^{-6} fatalities per mile-year, for the period between from 2002 through 2008. The predicted frequency of fatalities from the proposed pipeline is less than one-half this value (3.4×10^{-6} versus 1.45×10^{-6} fatalities per mile-year).~~

The commenter suggests that the frequency of external corrosion-caused incidents used in the Draft EIR should be significantly reduced because PG&E will install remote monitoring equipment, capable of monitoring cathodic protection potentials at approximately one-mile intervals. While these devices offer real-time monitoring of the pipe to soil potential at the point of installation, they do not provide any data for points in between. As a result, they are not effective in providing early detection of pitting corrosion due to coating holidays, or interference from third party substructures, etc. The unmitigated external corrosion incident rate used in the Draft EIR was reduced by one-third to reflect the fact that the pipeline will be operated at ambient temperatures, have modern externally corrosion coating, and an impressed current cathodic protection system.

S-76 The Draft EIR text on pages 4.7-14 and 4.7-15 have been clarified to reflect the fact that PG&E has adopted method two for determining High Consequence Areas. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-77 Please refer to response to comment S-76.

S-78 Please refer to response to comment S-76.

S-79 The CSLC serves the people of California by providing stewardship of the lands, waterways, and resources entrusted to its care through economic development, protection, preservation, and restoration. The CSLC has broad mandates for protection of California's natural environment. The CSLC staff often

prepare EIRs for projects that involve leases of State lands. For this Project, the CSLC is the lead agency for the CEQA environmental document. While PG&E is a CPUC-regulated public facility, other pipeline guidelines should be followed when those guidelines result in an increase in the public safety. The federal regulations (49 CFR 192) are minimum safety requirements for pipeline facilities and the transportation of gas. The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, additional measures shall be implemented to further reduce risks of project upset. MM HAZ-2a and MM HAZ-2b have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

~~The risks posed by the proposed Project exceed generally acceptable significance thresholds (1:1,000,000 risk of serious injury or fatality). As a result, mitigation measures must be developed to either avoid the impact altogether, minimize the impact by limiting the degree or magnitude of the action and its implementation, rectify the impact, or reduce or eliminate the impact over time (CEQA Guidelines Section 15370).~~

S-80 The text has been changed on page 4.7-31 of the Draft EIR to reflect the clearing of vegetation to a 50-foot radius, unless this extends beyond the permanent right-of-way or temporary use area secured for construction. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-81 Please refer to response to comment S-80.

S-82 The suggested text change has been made to page 4.7-31 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-83 The suggested text change has been made to page 4.7-36 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-84 The commenter disagrees with the proposed requirement to perform a baseline smart pig inspection using a high resolution internal inspection tool within the first six months of pipeline operation, contending that the completed pipeline will be hydrostatically tested following construction.

The proposed pipeline would be in close proximity to planned developments, including school facilities. ~~The risks posed by the proposed Project exceed generally acceptable significance thresholds (1:1,000,000 risk of serious injury or~~

~~fatality). As a result, mitigation measures must be developed to either avoid the impact altogether, minimize the impact by limiting the degree or magnitude of the action and its implementation, rectify the impact, or reduce or eliminate the impact over time (CEQA Guidelines Section 15370).~~ The proposed mitigation requiring a baseline internal inspection is directed at minimizing the likelihood of an unintentional release, thereby reducing the risk to the public~~., which has been identified as a significant risk.~~

The post-construction hydrostatic test proposed by PG&E is required by 49 CFR 192.505. As a result, it is not considered mitigation.

The baseline or "fingerprint" internal inspection is intended to reduce the likelihood of an unintentional release by providing verification of construction quality and collecting inspection data for future reference, which can be compared to subsequent internal inspection results. These comparisons allow the operator to determine corrosion rates and evaluate "hot spots." The value of conducting these inspections has been demonstrated. For example, a recently constructed 25-mile, 42-inch diameter gas pipeline was inspected six months after being commissioned; over 40,000 metal loss features were identified. In this case, the vast majority of the defects were internal, which are not anticipated for the proposed Project. But over 800 external metal loss defects were also identified.

The commenter suggests that performing an in-line inspection may not be the best technology for assessing potential threats and therefore may be in violation of 49 CFR 192.921. The proposed mitigation does not preclude PG&E from using other technologies to comply with 49 CFR 192 Subpart O. The internal inspections required in the mitigation measure are intended to be *in addition* to the regulatory requirements; otherwise, these measures would not be considered mitigation. PG&E will likely be required to employ additional technologies to comply with the federal regulation.

The commenter discusses limited resources for inspections and that mandating ILI on these new segments will detract from being able to inspect other lines. This comment is noted. The proposed mitigation requiring a baseline internal inspection is directed at minimizing the likelihood of an unintentional release, thereby minimizing ~~reducing~~ the risk to the public.

S-85 Please refer to response to comment S-84.

S-86 The CSLC has considered PG&E's proposed changes to the language in MM HAZ-2b, and the reasons for the need for PG&E to be able to remotely operate the valves. The text of MM HAZ-2b, on page 4.7-38 of the Draft EIR, has been revised to incorporate ~~both the features of the remotely controlled valves and~~ the benefits of automatically controlled valves during potentially critical events (e.g., line ruptures). Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-87 Comment acknowledged. Page 4.8-18, line 17, (MM HWQ-1) of the Draft EIR has been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-88 Comment acknowledged. Page 4.8-18, lines 25 through 26, (MM HWQ-1) of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-89 Comment acknowledged. Page 4.8-20, lines 18 through 31, (MM HWQ-2) of the Draft EIR have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-90 Comment acknowledged. Page 4.8-21, line 23 to page 4.8-22, line 22 (MM HWQ-3); page 4.8-34, lines 30 through 24; and, page 4.1-13, lines 15 through 18; of the Draft EIR have been modified. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

S-91 Please refer to response to comment S-90.

S-92 Please refer to response to comment S-90.

S-93 Please refer to response to comment S-90.

Response to Comment Set S's Attachment

S-94 The commenter states, "Although these variances in raw data or interpretation imply that some numerical results might change, these would not necessarily alter the overall conclusions or invalidate the assessment." This comment is noted and agreed.

S-95 This comment pertains to numerous portions of the System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project.~~, and is included as a part of Appendix H of the Draft EIR.~~ Revisions have

been made to the System Safety and Risk Upset report, and it is included as Appendix H-3 of this Revised Final EIR. ~~are included in Section 4.0 of this Final EIR.~~

Section 2.1.1, bottom of page 2 The recommended additional wording has been added.

Section 4.1.1, page 11 The commenter notes that different sources provide different values and definitions for mortality after exposure to fires. The commenter notes that a radiant heat flux of 5,000 btu/ft^2-hr is cited by one source as resulting in a 1 percent mortality after 30 seconds of unabated exposure. In fact, in many cases, an able-bodied person would take actions to increase the separation distance or seek cover during that 30 second period. The Draft EIR is correct; the reference cited (CDE 2007) uses a 1 percent mortality for this radiant heat flux level. The System Safety and Risk Upset report text has been revised to reflect the variance in different data sources. Refer to page 22 of ~~the~~ Section 4.1.1 of the System Safety and Risk of Upset Report included in this Revised Final EIR as Appendix H-3 for revisions to the report ~~Draft EIR~~.

~~However, only the 8,000 btu/ft^2-hr radiant heat flux isopleth was used in the quantitative risk assessment which begins on page 30 of the report. As a result, any conservatism that may have been implied by these differences of professional opinion in the text on page 11 of the report was not reflected in the analysis. In fact, any potential impacts beyond the 8,000 btu/ft^2-hr isopleth were excluded from consideration, since able bodied persons would normally be expected to escape the exposure before the impact would be serious.~~

Section 4.1.2, pages 13-14 The commenter suggests that presenting gas pipeline release data for the period between 1970 through June 1984 is not relevant. Table ~~4.1.2-1~~ 4.2.5-1 of the System Safety and Risk of Upset report summarizes the various release data sets. As indicated in this table, the frequency of reportable incidents for gas lines from 1970 through June 1984 is essentially the same as that for hazardous liquid lines, during the period when the reporting criteria was the same ($5,000). This demonstrates the similar incident rates between gas and hazardous liquid pipelines subject to the USDOT's jurisdiction. The data also helps illustrate the reduction in the frequency of injuries and fatalities over the past four decades. It should be

noted that these baseline data were not used in the quantitative analysis~~, which begins on page 30 of the System Safety and Risk of Upset report~~.

Section 4.1.2, pages 14-15 The commenter questions the USDOT frequency of release data provided for July 1984 through 2007. However, the commenter is not making an "apples to apples" comparison. The commenter has tallied the "significant" incidents, as compiled by the USDOT. The Draft EIR presents the "reported" incidents, as reported to the USDOT. The USDOT filters the reported incidents and provides reports for "significant" pipeline incidents. These incidents include those which result in:

- fatality or injury requiring in-patient hospitalization;
- $50,000 or more in total costs (measured in 1984 dollars);
- highly volatile liquid releases of 5 barrels or more or other liquid releases of 50 barrels or more; or
- liquid releases resulting in an unintentional fire or explosion.

Section 4.2~~1~~.2, pages ~~14~~ 25 through 26 ~~15~~ of the System Safety and Risk of Upset report, included in Appendix H-3 of the Revised Final ~~Draft~~ EIR, have been revised to reflect this information. ~~Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

One of the primary differences is that the "reported" incidents include incidents that were considered significant in the judgment of the operator, even though they did not meet the other USDOT reporting criteria. As a result, there are a higher number of "reported" incidents than there are "significant" incidents. This difference is noteworthy. For the eight year period from 2002 through 2008, there were 368 "significant" incidents and 614 "reported" incidents from onshore gas transmission pipelines.

Section 4.2~~1~~.2, pages 25 ~~14~~ through 26 ~~15~~ of the System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project, is included as a part of Appendix H-3 of the ~~Draft~~ Revised Final EIR and has been revised to clarify this difference. ~~(pages 14 and 15).~~ The text has also been revised to correct an error on page 26 ~~15~~ of the report, where some gathering line incidents were included in the data set. ~~No changes to the Draft EIR were necessary.~~

The commenter notes that there were 323 "significant" incidents on onshore gas transmission lines between 1988 through 2008. This figure is in error. Data pulled from the USDOT Pipeline and Hazardous Materials Safety Administration (PHSMA) web site on July 3, 2009 indicates that there were 846 "significant" incidents on onshore gas transmission pipelines during this eleven year period and an additional 262 on offshore gas transmission line segments, for a total of 1,108. Some of the incident rates cited by the commenter are also in error due to the incorrect number of incidents used in the calculations. The table of "significant" incidents from onshore transmission pipelines, pulled directly from the PHSMA web site on July 3, 2009 is presented below. Similar tables are available for offshore and gathering lines.

National Gas Transmission Onshore:
Significant Incidents Summary Statistics: 1988-2008

Year	Number	Fatalities	Injuries	Property Damage ($)
1988	31	2	9	6,707,494
1989	29	4	15	16,303,907
1990	36	0	15	12,752,888
1991	27	0	11	14,456,387
1992	32	3	14	13,078,380
1993	43	1	16	21,762,671
1994	34	0	15	53,262,153
1995	22	0	7	8,269,519
1996	34	1	5	12,589,358
1997	26	1	5	11,068,642
1998	40	1	11	40,150,999
1999	34	2	8	19,370,527
2000	45	15	16	16,897,783
2001	45	2	5	12,977,700
2002	40	1	4	21,306,317
2003	61	1	8	52,523,788
2004	43	0	2	10,045,994

Year	Number	Fatalities	Injuries	Property Damage ($)
2005	64	0	5	134,090,086
2006	60	3	4	29,028,775
2007	55	2	7	40,022,492
2008	45	0	5	105,159,045
Total	846	39	187	651,824,913
Source: http://primis.phmsa.dot.gov/comm/reports/safety/SigPSI.html				

The PHMSA onshore transmission pipeline incident report above was independently reconciled to within less than 4 percent of the data included in the PHMSA transmission pipeline raw incident database. The raw transmission line incident database was downloaded from the PHMSA web site on July 3, 2009. All incidents which occurred outside the period of January 1, 2002 and December 31, 2008 were deleted. All incidents which were indicated to have occurred on an "offshore" or "gathering" line segment were also deleted. The remaining data was filtered to only include those incidents which resulted in $50,000 or greater in property value, an injury, or a fatality. This resulted in 535 incidents for the 2002 through 2008 period, slightly more than the 516 incidents reported by PHMSA for the same period in the above table. The difference is that the PHMSA report reflects adjustments in the property damage to convert the result to 1984 constant dollars; this results in somewhat fewer incidents being included in their report than the reconciliation, which did not include an adjustment for inflation.

Section 4.1.2, page 16 Figure 4.2~~1~~.2-1 and related text on pages 27 and 28 ~~16~~ of the System Safety and Risk of Upset report, included as Appendix H-3 of this Revised Final EIR, have been modified to include "significant" incidents. ~~No revisions to the Draft EIR are necessary. Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

Section 4.1.2, page 17 A value for "significant" incidents has been added to the bullet list on page 28 ~~17~~ of the System Safety and Risk of Upset report, included as Appendix H-3 of this Revised Final EIR. The value is the same as that proposed by the commenter. ~~No revisions to the Draft EIR were necessary. Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

Section 4.1.2, page 18 Figure 4.2~~1~~.2-2 on page 29 ~~18~~ of the System Safety and Risk of Upset report, included in Appendix H-3 of this Revised Final ~~the Draft~~ EIR has been updated. ~~Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

Section 4.1.2, page 20 Table 4.2.5-1 ~~4.1.2-1~~ on page 31 ~~20~~ of the System Safety and Risk of Upset report, included in Appendix H-3 of this Revised Final ~~the Draft~~ EIR has been updated. ~~Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

Section 4.1.2, pages 18 through 20 [This information is now pages 29 through 31 of the System Safety and Risk of Upset Report included as Appendix H-3 of this Revised Final EIR]. The commenter suggests that the U.S. hazardous liquid pipeline leak history may not be relevant. However, for the period cited, the reporting threshold was the same as the gas transmission pipelines for the 1970 through June 1984 period ($5,000). During these periods, where the reporting threshold was the same, the frequency of incidents was essentially identical. These data provide a useful benchmark for predicting incident frequencies of a similar size. The major failure modes are similar for both modern gas and hazardous liquid pipelines subject to USDOT jurisdiction (e.g., third party damage, external corrosion, and other causes).

The California hazardous liquid pipeline data is also useful. These data, which were presented in the California Hazardous Liquid Pipeline Risk Assessment (Payne, Brian L. et al., EDM Services, Inc. 1993. California Hazardous Liquid Pipeline Risk Assessment, Prepared for California State Fire Marshal, March.) facilitated the assessment of impacts caused by a variety of parameters (e.g., operating temperature, pipe age, operating pressure, operating stress level, etc.). These data were used to help develop the baseline frequency of unintentional releases used in the Draft EIR.

Section 4.1.2, page 21 The commenter notes that many of the factors in the bulleted list can be attributed to features associated with older pipelines and construction methods and that the baseline release frequency should be adjusted accordingly. As noted on pages 28 through 33 ~~23 and 27~~ of the System Safety and Risk of Upset report, the baseline incident rate for third party damage was reduced by 30 percent, the external corrosion incident rate was reduced by one-third, and the incident rate for all other causes was

reduced by one-third. The resulting baseline incident rate used in the Draft EIR before mitigation was 0.196 incidents per 1,000 mile-years (reference page 28 ~~27~~ of the System Safety and Risk of Upset report). This result is less than 9 percent higher than the commenter proposed baseline incident rate of 0.18 incidents per 1,000 mile-years. ~~(See comment regarding page 31 of the System Safety and Risk of Upset report.)~~ This difference does not have a meaningful impact on the study results. Further, ~~past~~ post mitigation, the baseline incident rate was reduced by 50 percent to 0.098 incidents per 1,000 mile-years; this value is roughly one-half the value proposed by the commenter.

Section 4.1.2, page 23 The commenter suggests that additional reductions should be made to address issues such as the resistance of the pipe to immediate penetration from equipment due to the proposed pipe wall thickness. The Draft EIR did consider the effect of additional wall thickness. The System Safety and Risk of Upset included an adjustment to the baseline incident rate, assuming that the mitigation measure would require the 30-inch diameter lines to have a minimum pipe wall thickness of 0.375-inches. The effect of this mitigation is discussed on page 88 ~~57~~ of the revised System Safety and Risk of Upset report included as Appendix H-3 of this Revised Final EIR. As noted, the increased pipe wall thickness, increased depth of cover, and supplemental third party protection was assumed to reduce the frequency of third party caused incidents by one-third. At the time the Draft EIR was prepared, PG&E's engineering of the pipeline was not complete. As a result, the proposed pipe wall thickness was subject to change. Therefore, the benefits provided by the increased pipe wall thickness were considered post mitigation.

~~It should be noted that the baseline incident rate used in the Draft EIR before mitigation was 0.196 incidents per 1,000 mile years (reference page 27 of the System Safety and Risk of Upset report). This result is less than 9 percent higher than the commenter proposed baseline incident rate of 0.18 incidents per 1,000 mile-years, which is intended to reflect reductions for additional pipe wall thickness, depth of cover, etc. Post mitigation, the Draft EIR assumed that the baseline frequency of unintentional releases would be reduced by approximately 50 percent (reference page 4.7-39 of the Draft EIR) to 0.098 incidents per 1,000 mile-years; this value is slightly more than one-half (54 percent) the value proposed by the commenter.~~

Section 4.2.1 Page 27 The commenter notes that PG&E will be installing remote monitoring of cathodic protection potential at approximately one mile intervals and indicates that this will reduce the likelihood of external corrosion caused incidents. While these devices offer real time monitoring of the pipe to soil potential at the point of installation, they do not provide any data for points in between. As a result, they are not effective in preventing early detection of pitting corrosion due to coating holidays, or localized interference from third party substructures, etc. The external corrosion incident rate used in the Draft EIR was reduced by one-third to reflect the fact that the pipeline will be operated at ambient temperatures, have modern externally coated pipe, and an impressed current cathodic protection system (reference page ~~27~~ 28 of the revised System Safety and Risk of Upset report). The resulting baseline incident rate used in the Draft EIR before mitigation was 0.196 incidents per 1.000 mile-years (reference page ~~27~~ 28 of the System Safety and Risk of Upset report). This result is less than 9 percent higher than the commenter proposed baseline incident rate of 0.18 incidents per 1,000 mile-years.

Section 4.1.3, page 29 and 30 Table 4.4.2-1 ~~4.1.3-2~~ does not contain any data for LPG lines. The text on page 40 ~~30~~ of the System Safety and Risk of Upset report, included in Appendix H-3 of this Revised Final ~~the Draft~~ EIR, has been revised to avoid confusion, as requested by the commenter. No revisions to the Draft EIR were necessary. ~~Refer to Section 4.0 of this Final EIR for revisions to Appendix H of the Draft EIR.~~

Section 4.1.3, page 30 The commenter states that the probability of a worst-case scenario is greater in a rural location due to the higher operating stress levels and typically thinner wall pipe used in rural areas. The commenter notes that Class 3 lines comprise 11 percent of the total gas pipeline mileage and 14 percent of the gas pipeline reportable incidents, but that there has only been one fatality caused by a pipeline located in a Class 3 area since 1989. Since 2002, there have been no fatalities resulting from pipelines located in Class 3 or 4 areas. The commenter further states that the heavier pipe wall thickness and lower operating stress affects the susceptibility to failure and can affect its mode.

While the Class 3 line mileage percentage cited by the commenter has not been independently verified, the data indicates that the incident rate for pipelines located in Class 3 areas was 27 percent higher than one would

predict using the same incident rate for all area Classes. The Draft EIR uses the same baseline incident rate for unintentional releases for all area Classes.

The data set cited by the commenter for fatalities in Class 3 and 4 areas is very small; the data set is too small to be statistically relevant for evaluating differences in the frequency of fatalities in different area Classes. For example, there were only 7 fatalities from gas transmission pipelines for the seven year period from 2002 through 2008. For the fourteen-year period from 1988 through 2008, 6 of the 39 fatalities (15 percent) have resulted from unintentional releases from onshore gas transmission pipelines in Class 3 and 4 areas. Using the line mileages provided by the commenter, 11.7 percent of the gas gathering and transmission line pipe was in Class 3 and 4 areas (11.4 percent in Class 3 and 0.3 percent in Class 4 areas). In other words, 15 percent of the fatalities resulted from releases on 11.7 percent of the pipe; this indicates that the fatality rate in Class 3 and 4 areas was about 28 percent higher than one would predict using the same fatality rate for all area Classes. It should be noted that the actual difference may vary somewhat, since the distribution of pipe in various area Classes includes some onshore gas gathering lines, in addition to the gas transmission pipelines; the fatalities only include those which occurred on onshore gas transmission lines. However, since this data set is so small, a single catastrophic incident could drastically skew the result and any conclusions that might be drawn.

In the absence of sufficient data to fully support a more rigorous analysis which differentiates the frequency of incidents in different area Classes, the Draft EIR used a common baseline frequency of unintentional release for all area Classes. This baseline release frequency was then used in the quantitative risk assessment which considered all of the possible release scenarios and their potential impacts on the various populations along the pipeline. The highest quantified individual risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. ~~This resulted in an~~

~~unmitigated risk of serious injury or fatality of 6.08×10^{-5} per year (annual likelihood of 1:16,000). This result was roughly one-third the value of 1.7×10^{-4} (annual likelihood of 1:6,000) which was obtained in the qualitative risk assessment using a frequency of 0.004 fatalities per 1,000 mile-years. (Reference page 29 of the System Safety and Risk of Upset report.)~~ It should be noted that ~~this~~ the qualitative approach is often used to evaluate pipeline risk in lieu of a quantitative approach, since the quantitative approach used in the Draft EIR, as revised in the Revised Final EIR, is much more rigorous and resource intensive.

Section 4.1.4, page 31 The commenter states that a baseline incident rate of 0.18 incidents per 1,000 mile-years could have been used instead of the baseline incident rate of 0.196 incidents per 1,000 mile-years which was used in the quantitative risk assessment presented in the System Safety and Risk of Upset report. This difference is less than 9 percent and would not have a meaningful impact on the study results. It should also be noted that the baseline rate of 0.196 incidents per 1,000 mile-years is before mitigation; as noted on page 4.7-39 of the Draft EIR, the proposed mitigation reduces the risk by 50 percent to 0.098 incidents per 1,000 mile-years.

Section 4.1.4, page 43 The migration of gas from a pipeline leak or rupture into a residence or building, although rare, has occurred. When the conditional probabilities used in the System Safety and Risk of Upset report are combined, the predicted probability of an indoor explosion resulting from a 1-inch diameter release from the proposed pipeline is less than 0.1 percent. In other words, this scenario results from less than one in one thousand releases.

Section 4.1.4, page 49 From 1988 through 2008, 6 of the 39 fatalities (15 percent) that have resulted from unintentional releases from onshore gas transmission pipelines have occurred in Class 3 and 4 areas. Since this data set is so small, a single catastrophic incident could drastically skew the result and any conclusions that might be drawn.

In the absence of sufficient data to fully support a more rigorous analysis which differentiates the frequency of incidents in different area Classes, the Draft EIR used a common baseline frequency of unintentional release for all area Classes. This baseline release frequency was then used in the quantitative risk assessment which considered all of the possible release

scenarios and their potential impacts on the various population densities along the pipeline. The highest quantified individual risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. ~~This resulted in an unmitigated risk of serious injury or fatality of 6.08×10^{-5} per year (annual likelihood of 1:16,000). This result was roughly one-third the value of 1.7×10^{-4} fatalities per year (annual likelihood of 1:6,000) which was obtained in the qualitative risk assessment, which used a frequency of 0.004 fatalities per 1,000 mile-years. (Reference page 29 of the System Safety and Risk of Upset report.)~~ It should be noted that the ~~this~~ qualitative approach is often used to evaluate pipeline risk in lieu of a quantitative approach. However, the quantitative approach used in the Draft EIR, as revised in this Revised Final EIR, is much more rigorous and resource intensive.

Section 4.1.4, page 52 ~~From 1988 through 2008, 6 of the 39 fatalities (15 percent) that have resulted from unintentional releases from onshore gas transmission pipelines have occurred in Class 3 and 4 areas. Since this data set is so small, a single catastrophic incident could drastically skew the result and any conclusions that might be drawn.~~

~~In the absence of sufficient data to fully support a more rigorous analysis which differentiates the frequency of incidents in different area Classes, the Draft EIR used a common baseline frequency of unintentional release for all area Classes. This baseline release frequency was then used in the quantitative risk assessment which considered all of the possible release scenarios and their potential impacts on the various population densities along the pipeline. This resulted in an unmitigated risk of serious injury or fatality of 6.08×10^{-5} per year (annual likelihood of 1:16,000). This result was roughly one-third the value of 1.7×10^{-4} fatalities per year (annual likelihood of 1:6,000) which was obtained in the qualitative risk assessment, which used a frequency of 0.004 fatalities per 1,000 mile-years. (Reference page 29 of the System Safety and Risk of Upset report.) This The qualitative approach is often used to evaluate pipeline risk in lieu of a quantitative approach, since~~

~~the quantitative approach used in the Draft EIR, is much more rigorous and resource intensive.~~

The text of the System Safety and Risk of Upset is correct. If the population density increases, the likelihood of serious injuries and fatalities will increase accordingly, should the population be exposed to a fire or explosion resulting from an unintentional release. The data provided by the commenter indicates that the incident rate for pipelines located in Class 3 areas was 27 percent higher than one would predict using the same incident rate for all area Classes. ~~(See response to page 30 comment above.)~~ It should be noted that the Class 3 line mileage percentage cited by the commenter has not been independently verified.

Section 4.1.4, page 55 Appendix B of 49 CFR 192 allows the use of pipe manufactured to a variety of specifications. There is no requirement for pipe to comply with a specific edition of any of these specifications. The regulation also allows pipe of unknown or unlisted specifications to be used. And finally, pipe manufactured before November 12, 1970 may be used subject to certain restrictions. Because of the benefits of using modern pipe, the use of pipe manufactured in the year 2000 or later was included in the proposed Project mitigation. (Please refer to page 86 ~~56~~ of the revised System Safety and Risk of Upset report, included as Appendix H-3 to ~~the Draft~~ this Revised Final EIR.)

Section 4.1.4, page 57 Comment acknowledged.

S-96 The benefits of a modern pipeline have been incorporated into the baseline incident rate. The baseline frequency of unintentional releases used in the Draft EIR is 0.196 incidents per 1,000 mile-years. This frequency was reduced 50 percent to 0.098 incidents per 1,000 mile-years, post mitigation. For reference, the frequency of reported incidents from onshore gas transmission pipelines from 2002 through 2008 was 0.30 incidents per 1,000 mile-years, essentially three times the rate used for the proposed Project after mitigation. For reference, the frequency of "significant" incidents from onshore gas transmission pipelines from 2002 through 2008 was 0.18 incidents per 1,000 mile-years.

S-97 The data set cited by the commenter for fatalities in Class 3 and 4 areas is very small; the data set is too small to be statistically relevant for evaluating differences in the frequency of fatalities in different area Classes. For example,

there were only 7 fatalities from onshore gas transmission pipelines for the seven year period from 2002 through 2008. For the 14 year period from 1988 through 2001, there were 3 fatalities in Class 3 areas and 3 fatalities in Class 4 areas. During this fourteen-year period, 6 of the 32 fatalities (19 percent) resulting from unintentional releases from onshore gas transmission pipelines occurred in Class 3 and 4 areas. If these two data sets are combined, from 1988 through 2008, 6 out of 39 fatalities (15 percent) resulted from unintentional releases from onshore gas transmission pipelines occurred in Class 3 and 4 areas. Since this data set is so small, a single catastrophic incident could drastically skew the result and any conclusions that might be drawn.

However, using the gas transmission and gathering pipeline mileage data compiled by the commenter (11.4 percent Class 3 and 0.3 percent Class 4), which has not been independently verified, it is clear that the frequency of fatalities in Class 3 and 4 areas is higher than in Class 1 and 2 areas. Specifically, from 1988 through 2008, 15 percent of the fatalities occurred in Class 1 ~~3~~ and 2 ~~4~~ areas while only 11.7 percent (11.4 + 0.3 percent = 11.7 percent) of the pipeline mileage was in Class 3 and 4 areas. It should be noted that the actual difference may vary somewhat, since the distribution of pipe data in various area Classes includes some onshore gas gathering lines, in addition to the onshore gas transmission pipelines; the fatalities only include those which occurred on onshore gas transmission lines.

COUNTY OF PLACER
Community Development Resource Agency

ENGINEERING & SURVEYING

MEMORANDUM

TO: MAYWAN KRACH, ECS DATE: JUNE 11, 2009

FROM: PHILLIP A. FRANTZ, ESD ~ ENGINEERING & SURVEYING DEPARTMENT

SUBJECT: PG&E LINE 406/407 NATURAL GAS PIPELINE ~ DEIR

Thank you for the opportunity to review the above-mentioned project for concerns relating to Placer County. After reviewing the submitted information, the Community Development Resource Agency ~ Engineering & Surveying Department and the Department of Public Works offer the following comments for your consideration regarding the proposed project:

1. Pages 3-65 through 3-67, Table 3-3, Cumulative Impact Analysis Projects: Most of the Placer County identified projects have construction completion dates of 2008 and 2009. These dates are not accurate as these improvements are not close to being constructed. Please revise accordingly. T-1

2. The proposed pipeline alignment must be coordinated to accommodate the ultimate 6 lane configuration for Baseline Road. The improvements at major intersections, such as Watt Ave., Brewer Road or Locust Road have not been designed yet, but may be up to 11 lanes wide, with sidewalks and landscaping areas adjacent to the roadway. T-2

3. Will street light or sign post foundations be precluded from the 50 ft easement? T-3

4. There was a previous proposal for a bridge type pedestrian overcrossing of Baseline Road, connecting Placer Vineyards to Sierra Vista, would the necessary foundations be permitted within the 50 ft easement? T-4

5. The final location of the Baseline/Brewer Main Line Valve should be coordinated with the Placer Vineyards development since it appears the valves are proposed to be located across the road from the high school. T-5

6. Page 4.13-20, paragraph 3: Brewer Road should be added to the list of impacted roadways. T-6

7. Advisory Comment: While the intersection is not within Placer County, the DEIR does not address how the proposed gas line alignment would accommodate the proposed reconfiguration of the Natomas Road intersection and UPRR track crossing along Riego Road. Both Placer and Sutter County have been notified by the PUC and UPRR that construction of an overcrossing of the railroad tracks will be required when the Riego Road/ Baseline Road is ultimately widened to 6 lanes. T-7

cc: Andrew Gaber, DPW ~ Transportation Division

Ref: state of ca pge line 406-407 natural gas pipeline.doc

RESPONSE TO COMMENT SET T

T-1 Comment acknowledged. Placer County was contacted and asked to provide appropriate dates for their cumulative projects listed in Table 3-3 of Section 3.0, Alternatives and Cumulative Projects. Placer County indicated that updating construction dates for the PVSP is difficult due to current litigation. Accordingly, Draft EIR pages 3-65 through 3-67, Table 3-3, have been updated to correctly identify that construction dates for projects within Placer County are unknown. Additionally, related changes have been made to page 4.12-33, line 5 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

T-2 Please refer to response to comment K-2. This section of Line 407 is planned for construction in 2012. PG&E indicated they have met the civil engineering firm of McKay and Somps representing the developers of SVSP, PVSP, and Sutter Pointe Specific Plan, on several occasions in their Roseville and Sacramento offices in order to coordinate the pipeline vertical and horizontal alignment with the future road alignments dictated by the City of Roseville. PG&E has used the best design information available in locating the pipeline. Currently the road improvement plans are limited to line work in plan view only. The Baseline Road design has not progressed to include future elevations, drainages, or utility infrastructure. In the absence of final road improvement design drawings, PG&E has increased cover at major road crossing to 8 feet. In PG&E's experience, 8 feet of cover will generally allow for typical road construction and utility crossings. PG&E would like to work with Placer County to coordinate design of roads and adjacent areas so that potential conflicts can be addressed prior to the construction of the pipeline.

A mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

T-3 Streetlight and sign-post foundations will be allowed within the 50-foot permanent easement as long as proper clearance from the pipeline is maintained at 10 feet, and proper notification to PG&E is made prior to construction for concurrence.

T-4 A bridge-type pedestrian overcrossing of Baseline Road would most likely be allowed, but a review of the foundation design and proximity to the pipeline by PG&E would be required.

T-5 The eastern side of the valve lot is approximately 275 feet west of Brewer Road and approximately 400 feet west of the 1500-foot school ~~buffer~~ study zone, rather than across the road from the high school. Please refer to response to comment G-14 for further discussion on the Baseline/Brewer Main Line Valve Station placement.

T-6 Comment acknowledged. Brewer Road has been added to the list of impacted roadways on page 4.13-20 of the Draft EIR. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

T-7 PG&E indicated they have coordinated with the developers and included the future Riego Road design in the pipeline drawings to ensure that the pipeline will not be in conflict with the six lane expansion. Although PG&E does not have the detailed Riego Road design through the Natomas Road Intersection and Union Pacific Rail Road (UPRR) track crossing, the pipeline permanent easement is set back as if there are six lanes traveling through this area. PG&E is maintaining the setback distance from the current design of the six lanes traveling from the east and west along Baseline Road. Currently, PG&E's design location for its permanent 50-foot easement has the southern boundary located 70 feet north of the existing Riego Road centerline, tapering to 60 feet north of centerline as the pipeline progresses eastward due to a slight offset in Riego Road. In addition to the setback, PG&E has designed a HDD crossing under the UPRR, Natomas Drain, and Natomas Road. The HDD entry location is 275 feet east of the UPRR tracks and will exit approximately 400 feet west of Natomas Road. The pipeline will be at an approximate depth of 50 feet below the ground surface between the entry and exit locations.

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June 12, 2009

Via fax: (916) 574-1885
(original to follow by U.S. Mail)

Crystal Spurr
Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Re: PG&E Line 406-407 Natural Gas Pipeline
SCH No. 2007062091
Comments on CA State Lands Commission Draft EIR No. 740

Dear Ms. Spurr:

We are writing on behalf of the Measure M Group, the proponents of the Sutter Pointe Specific Plan (SPSP) in Sutter County, currently under consideration for approval by the Sutter County Planning Commission and Board of Supervisors. The Measure M Group generally supports the extension of new natural gas pipelines as outlined in the DEIR, as the lines would serve the new urban development planned for the Sutter Pointe Specific Plan area in south Sutter County. However, the Measure M Group has several concerns regarding the assessment of risk to the public and the adequacy of the mitigation measures discussed in the Draft EIR to address such risks resulting from the proposal to construct and operate the new natural gas transmission pipelines. While we recognize that some effort has been made to quantify and address the risks, more can and should be done. The Measure M Group also has concerns about the construction timing and sequencing described in the EIR. As currently presented, we believe the EIR fails to fully comply with the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). In the following discussion, we offer specific suggestions for additional or revised mitigation measures that we believe could address our concerns.

U-1

Public Resources Code section 21002 requires agencies to adopt feasible mitigation measures (or feasible environmentally superior alternatives) in order to substantially lessen or avoid the otherwise significant adverse environmental impacts of proposed projects. (Pub. Resources Code, §§ 21002, 21081, subd. (a); CEQA Guidelines, §§ 15002, subd. (a)(3), 15021, subd. (a)(2), 15091, subd. (a)(1).) To effectuate part of this general requirement, EIRs must set forth mitigation measures that decisionmakers can adopt at the findings stage of the planning process. (Pub. Resources Code, § 21100, subd. (b)(3); CEQA Guidelines, §§ 15126, subd. (e), 15126.4.)

Mitigation measures should be capable of: (a) "[a]voiding the impact altogether by not taking a certain action or parts of an action"; (b) "[m]inimizing impacts by limiting the degree or magnitude of the action and its implementation"; (c) "[r]ectifying the impact by repairing, rehabilitating, or restoring the impacted environment"; or (d) "[r]educing or eliminating the impact over time by preservation and maintenance operations during the life of the action." (CEQA Guidelines, § 15370.)

U-1 Cont.

"An adequate EIR must respond to specific suggestions for mitigating a significant environmental impact unless the suggested mitigation is facially infeasible." (*Los Angeles Unified School District v. City of Los Angeles* (1997) 58 Cal.App.4th 1019, 1029-1030.)

While an acceptable level of individual risk for hazards associated with underground pipelines has not been established by the State of California or the federal government for new development projects such as the Sutter Pointe Specific Plan, standards have been proposed and used by various governmental agencies worldwide.[1] These standards generally consider individual risk levels below 1×10^{-6} (one-in-a-million) acceptable.

A local community's tolerance for risk and risk acceptability needs to be taken into consideration in determining a threshold value above which individual risk levels are unacceptable. As mentioned in Item No. 9 below, the Sutter Pointe community has determined the acceptable level of individual risk to be one-in-a-million (1:1,000,000 or 1×10^{-6}). Accordingly, any proposal that results in a higher level of risk to the community would be deemed unacceptable by the SPSP community.

U-2

Our overarching concern with this DEIR is with the estimated risk from the proposed pipeline (1:27,000), which is approximately 60 times greater than the estimated risk that is generally considered acceptable. Unless PG&E is required to take steps to decrease the likelihood of injury or fatalities from a rupture of the proposed pipeline, it is

[1] Cornwell, John B. and Meyer, Mark M., Quest6 Consultants, Inc., *Risk Acceptance Criteria or "How Safe is Safe Enough?"*, October 13, 1997.

reasonable to anticipate that adjoining residential and commercial land uses will be significantly constrained (i.e., that setbacks would be required). While one might be able to site parking lots or streets directly adjacent to the fifty-foot easement line, buildings may have to be set back significantly greater distances (perhaps tens to hundreds of feet). This could severely impact the resulting buildable areas of parcels along the pipeline. This significant issue is explained in more detail in our comments pertaining to specific pages and sections below. U-2 Cont.

1. Page ES-17, Impact No. HAZ-2: Mitigation measures should be increased to reduce the risk to acceptable levels. See our suggestions in Comment #10, below. U-3

2. Page ES-18, Impact No. LU-1: The DEIR states that the project will not conflict with SPSP; however, the unacceptable level of risk may result in the creation of no-build zones within SPSP – this would be unacceptable to Measure M Owners. (See also pages 4.9-19 through 4.9-23). U-4

3. Page 2-31, Powerline Road Main Line Valve (PRV): The location of this facility isn't clear, but it should be located on the northeastern corner of the intersection of Riego Road and Powerline Road – not southerly of Riego Road. U-5

4. Page 2-50, Giant Garter Snake Construction Scheduling: Several strategies are listed, but they could adversely impact existing rice farming operations. These impacts need to be resolved during right-of-way acquisition proceedings so that landowners can properly anticipate the impacts to their farming operations. U-6

5. Page 2-53, Trenching: The horizontal alignment and vertical profile of the pipeline need to anticipate the future location, depth and size of underground improvements within the SPSP area. The horizontal alignment and vertical profile of the pipeline should be adjusted as needed to allow future construction of the SPSP infrastructure. U-7

6. Page 2-71, Pipe Bouyancy, Line 11: The effect of a higher Factor of Safety would appear to be to "increase," not "decrease," the downward force of backfill acting on the pipe. U-8

7. Page 2-83, Operation, Maintenance, and Safety Controls: This section outlines the proposed monitoring efforts PG&E plans for the pipeline to address its potential impacts over time. Section 2.8.3 sets forth the concept of High Consequence Areas (HCA), which includes the SPSP area. This section talks about a Pipeline Integrity Management Plan. Section 2.8.4 also refers to an Emergency Response Plan. Notwithstanding the attempts in these sections to provide reassurance, a later section of the DEIR reveals that U-9

the level of risk associated with pipeline is unacceptable (see Table 4.7-5 on Page 4.7-33 which shows the annual likelihood of serious injury or fatality to be 1:27,000 for Line 407E (the section of line running through SPSP)). As stated earlier, the generally accepted level of risk is considered to be 1:1,000,000, which is consistent with the SPSP community's risk tolerance. U-9 Cont.

Also, we were unable to find either of the plans mentioned above in the DEIR. We would appreciate the opportunity for our engineering consultants to review these plans to be sure they adequately address our concerns.

8. Page 3-63, Table 3-3, Sutter County: The description incorrectly characterizes the timing of the widening of Riego Road. We understand that the current estimate is for that work to begin in 2011. U-10

9. Page 4.7-22, Sutter County General Plan: You should be aware that development standards being developed by the Measure M Group and Sutter County relating to the siting and routing of energy facilities within the SPSP area. We refer you to Section 9.5 Dry Utilities (Page 9-18 of the Specific Plan). Specific Plan Policies 9.5-8 through 9.5-11 deal specifically with natural gas facilities. The provisions of Division 15 of the Sutter Pointe Land Use and Development Code (Section XX00-1511) also require compliance with the provisions of the Specific Plan standards. While we understand that the California PUC regulates the design of natural gas facilities (and supersede local codes and regulations), these Specific Plan standards set forth the community's expectations with respect to the location of such facilities, and the level of risk the community is willing to accept. These standards specifically set the risk level at 1:1,000,000, which, as stated earlier, are generally accepted worldwide as the appropriate level of risk for the general public. PG&E's proposal does not come close to meeting these expectations. (See also, Page 4.12-16). U-11

10. Page 4.7-33, Impact HAZ-2, Table 4.7-5: This table indicates the annual likelihood of serious injury or fatality for Line 407E (the section of the pipeline in the SPSP area) at 1:27,000 or 4.93×10^{-5} (a significantly higher level of risk than generally accepted (1:1,000,000)). In fact, the level of risk proposed by PG&E is approximately 60 times greater than the generally accepted level of risk of 1:1,000,000. U-12

CEQA does not allow an agency to simply declare an impact to be significant and unavoidable without substantial evidence that mitigation to a less than significant level is infeasible. In fact, we believe additional mitigation is quite feasible and should be considered for this project to provide a more acceptable level of risk protection.

Additional mitigation measures could include increasing the wall thickness of the pipe, using a higher grade of pipe, decreasing the hoop stress of the pipeline, providing a greater depth of cover, providing more frequent inspections, increasing the frequency and type of monitoring, better cathodic protection systems, more frequent patrolling and inspections, better line marking efforts, better public education efforts, development of emergency planning and training programs, and providing a better warning to future excavators than simply a buried yellow tape lying in the pipeline trench (for example, providing a concrete cap over the pipe, encasement of the pipe with concrete, encasement of the pipe with a sand envelope, etc.). In the final analysis, the desired level of protection should be one where there is not a need for no-build zones or set-backs of habitable structure and outdoor areas on developable land within SPSP. U-12 Cont.

Further, we propose that PG&E be required to prepare individual risk assessments for all proposed land uses along the route of the proposed pipelines within the SPSP area, and to develop appropriate mitigation measures that will reduce the risk to the adjacent land uses to mutually agreeable acceptable levels. The Measure M Group, in conjunction with Sutter County, is interested in working with PG&E to address our concerns. U-13

We appreciate your consideration of our comments. We would welcome the opportunity to discuss with you further our concerns about the compatibility of the existing plans and mitigation proposed for the pipeline as they affect the planned development for the SPSP area.

Sincerely,

Sabrina Teller

Sabrina V. Teller

RESPONSE TO COMMENT SET U

U-1 The risk assessment included risk measurement terminology that was not defined in the document, which has resulted in some confusion. The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. The EDM report findings are summarized in the Introduction to this section (Section 3.0) of the Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, regarding the risk analysis are provided in Section 4.0 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset. MM HAZ-2a and MM HAZ-2b have been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

The project design features and the proposed mitigation measures in the Draft EIR (MM HAZ-2a and MM HAZ-2b, as amended in this Revised Final EIR) reduce the risk by roughly 50 percent. These measures include the use of modern pipe, regular internal inspections using a high resolution instrument (smart pig), corrosion mitigation, and the installation of automatic or remotely operated shut-down valves. (See also the response to comment P-3, which provides a discussion of additional measures suggested by Hefner, Stark, and Marois.) ~~Even with the project design measures, regulations, and mitigation measures, the overall individual risk of fatality would still be approximately 1:30,000, which exceeds the individual risk significance threshold of 1:1,000,000 for serious injury or fatality (used by the California Department of Education for school sites).~~

~~Measures have been implemented to reduce the public risks. However, the lead agency recognizes that the risks remain significant even after mitigation. The CSLC will need to balance the economic, legal, social, technological, or other benefits of the proposed Project against its unavoidable environmental risks when determining whether to approve the Project. If the EIR is certified by the CSLC, a Statement of Overriding Considerations will need to be adopted at the time of certification and approval of the Project (CEQA Guidelines Section 15093).~~

Please refer to response to comment U-12 for a discussion of each specific mitigation suggested in this letter.

U-2 The individual risk significance threshold used in the Revised Final EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and

after mitigation is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~The individual risk criteria used by the commenter of 1:1,000,000 for serious injury or fatality is the same as that used in the Draft EIR. These criteria are outlined in Section 3.1 of the System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project, included as a part of Appendix H-3 of the Draft EIR.~~

~~As indicated in Table 4.7-5 of the Draft EIR, the total annual likelihood of serious injury or fatality is 1:16,000 before mitigation. The mitigation measures being imposed on the Project would reduce the risk by approximately 50 percent; however, the individual risk of serious injury or fatality would still be approximately 1:30,000, 33 times greater than the level of risk generally considered acceptable. (Please refer to page 4.7-39 of the Draft EIR.)~~

With regard to setback requirements (no-build zones) for pipelines, there are no specific set back requirements in the general plans or development codes of the affected local agencies and CPUC does not identify a setback requirement for pipelines. However, PG&E would maintain a 50-foot-wide permanent easement along the length of the Project, with the exception of the Powerline Road DFM, which would have a 35-foot-wide permanent easement. Assuming that the pipeline would be placed near the center of the easement, this would allow PG&E to restrict habitable structures from being built closer than 25 feet of the pipeline. This coupled with a minimum depth of 5 feet depth below ground surface, and 8 feet at known intersections, would minimize conflicts between the pipeline and other infrastructure construction, by burying the pipeline deeper than most other utilities.

U-3 The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

Societal Risk: Societal risk is the probability that a specified number of people will be affected by a given event. Several release scenarios were used that could impact both building occupants and vehicle passengers.

The California Department of Education (CDE) approach for evaluating the risk to the student population uses two calculated parameters: an average individual risk across the depth of the campus site, and a site population risk indicator parameter. The CDE does not specify numerical criteria of acceptability or unacceptability for these indicators (CDE Guidance Protocol for School Site Pipeline Risk Analysis, 2007).

The threshold values for societal risk vary greatly, depending on the agency or jurisdiction. There are no prescribed societal risk guidelines for the United States or the State of California. The Committee for the Prevention of Disasters and the Netherlands use an annual probability of 1.0×10^{-3} (1:1,000) or less. This criterion has been used to evaluate the proposed project.

The societal risk posed by the proposed project is less than the significance threshold of 1:1,000 or less.

~~The level of risk posed by Line 407E before mitigation is 1:27,000, 37 times greater than the level of risk generally considered acceptable. After mitigation, the level of risk posed by Line 407E would be approximately 1:40,000, 25 times greater than the level of risk generally considered acceptable. The level of individual risk for the entire proposed Project is presented above, in the response to comment U-2.~~

The commenter cited the following additional mitigation measures, which could be imposed to reduce the level of risk. As noted above, the revised risk analysis shows that the individual risk is less than significant before mitigation. ~~In addition~~ To reduce the risk further, many of these additional mitigation measures have already been incorporated into the Project, as ~~noted~~ listed below:

- Increase the Pipe Wall Thickness - The pipe as proposed has adequate thickness to resist damage from construction equipment beyond the size normally used in general construction. PG&E has proposed, as a part of their Project, to install the pipeline to meet or exceed the current pipeline regulations (49 CFR 192). Thick-walled steel pipelines are typically used for extreme conditions such as subsurface sea floor lines or risers. During the manufacturing of thick-walled steel pipelines, the cooling rate at the time of quenching of the pipe becomes slow, particularly at the central portion due to its thickness, resulting in insufficient strength and toughness. This is because the cooling rate is slow, and there is a high probability that the pipe will be brittle. As provided in the Project Description and on pages 4.7-36 and 4.7-37 of the Draft EIR, the following pipe wall thickness is proposed for the Project:

    - For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; 0.375-inch wall thickness pipe is proposed, 20% greater than the minimum required.

- For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; 0.406-inch wall thickness is proposed, 8% greater than the minimum required.

- For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; 0.500-inch wall thickness is proposed, 3% greater than the minimum required.

  The additional wall thickness will provide added strength. For example, the 0.375-inch to 0.406-inch thick pipe wall would resist a 73-ton machine and the 0.500-inch thick pipe wall would resist a 120-ton machine. As noted on page 88 ~~57 of~~ the revised System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. (October 2009) for the proposed Project and is included as ~~a part of~~ Appendix H-3 of ~~the Draft~~ this Revised Final EIR, "For 24-inch diameter pipe, a wall thickness of 0.375-inches or greater was found to reduce the frequency of third party caused unintentional releases by 80 percent."

- Higher Grade Pipe - PG&E has proposed using API 5L X-60 and X-65 pipe. These pipe materials have specified minimum yield strengths of 60,000 psi and 65,000 psi, respectively, and are at the upper range of pipe grades typically used for transmission pipelines. For reference, API 5L Grade B pipe, with a specified minimum yield strength of 35,000 psi, is commonly used for pipeline construction. Pipes with higher yields strengths than those proposed can suffer from metallurgical issues including excessive hardness, cracking, difficulty in welding, etc.

- Decreased Hoop Stress - The California Hazardous Liquid Pipeline Risk Assessment (Payne, Brian L. et al. EDM Service, Inc. 1993. California Hazardous Liquid Pipeline Risk Assessment, Prepared for California State Fire Marshal) studied the effect of operating pressure and hoop stress as a percentage of the specified minimum yield strength of the pipe. The study found that there was no statistical correlation between stress level or operating pressure and the likelihood that a pipe would leak or rupture. Although the study found that pipes operated at higher pressures and stress levels were actually less prone to leakage, these differences disappeared once other variables, such as pipe age and operating temperature were controlled in the logistic regressions.

- Greater Depth of Cover - As noted on page 4.7-36 of the Draft EIR, PG&E has proposed a minimum depth of cover of 60 inches (5 feet). 49 CFR 192.327 establishes the minimum depths of required cover. For Class 1 areas, a minimum of 30 inches of cover is required. For Class 2, 3, and 4 areas, a minimum depth of cover of 36 inches is required. As noted on page 88 ~~57 of~~ the revised System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project and is included as ~~a part of~~ Appendix H-3 of ~~the Draft~~ this Revised Final EIR, "Pipelines with a depth of cover of 48-inches or greater experienced a 30 percent reduction in third party caused incidents."

  In order to avoid potential conflicts with other utilities, a mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

- Increasing the Frequency and Type of Monitoring and Patrols - The inspection frequencies are summarized in Table 4.7-7 of the Draft EIR. As noted, for Class 3 areas, the pipeline must be patrolled and a leak survey must be conducted twice per year, in accordance with 49 CFR 192. PG&E must also subscribe to the USA North underground service alert "one-call" system in accordance with 49 CFR 192.614. Excavators are required by State law to notify this service at least 48 hours prior to beginning any excavation. The service then notifies all underground facility owners in the vicinity who respond and mark the location of their facilities on the ground. PG&E uses a Geographical Information Systems (GIS) map to maintain records of the installed lines to aid USA in determining if the pipelines are in the area when called and to redirect PG&E personnel in locating the pipelines.

- Better Cathodic Protection Systems - 49 CFR 192 requires the pipe to be cathodically protected. In addition, the pipe to soil potential must be checked annually and the rectifier readings must be checked at least six times per year. PG&E has proposed the installation of devices that can provide remote monitoring of pipe to soil potentials at approximately one-mile intervals along the pipeline. These devices provide real time pipe to soil potential data, enabling PG&E to identify major cathodic protection system deficiencies.

- More Frequent Inspections – Table 4.7-7 of the Draft EIR provides a list of inspections that are required for the proposed project. Cathodic protection

inspections and testing are done annually for the pipe to soil potential, and are done six times per year for the rectifier readings. The valve testing is done annually. Pipeline patrols are done up to two times per year. Leak surveys are done annually. MM HAZ-2a, on page 4.7-37 of the Draft EIR, as revised in the Revised Final EIR, provides additional ~~specific~~ inspection requirements which exceed those required by the federal regulation. Specifically, the mitigation measure requires that prior to beginning operations, PG&E must internally inspect the pipeline using a geometry inspection tool. Then within six months of initial operations, PG&E must conduct a baseline internal inspection using a high resolution instrument (smart pig). The internal inspections must be repeated every 7 years. These measures will help identify pipe defects.

- Better Line Marking Efforts - The line must be marked in accordance with 49 CFR 192.707. However, in Class 3 areas, above-grade line marking can be problematic due to street improvements, traffic, and landscaping. In these cases, the line will most likely be marked by installing small marker caps or paint markings on the pavement. PG&E markers are placed so that the next marker is within line of sight or no more than ½ mile away. In addition, PG&E must subscribe to the USA North underground service alert "one-call" system in accordance with 49 CFR 192.614 as discussed above.

- Better Public Education Efforts - A public awareness program must be developed per 49 CFR 192.616.

- Emergency Planning and Training Programs - Operations, maintenance, and emergency response procedures must be established in accordance with 49 CFR 192.605. These procedures must be reviewed and updated annually.

- Better Warning to Future Excavators Than Buried Yellow Tape - As noted in ~~on page 57 of~~ the revised System Safety and Risk of Upset report, which was prepared by EDM Services, Inc. for the proposed Project and is included as ~~a part of~~ Appendix H-3 of ~~the Draft~~ this Revised Final EIR, the use of supplemental third-party protection (e.g., marker tape, concrete cap, steel plates, etc.) has been shown to reduce third party intrusion incidents by 10 percent. Unfortunately, the source data do not differentiate between the various methods (e.g., marker tape versus concrete cap).

U-4 ~~Comment acknowledged. Please refer to response to comment U-3.~~ The Revised Final EIR provides an analysis that has been clarified to account for

individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk assessment included risk measurement terminology that was not defined in earlier versions of the document, resulting in some confusion. The revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the Revised Final EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk before mitigation is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

The required DOT regulations, along with PG&E Project features that exceed the minimum requirements, will reduce risks of project upset. Even though the project risk impacts are less than significant, Mitigation Measures MM HAZ-2a and MM HAZ-2b shall be implemented to further reduce risks of project upset.

U-5 The Powerline Road Main Line Valve is located on the northeast corner of Powerline and Riego roads.

U-6 Approximately 55.28 acres of rice fields would be disturbed during construction of the proposed Project. Of the 55.28 acres, 0.6 acre of rice field would be permanently removed due to construction of aboveground facilities. Draft EIR Section 2.0, Project Description, recognizes there are scheduling challenges when constructing in rice fields. The discussion on pages 2-50 and 2-51 describe how PG&E would coordinate with property owners prior to initiating any construction activities on agricultural lands, and would work to install temporary rice checks during the allowable GGS construction window in order to segregate the right-of-way from flooded rice fields. The discussion includes how PG&E would work with farmers to attempt to install the rice checks during their normal field preparation in the spring, and to remove the rice checks after the fields have been drained following construction.

U-7 In planning the proposed Project, PG&E has taken future development along the proposed alignment in all four counties into consideration and, as a result, has proposed to construct the pipeline at depths of 60 inches (5 feet) or greater. At intersections, PG&E is proposing 8 feet below ground surface. Also, see responses to comments H-5 through H-7 (Yolo County); K-2 through K-5 (City of Roseville); R-1 through R-7 (Sierra Vista Owners Group); and T-2 through T-4 (Placer County).

The commenter has indicated that the proposed pipeline should be buried deeper to avoid conflicts with other utilities. A mitigation measure (MM LU-1d) has been added to section 4.9, Land Use and Planning, to address potential conflicts with utilities. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

U-8 Because the force of backfill is downward, applying a factor to decrease this calculated force would result in a more conservative net pipeline buoyant force. Page 2-71 of the Draft EIR has been revised to provide additional clarity. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

U-9 Refer to Response U-4.

~~Measures have been implemented to reduce the risks to the public. However, the lead agency recognizes that the risks remain significant even after mitigation. The CSLC will need to balance the economic, legal, social, technological, or other benefits of the proposed Project against its unavoidable environmental risks when~~

~~determining whether to approve the Project. If the EIR is certified by the CSLC, a statement of overriding considerations will need to be adopted at the time of certification and approval of the Project (CEQA Guidelines Section 15093).~~

49 CFR 192.605 requires that PG&E prepare written procedures covering their operations, maintenance, emergency, and abnormal operation procedures. These manuals must be prepared before operations commence and must be updated annually. They are on file with the California Public Utilities Commission but are kept confidential for pipeline security reasons. PG&E asks that the commenter specify what particular information they would like or need to complete their risk analysis, and PG&E will work with them to provide specific information. Requests can be made through Chris Ellis or George Karkazis at PG&E offices in Sacramento, telephone number 916.923.7030.

U-10 The text in Draft EIR Table 3-3 under the Description column, located in Section 3, Alternatives and Cumulative Projects (page 3-63), has been updated to reflect the correct timing of the Riego Road widening project, the construction of which is scheduled to begin in 2011. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

U-11 Please refer to responses to comments U-7 and U-9.

U-12 Please refer to response to comment U-3.

U-13 PG&E indicated they have been working with the Measure M group through their civil engineering firm (MacKay and Somps) and provided comments to the Sutter Point Specific Plan (SPSP) Draft EIR. PG&E indicated they have also had meetings with representatives of the Measure M group to clarify comments submitted on the SPSP Draft EIR. PG&E has used the best design information available from MacKay and Somps in locating and designing the proposed pipeline. Currently the road improvement plans are limited to line work in plan view only. The Riego Road design has not progressed to include future elevations, drainages, or utility infrastructure. PG&E has expressed a willingness ~~would like~~ to work with the Measure M group to coordinate design of roads and adjacent land uses so that potential conflicts can be addressed prior to construction of the Project.

PG&E does use risk assessments in the performance of their work (refer to Table 4.7-7 on page 4.7-37 of the Draft EIR). However, the risk assessments that PG&E performs are not a statistical approach to determine risk of fatality or serious injury to

individuals such as was developed by EDM in the Draft EIR, as revised in this Revised Final EIR. Rather, they are relative risk assessments (one pipeline segment risk compared to another) performed for two purposes: to schedule pipes for remediation or replacement (this is a voluntary program PG&E conducts with approval from the CPUC), and for prioritizing assessments of HCA piping; the Federal Code requires pipeline operators to risk rank their pipelines within HCAs and to begin the assessments with the pipelines most at risk.

As noted in Response U-4, the Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk before mitigation is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

The required DOT regulations, along with PG&E Project features that exceed the minimum requirements, would further reduce risks of project upset. Even though the project risk impacts are less than significant, Mitigation Measures MM HAZ-2a and MM HAZ-2b would be implemented to further reduce risks of project upset.

STATE OF CALIFORNIA – THE RESOURCES AGENCY ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD
3310 El Camino Ave., Rm. LL40
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682

June 10, 2009

Crystal Spurr
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202

Dear Ms. Spurr:

State Clearinghouse (SCH) Number: 2007062091
PG&E Line 406/407 Project

Staff for the Department of Water Resources has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2). V-1

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

- The placement (including auger boring/Jack-and-boring), construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee(CCR Section 6);

- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6). V-2

- A vegetation plan including, but not limited to the sites, vegetation type (i.e. common and scientific name), number, planting spacing and irrigation method that will be within each project area (CCR Section 131).

- Board jurisdictions include but are not limited to the Sacramento River, Yolo Bypass, Cache Creek, Natomas Cross Canal, Natomas East Main Drainage Canal, Knights Landing Ridge Cut.

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at http://www.cvfpb.ca.gov/. Contact your local, federal and state agencies, as other permits may apply.

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

Sincerely,

James Herota
Staff Environmental Scientist
Floodway Protection Section
Division of Flood Management

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

RESPONSE TO COMMENT SET V

V-1 CSLC acknowledges that the Central Valley Flood Protection Board (formerly known as the Reclamation Board) regulates standards for the construction, maintenance, and protection of adopted flood control plans that will protect public lands from floods. CSLC has, therefore changed 'State Reclamation Board' to 'Central Valley Flood Protection Board' in Section 1.4, Permits, Approvals and Regulatory Requirements (page 1-9 of the Draft EIR). Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

V-2 Comment acknowledged (see response to comment V-1).

California Regional Water Quality Control Board
Central Valley Region
Karl E. Longley, ScD, P.E., Chair

Linda S. Adams
Secretary for Environmental Protection

11020 Sun Center Drive #200, Rancho Cordova, California 95670-6114
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Arnold Schwarzenegger
Governor

9 June 2009

Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825

Subject: WDID 5A57CR00074 Pacific Gas and Electric Line 406-407 Natural Gas Pipeline

As a Responsible Agency, as defined by CEQA, the Central Valley Regional Water Quality Control Board have reviewed the Draft Environmental Impact Report for the Pacific Gas and Electric (PG&E) Line 406-407 Natural Gas Pipeline (29 April 2009).

PG&E proposes to construct and operate multiple natural gas transmission pipelines that will cross the California Central Valley in Yolo, Sutter, Sacramento, and Placer counties. These projects are necessary in order to provide greater capacity and system reliability for existing gas transmission and distribution pipeline system and to extend service to new customers through the region. PG&E also intends to install the new facilities in an environmentally sensitive manner while locating the pipeline to "minimize the potential of environmental impacts resulting from damage by outside sources."

According to project information obtained from the Draft EIR, this project includes:

- Construction of approximately 40-miles of new 30-inch pipeline that would tie into existing pipelines.
- Construction of new aboveground facilities such as new valve stations and associated extensions, actuators, valve hand wheels, risers, meters, monitoring equipment and other appurtenances.

The new pipeline construction would include the following activities:

- clearing and grading
- trenching and soil stockpiling
- horizontal directional drilling
- hammer boring
- auger boring/jack and boring
- epoxy coating of pipe
- pipeline stringing and welding
- lowering in the pipeline and backfilling
- hydrostatic testing of pipe and pigging

The DEIR identifies over ten alternatives. It does not identify a preferred alternative or an environmentally superior alternative. The Executive Summary for the project states, "..the determination of an environmentally superior alternative is difficult because of the many factors that must be balanced, and none of the alternative options reduce Class I impacts." It goes on to state, "the environmentally superior alternative would be incorporating Alternative Options I and L into the proposed Project alignment. Alternative Option I includes impacts to seasonal wetlands, swales, a vernal pool, and a creek. Alternative Option L has complications with a planned new elementary school and as stated in the ES, "Option L would not reduce the significant and unavoidable impacts associated with the proposed Project..." W-1

Since a specific preferred alternative was not identified in the DEIR, the Central Valley Regional Board is not providing specific project comments for the Draft EIR however; we have determined that this project has the potential to adversely affect water quality and waters of the U.S. and California ("other waters"). The proponent must follow the ACOE 404(b)(1) Guidance to assure approval of their 401 Water Quality Certification application. The guidelines are as follows: W-2

1. **Avoidance** (Is the project the least environmentally damaging *practicable* alternative?)
2. **Minimization** (Does the project minimize any adverse effects to the impacted wetlands?)
3. **Mitigation** (Does the project mitigate to assure a no net loss of functional values?)

The Central Valley Regional Board is requesting the California State Lands Commission consider an alternative that will produce the fewest impacts to state water resources and water quality including avoiding and minimizing impacts to all drainage features, canals, creeks, streams, rivers, vernal pools and other water bodies. W-3

We look forward to receiving additional specific project information in order to process your 401 Water Quality Certification request for this project.

Thank you for the opportunity to comment on the DEIR. If you have any questions or comments regarding the 401 water quality certification program, pleases contact me at (916) 464-4814.

VIRGINIA MORAN
Environmental Scientist
Water Quality Certification Unit

Cc: Mr. Chris Ellis, Principal Planner, Pacific Gas and Electric Company

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RESPONSE TO COMMENT SET W

W-1 The Draft EIR described a reasonable range of feasible alternatives to the Project and to the Project location, including the No Project Alternative. These alternatives were evaluated for their ability to attain most of the Project goals and to avoid or substantially lessen any of the significant impacts of the proposed Project. Three major alternative routes were evaluated and rejected, as stated in Section 3.2 of the Draft EIR, and one system-wide alternative was evaluated and rejected as stated in Section 3.2.4. In summary, the overall proposed Project route was found to have the fewest significant environmental impacts or magnitude of significant environmental impacts. Within the overall proposed Project route, an additional 12 alternatives (termed options) were developed. These options were designed to minimize risk; minimize impacts to biota, listed species, and wetlands; and respond to land owners' concerns. None of the options was found to reduce ~~a~~ the Class I construction air quality impact to a Class II impact; however, two options were found to decrease the magnitude of the ~~a Class I impact,~~ risk of upset. Those options, I and L, in conjunction with the proposed Project, represent the environmentally superior alternative, which was adequately evaluated in the Draft EIR.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

W-2 The proposed Project is the "preferred alternative" and was evaluated in the Draft EIR in accordance with CEQA and the CEQA Guidelines. Included in the Draft EIR is an evaluation of the proposed Project's potential adverse impacts to biological resources and waters of the State and US (refer to Section 4.4, Biological Resources; and Section 4.8, Hydrology and Water Quality).

Please refer to response to comment W-1. The Draft EIR identifies resource-specific APMs, potential impacts, and mitigation measures. The CSLC will decide at one of its public meetings whether to certify the EIR and whether to approve the Project as proposed, with or without any of the alternative options. All of the APMs and MMs set forth in the EIR and the MMP regarding water quality and wetlands will apply to all of the alternative options if any of the options are chosen to replace that segment of the Project as proposed.

In addition, the Project proponent, PG&E, will be working with the U.S. Army Corps of Engineers for a Section 404 Permit, and the Certification from the Regional Water Quality Control Board for a Section 401 Water Quality Certification.

W-3 The Draft EIR includes a discussion of potential impacts to wetlands and other waters in Section 4.4, Biological Resources. All of the vernal pools and swales along the Project alignment would be crossed using HDD technology, to avoid impacting the waterways (refer to Table 2-5 on pages 2-56 through 2-59 of the Draft EIR). PG&E intends to avoid impacts to wetlands and other waters as much as possible (see APM BIO-20, APM BIO-21, APM BIO-22 on pages 4.4-65 and 4.4-66 of the Draft EIR). If avoidance is not possible, then specific mitigation measures (see MM BIO-1a, MM BIO-1b, and MM BIO-1c on pages 4.4-81 through 4.4-87 of the Draft EIR, as revised in Section 4.0 of this Revised Final EIR) would be implemented to mitigate those impacts to less than significant levels. Performance standards are included in the MMs to ensure their effective implementation.

Alternatives that were evaluated in the Draft EIR are presented in Section 3.0, Alternatives and Cumulative Projects, and impacts to biological resources are presented in Section 4.4, Biological Resources. With so many wetlands, canals, creeks, sloughs, streams, and irrigation canals in the area, it was difficult to locate an alternative that would avoid these features. Six of the alternative options had greater impacts and six of the alternative options had similar impacts to waters of the U.S., including wetlands, as the proposed Project.

State of California
Department of Fish and Game

Memorandum

Date: June 18, 2009

To: Crystal Spurr, Project Manager
California State Lands Commission
100 Howe Avenue, Suite 100 South
Sacramento, CA 95825

Comment Set X
Page 1 of 5

From: Kent Smith, Habitat Conservation Program Manager
Department of Fish and Game
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670

Subject: Comments on the Pacific Gas and Electric Company (PG&E) Line 406-407 Natural Gas Pipeline Draft Environmental Impact Report (DEIR), SCH# 2007062091

The California Department of Fish and Game (DFG) has reviewed the California State Lands Commission's Draft Environmental Impact Report (DEIR) for the proposed PG&E Line 406-407 Natural Gas Pipeline project (Project). PG&E is proposing to construct a 30-inch diameter natural gas pipeline (Lines 406 and 407) from Esparto in Yolo County east to a location near Roseville in Placer County. The proposed pipeline would be approximately 40 miles long spanning four counties: Yolo, Sutter, Sacramento, and Placer. Line 406 would begin at PG&E's existing Lines 400 and 401 in Yolo County and extend east to PG&E's existing Line 172A near the town of Yolo. Line 407 would extend from PG&E's existing Line 172A where the proposed Line 406 terminates, east to PG&E's existing Line 123 near the City of Roseville. The proposed Distribution Feeder Main would extend from the new Line 407 south and parallel Powerline Road to the Sacramento Metro Air Park development in Sacramento County. The Project would also include the construction of six above-ground facilities totaling 2.18 acres in size.

The DFG is providing comments on the DEIR as a trustee agency and responsible agency. As trustee for the State's fish and wildlife resources, the DFG has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species. In this capacity, the DFG administers the California Endangered Species Act (CESA), the Native Plant Protection Act (NPPA), and other provisions of the California Fish and Game Code that afford protection to the State's fish and wildlife public trust resources. As a responsible agency, the DFG will review a Lake and Stream Alteration Agreement notification package for components of the proposed Project.

X-1

Enforceable Mitigation Measures

California Environmental Quality Act (CEQA) Guidelines §§15126.4 (a)(1)(B) state that formulation of mitigation measures should not be deferred until some future time.

X-2

Table 7-3 lists a number of mitigation measures for biological resources (i.e. APM BIO-17, APM BIO-35, MM BIO-2a, MM BIO-4a, MM BIO-4b, MM BIO-4c) that rely on future approvals or agreements with State/federal agencies, The Natomas Basin Conservancy (TNBC), and private/public land owners, as a means to bring identified significant environmental effects to below a level that is significant. Because there is no guarantee that these approvals or cooperation with all of the above entities will ultimately occur, the DFG believes that the above mitigation measures are potentially unenforceable and may not bring the impacts to biological resources to below a level that is significant.

Mitigation measures should establish performance standards to evaluate the success of the proposed mitigation, provide a range of options to achieve the performance standards, and must commit the lead agency to successful completion of the mitigation. Mitigation measures should also describe when the mitigation measure will be implemented, and explain why the measure is feasible. The DFG recommends that the mitigation measures summarized in Table 7-3, include measures that are enforceable and do not defer mitigation details to some future time. The DEIR should identify the following items: how each measure will be carried out; who will perform the measures; when the measures will be performed; and the performance standards and mechanisms for achieving success, and an assured source of funding to acquire and manage identified mitigation lands. The DEIR should describe a range of enforceable mitigation measures that will be implemented in instances where approval and cooperation with the entities identified above either does or does not occur.

X-2 Cont.

Impacts to Swainson's Hawk

There are numerous documented occurrences of Swainson's hawk (*Buteo swainsoni*, SWHA), a threatened species protected under CESA, with the potential to be impacted by the proposed Project. Page 4.4-141 of the DEIR states that "based on conservative estimates... approximately 206 potentially suitable nesting trees would be removed during construction of the proposed Project, and an additional 1,967 potentially suitable nesting trees occur within 250 feet of the Project site, some of which may require removal or trimming/pruning in order to construct the Project. Several of these trees have recorded occurrences of nesting by Swainson's hawk". The Final EIR should provide a complete inventory of the species, size, and location of these trees identified for potential removal during Project construction, once a final design route has been decided upon through the CEQA process. Table 4.4-1 states that 1.04 acres of riparian woodland and 0.59 acres of valley oak woodland are located within the Project's footprint and may be removed. It is unclear to the DFG whether or not these woodlands identified in table 4.4-1 are part of the 2173 trees identified within 250 feet of the Project site. The Final EIR should specify the species and size of these trees identified for potential impacts.

X-3

Prior to the initiation of Project related construction activities, the entire pipeline route should be surveyed by a qualified biologist at the appropriate time of year to identify

any occupied SWHA nests within 0.5 miles that could potentially be impacted by construction activities. To avoid violation of CESA and Fish and Game Code §3503.5, a no-construction buffer zone of at least 0.25 miles should be maintained by construction personnel at all times around any occupied SWHA nest tree. These no-construction buffer zones should be clearly delineated, with construction personnel instructed to maintain all construction activities and staging areas outside of the 0.25 mile buffer until all SWHA young have fledged.

Any suitable SWHA nest trees that cannot be avoided by the proposed Project should be appropriately mitigated for with a mix of native tree species typical of those utilized by SWHA for nest sites (valley oak, cottonwood, sycamore, black walnut, willow). Removed trees should be replaced at a minimum 3:1 ratio to offset the temporal loss of nesting habitat associated with the loss of mature trees, and the significant amount of time required for mitigation plantings to attain similar canopy size as those trees removed. These mitigation plantings should be appropriately managed and monitored for the minimum amount of time necessary to ensure a 100% survival rate among trees, typically 5 to 7 years.

X-3 Cont.

CESA

A CESA permit should be obtained if the Project has the potential to result in take of species of plants or animals listed under CESA, either during construction, or over the life of the Project. Issuance of a CESA permit is subject to CEQA documentation; therefore the CEQA document must specify impacts, mitigation measures, and a mitigation monitoring and reporting program. If the Project will impact CESA listed species, early consultation is encouraged, as significant modification to the Project and mitigation measures may be required in order to obtain a CESA permit. A CESA permit may only be obtained if the impacts of the authorized take of the species is minimized and fully mitigated and adequate funding has been ensured to implement the mitigation measures. The DFG may only issue a CESA permit if DFG determines that issuance of the permit does not jeopardize the continued existence of the species. The DFG will make this determination based on the best scientific information available, and shall include consideration of the species capability to survive and reproduce, including the species known population trends and known threats to the species. Issuance of a CESA permit may take up to 180 days from receipt of an application from the applicant.

X-4

Impacts to Migratory Birds and Raptors

To avoid violation of Fish and Game Code §3503, §3503.5, and §3513, no trees shall be disturbed that contain active bird nests until all eggs have hatched and young birds have fledged. To avoid potential impact to tree nesting birds, tree and shrub removal would be conducted during the time period of September 15th to February 15th. Trees may be removed between February 15th and September 15th provided the County has a qualified biologist (as determined by a combination of academic training and professional experience in biological sciences and related

X-5

resource management activities) survey the proposed work area to verify the absence of nesting birds within 15 days prior to the start of construction activities. The detailed survey would be submitted to DFG for review and comment prior to commencement of tree removal. The County is advised that the U.S. Fish and Wildlife Service (USFWS) regulates activities that may be covered under the Federal Migratory Bird Treaty Act of 1918.

X-5 Cont.

Impacts to Giant Garter Snake

The proposed Project may result in potentially significant impacts to giant garter snake (*Thamnophis gigas*, GGS) within the Natomas Basin. The DEIR proposes to install temporary earthen berms throughout all affected rice fields in the Natomas Basin to separate the Project area from the surrounding habitat and avoid direct impacts to GGS. This will be accomplished either by constructing the berms during the GGS active season (May 1st to October 1st) the summer before planned construction activities, or by constructing the berms early during the GGS active season of the year construction is to begin. Pages 2-50 and 2-51 of the DEIR state that if construction within the right-of-way is to be conducted outside of the GGS work window within the Natomas Basin, the USFWS will be consulted to ensure proper mitigation measures are in place. Please be advised that the GGS is a threatened species protected under CESA as well as the Federal Endangered Species Act. If the proposed Project has the potential to result in impacts to GGS, the DFG should be consulted in addition to the USFWS to ensure that proper mitigation measures are in place to avoid violation of CESA.

X-6

APM BIO-35 of the Mitigation Monitoring Program (MMP) states that compensatory mitigation for GGS will be "calculated upon determination of a final route by the CEQA Lead Agency (California State Lands Commission) and final compensatory mitigation ratios will be determined in consultation with the appropriate resource agencies during permitting of the Project". The DFG urges the County to meet as soon as possible with the DFG and the USFWS to address minimization and appropriate mitigation measures which offset impacts to SWHA, GGS, and other species covered by the Natomas Basin's Habitat Conservation Program's (NBHCP) Incidental Take Permits, without affecting the implementation of the NBHCP or TNBC's operating conservation program.

Cumulative Effects

CEQA guidelines require a discussion of the ways in which a project could potentially foster economic or population growth or the construction of additional housing in the surrounding environment. The DEIR provides no meaningful discussion regarding the potential for the Project to contribute to economic or population growth or the construction of additional housing in the surrounding environment. The DFG recommends that the Final EIR provide the above discussion by examining the relationship between energy supply and land use planning for this Project, and

X-7

demonstrate how growth inducing impacts to fish and wildlife resources will be avoided or reduced to a level below significant. ↑ X-7 Cont.

DFG appreciates the opportunity to comment on the DEIR. We remain available to be of further assistance to the California State Lands Commission in finalizing their DEIR.

If there are any comments or questions regarding this letter please contact the following DFG Staff: CEQA, CESA, or HCP related comments/questions, Mr. Patrick Moeszinger, Environmental Scientist, at (916) 358-2850 or Mr. Jeff Drongesen, Senior Environmental Scientist, at (916) 358-2919; for Lake and Streambed Alteration Agreement related comments/questions, Ms. Kelly Barker, Environmental Scientist, at (916) 358-4353.

cc: Kent Smith
Jeff Drongesen
Patrick Moeszinger
Kelly Barker
Department of Fish and Game
North Central Region
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Rancho Cordova, CA 95670

U.S. Fish and Wildlife Service
2800 Cottage Way, Room W2605
Sacramento, CA 95825

RESPONSE TO COMMENT SET X

X-1 The California Department of Fish and Game (CDFG) and its role as a responsible and trustee agency, including its jurisdiction and authority, is considered in the Draft EIR on page 1-4, line 15; page 1-9, line 2; page 4.4-49, line 31, page 4.4-50, lines 32 through 35; page 4.4-50, lines 1 through 11; page 4.4-53, lines 20 through 32; page 4.4-54, lines 1 through 2; 4.4-54, lines 30 through 35; page 4.4-73, lines 1 through 3; page 4.4-79, lines 5 through 6; page 4.8-5 through page 4.8-7; and page 4.8-15, lines 28 through 29.

The regulatory requirements of CDFG have been included in APM BIO-1 (page 4.4-61); APM BIO-5 (page 4.4-62); APM BIO-12 (page 4.4-63); APM BIO-18 (page 4.4-65); APM BIO-22 (page 4.4-66); APM BIO-26 (page 4.4-68); APM BIO-34 (page 4.4-71); MM BIO-1a (Page 4.4-81 through 83); MM BIO-1b (pages 4.4-83 through 84); MM BIO-1c (pages 4.4-84 through 85); MM BIO-2a (pages 4.4-89 through 91); MM BIO-4a (pages 4.4-101 through 104); MM BIO-4d (pages 4.4-105 through 107); and MM HWQ-1 (pages 4.8-17 through 4.8-19)

X-2 The Third District Court of Appeal recently issued its decision in California Native Plant Society v. City of Rancho Cordova, Case No. C057018. The Court determined that when an agency has evaluated the potentially significant impacts of a project and has identified measures that will mitigate those impacts, the agency does not have to commit to any particular mitigation measure in the EIR, as long as it commits to mitigating the significant impacts of the project. In addition, the details of exactly how mitigation will be achieved under the identified measures can be deferred pending completion of a future study.

The Draft EIR includes 35 APMs (APM BIO-1 through BIO-35) and four MMs (MM BIO-1 through BIO-4) in order to reduce impacts to biological resources to less than significant levels. In response to several comment letters, including Comment Set S and the CDFG letter (Comment Set X), portions of the MMs have been revised to include more specificity and additional performance standards. The CSLC feels that the mitigation measures which include minimum replacement ratios, timing of implementation, performance standards, range of options to achieve the performance standards, and success criteria that are included in the revised mitigation measures for Biological Resources (see Section 4.0 of this Revised Final EIR) are adequate for CEQA purposes and bring the potential impacts to biological resources to a less than significant level.

The applicant, PG&E, has identified a series of mitigation measures that have been incorporated into the Mitigation Monitoring Program (MMP) included in ~~Appendix F of the~~ this Revised Final EIR. The 35 APMs, coupled with the four comprehensive mitigation measures identified in the Draft EIR, address the items identified in this comment. The APMs and MMs were written so that it is clear that PG&E will be responsible for the success of each mitigation measure, with oversight by responsible agencies. APM BIO-35, Compensatory Mitigation, states that PG&E will consult with the resource agencies on species specific and habitat specific compensation.

X-3 Up to 206 potentially suitable nesting trees are located within the areas proposed for the Project, including the six aboveground facilities, the 100-foot pipeline right-of-way, and the temporary staging areas. An additional 1,967 potentially suitable nesting trees occur within 250 feet of the Project site (refer to page 4.4-18 of the Draft EIR). These estimates of potentially affected trees include trees within riparian woodland and valley oak woodland habitat. The Draft EIR provides a conservative estimate of the number of trees that could be removed; during construction, PG&E would avoid trees within the 50-foot temporary easement to the maximum extent possible. MM BIO-2a, Tree Avoidance and Replacement, from page 4.4-89 of the Draft EIR (as amended in Section 4.0 of this Revised Final EIR), states that the first step for avoiding, minimizing, and compensating for impacts to trees "shall be to determine the size and location of all trees located within and adjacent to the Project right-of-way, work areas, staging areas, and launcher/receiver stations." The CSLC has revised this MM to include recording the tree species, along with the size and location of all trees. Performance standards for this mitigation measure, which are described on pages 4.4-90 and 4.4-91 of the Draft EIR, have been revised to include additional details regarding replacement ratios, species, monitoring, and survivorship. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

MM BIO-4a, Swainson's hawk, on page 4.4-104 of the Draft EIR, has been revised to reflect suggested language regarding no-construction buffer zones around occupied nests. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

X-4 Comment acknowledged. PG&E has been working with CDFG regarding CESA compliance and has submitted an application for a 2081 Permit. PG&E will continue to work with CDFG to resolve the Department's concerns regarding special status species.

X-5 The construction windows listed on page 4.4-104, lines 5 through 22, and page 4.4-106, lines 4 through 18 and lines 23 through 33, of the Draft EIR have been revised to be consistent with CDFG's comment regarding "Impacts to Migratory Birds and Raptors." Accordingly, MM BIO-4a and MM BIO-4d have been revised to be consistent with the guidance provided in the CDFG letter. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

X-6 Table 4.4-3 on page 4.4-30 of the Draft EIR shows the federal and state listing status of the giant garter snake. APMs BIO-25 through BIO-28 and APM BIO-35 specifically address mitigating impacts to giant garter snake, and APM BIO-35 states that PG&E will consult with the USFWS, USACE, and/or CDFG regarding impacts to this and other special-status species. The text on page 2-50 of the Draft EIR has been modified to include CDFG. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

X-7 PG&E's planned increases in natural gas in Lines 406 and 407 and the DFM would accommodate demand for existing and currently planned residential and small commercial entity gas consumption. The Draft EIR discusses the potential for the proposed Project to induce growth in several sections. Section 6.4, on pages 6-2 through 6-6 of the Draft EIR, discusses the potential for growth-inducing impacts because of the proposed Project. The discussion includes economic or population growth and provides an estimate of the amount of average daily gas throughput needed through the year 2020. Based on PG&E's 10-year investment plan, the changes in average daily throughput do not provide excess supply of gas that could be considered growth inducing. The proposed Project would not foster growth or remove obstacles to population or economic growth.

The Draft EIR includes discussions regarding population and housing on pages 4.12-19, 4.12-20, and 4.12-33 through 4.12-35. The purpose of the proposed Project is to support existing and approved future planned population growth in the Project vicinity and the Project would not directly or indirectly increase permanent population in the Project area.

The Draft EIR includes discussions regarding energy resources in Section 4.14. The proposed Project would facilitate more efficient movement of natural gas to support the existing and approved future planned population growth within Yolo, Sutter, Sacramento, and Placer counties. While the Project would facilitate the delivery of non-renewable resources, these resources would be exploited and expended now and in the near future regardless of the proposed Project, since the need for natural

gas in the planned growth areas has been, or will be, approved by permitting agencies.

The Draft EIR includes discussions regarding cumulative effects of the proposed Project on fish and wildlife resources in Section 4.4.6 of the Biological Resources section. All Project impacts would be mitigated to a less than significant level. The proposed Project would not contribute to a cumulative significant impact on fish and wildlife resources.

American Farm Bureau Federation/California Farm Bureau Federation

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June 2, 2009

Crystal Spurr, Staff Environmental Scientist
California State Lands Commission
100 Howe Avenue, Suite 100-South
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FAX: 916.574.2274

RE: CSLC EIR No.: 740
Project: PG&E Line 406 and Line 407 Natural Gas Pipeline

Dear Ms. Spurr;

Yolo County Farm Bureau welcomes the opportunity to comment on the recently released EIR for the above project. After reviewing the document it appears that comments from our July 18, 2007 letter were considered and we thank you.

We would like to make the following comments:

1) We appreciate that PG&E has decided to bury the pipeline under 5 feet of dirt. This provides safety for agricultural operations above the pipeline. Y-1
2) We appreciate that PG&E has met with the Reclamation Districts and is working to accommodate their needs. Y-2

The following comments will apply to PG&E's preferred Alternate C. These parcels are located at the beginning of the pipeline at Capay going east to I-505. Most of these parcels will be bisected by the pipeline.

3) Laying the pipeline through a field creates problems:
   a. The placement of a pipeline within the field has the potential to disturb the soil due to compaction with the worst-case scenario of killing the soil in that area. If that happens then there will be a dead strip somewhere in the field. The landowner now has two smaller fields rather than one.
   b. If the owner is the farmer, he/she will deal with the smaller field sizes
   c. If the owner leases the parcel to a tenant farmer the parcel is now a less desirable parcel as small parcels are harder, more costly and less efficient to farm
   d. cutting the field in two could create a need for two separate irrigation ditches, taking further land out of production

   Y-3
4) Irrigation problems – It appears most of these parcels drain in a north-south direction while the pipeline would bisect the fields in an east-west direction.
5) Compaction problems – mentioned above. Construction needs to be done during the correct conditions, not by calendar date. If the soil is compacted it can, in a worst case scenario, kill the soil.
6) Tree and vine crops – the EIR acknowledges the pipeline will prohibit the planting of tree and vine crops in a 50 ft area of the underground pipeline. The problem will be to agree on the correct amount of compensation for the landowner. Y-4

Thank you for considering and addressing our concerns.

Sincerely,

Tim Miramontes
President

RESPONSE TO COMMENT SET Y

Y-1 Comment acknowledged. As noted on page 2-16, lines 20 through 24 of the Draft EIR, PG&E has increased the cover beyond minimum requirements to 5 feet because PG&E's experience has demonstrated that it is sufficient to eliminate most threats from agricultural operations and reduce impacts on farming operations.

Y-2 Comment acknowledged. Reclamation Districts 730, 1000, 1600, and 2035 are included under Section 1.0, Introduction, subsection 1.4, Permits, Approvals, and Regulatory Requirements on page 1-9.

Y-3 Pages 2-53 and 2-64 of Section 2.0, Project Description, and page 4.2-23 of Section 4.2, Agricultural Resources of the Draft EIR discuss topsoil removal and replacement.

PG&E would remove, stockpile, and replace topsoil during construction activities in accordance with landowner negotiations. The trench would be backfilled using select excavated subsoils that meet PG&E's backfilling requirements, and topsoil would then be replaced and restored to its original condition using either tracked construction equipment or water to minimize future settling. Soil that is not suitable for backfill or spread as topsoil would be removed from the ROW. It is estimated that approximately 1,200 cubic yards of spoil materials would need to be removed from the pipeline route. All excess soil would be disposed of appropriately with landowner and agency approval. A moderate level of compaction, 85 percent of maximum density using the American Society for Testing and Materials (ASTM) D-1557 test procedure, would be used to reduce the risk of uplift. Areas that would be under paved surfaces would be compacted to 95 percent or greater as specified by permitting entities. Compacting would be conducted to 85 percent in agricultural areas up to 18 inches from the surface. The entire pipeline ROW would be decompacted/restored per landowner negotiations.

As discussed in Impact HWQ-2, the Project has the potential to interrupt or degrade groundwater used for private or municipal purposes. Accordingly, MM HWQ-2 (as amended in this Revised Final EIR) would require testing of wells identified as potentially at risk and consultation with landowners, should wells be affected (please refer to page 4.8-21 through 4.8-22 of the Draft EIR). Implementation of MM HWQ-2 would ensure that Project construction activities would avoid potential conflicts with private water wells, irrigation wells, and water pipelines. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

In addition, PG&E has committed to working with landowners and their tenant farmers to avoid or minimize impacts to agricultural crops and disruption to crop irrigation systems during the proposed pipeline construction, including temporary or permanent re-configuration of crop irrigation systems to maintain irrigation to crops adjacent to the pipeline construction right-of-way. PG&E and their pipeline construction contractors will take reasonable measures to avoid damage to crop irrigation systems and will immediately repair all damage that does occur to crop irrigation systems during the proposed pipeline construction. MM HWQ-2 has been revised to also reflect these commitments. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

Y-4 The statement and concerns regarding economic impact to farmland is included in the public record and will be taken into account by decision-makers when they consider certification of the EIR and consider whether to approve the proposed Project.

The proposed 40-mile pipeline Project would temporarily disturb 511 acres of farmland within four counties (329 acres in Yolo County, 91 acres in Sutter County, 18 acres in Sacramento County, and 73 acres in Placer County). The proposed Project would prohibit the planting of deep-rooted plants, such as trees or vines within 10 feet on either side of the pipeline centerline (20 feet total within the permanent easement). This would result in the limitation of crops grown on approximately 102 acres of farmland within the four counties to row crops, field crops, or any other crops that do not involve deep-rooted plants. The proposed Project would result in the loss of 2.0 acres of orchards located within Yolo County. The proposed Project would permanently impact 2.55 acres of farmland across all four counties. Temporary and permanent agricultural impacts are discussed on pages 4.2-23 through 4.2-25 of the Draft EIR.

Both temporary and permanent economic losses of normal farm operations are required to be compensated as stated in the California Code of Civil Procedure. PG&E is required to provide financial compensation for temporary and permanent loss of agricultural uses through the California Code of Civil Procedure, as follows:

- Section 1245.030(b) requires compensation for property damage, including crop damage, resulting from pre-construction project studies, testing, surveying, etc.

- Section 1263.210(a) requires all property improvements, including agricultural crops and associated facilities and infrastructure, in project land rights acquisition compensation.

- Section 1263.250(a) requires compensation for crop damage/losses resulting from project construction. It also requires scheduling project construction to avoid impacts to agricultural crops when possible.

According to CEQA Guidelines Section 15358(b), effects analyzed under the CEQA must be related to a physical change in the environment. The introduction of the Draft EIR, Section 1.0, provides a definition of the affected environment as it currently exists (baseline conditions), and each major resource section of the Draft EIR provides an environmental setting, including agricultural resources. Attempting to determine that future uses of farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative for evaluation.

CEQA Guidelines Section 15125 (a) provides that an EIR must include a description of the physical environmental conditions in the vicinity of the project as they exist at the time of the Notice of Preparation of the EIR, or at the time environmental analysis is commenced. We analyzed the agricultural resources based on current uses being able to continue once the pipeline was installed and the topsoil restored. Most of the agricultural land along the proposed Project alignment is currently used for row or field crops. Refer to pages 4.2-23 through 4.2-25 of the Draft EIR for a discussion of temporary and permanent impacts to agricultural land. The temporary impacts to the 511 acres of farmland would not result in a physical change to the environment for more than three weeks in any one area, or in the case of HDD, for more than four weeks. In addition, the amount of farmland permanently impacted (2.55 acres) across all four counties, and the amount of farmland converted from deep-rooted plants to other types of crops (2.0 acres of orchard loss) located within Yolo County does not represent a significant regional loss.

PUBLIC HEARING DRAFT EIR COMMENTS - JUNE 3 AND 4, 2009

The complete transcripts of the Public Hearing Comments are in Appendix J of this Revised Final EIR ~~B~~.

PT-1 ~~Please refer to response to comment C-5.~~ While portions of Option A and Option B follow CR-16, it is the portion of the Line 406 Central Alternative that would cross hillsides between Highway 505 and I-5 for which sloughing was a primary concern. The Line 406 Central Alternative was considered but eliminated from full evaluation in the Draft EIR (refer to pages 3-10 and 3-11 of the Draft EIR) because this proposed pipeline alignment alternative would be longer than the preferred alternative (resulting in greater impacts) and would require crossing a greater amount of potential foraging habitat for Swainson's hawk, nesting habitat for burrowing owls, and other habitats utilized by special-status species. This alternative would also require construction along sidehills, which would present additional engineering, construction, and maintenance considerations.

PT-2 ~~Please refer to responses to comments B-6 and C-4.~~ In addition to all other applicable federal and State codes, regulations, and industry standards for pipeline design, the CSLC requires that the pipeline design also meet the requirements of current seismological engineering standards such as the "Guidelines for the Design of Buried Steel Pipe" by American Lifeline Alliance and "The Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines" by the Pipeline Research Council International, Inc. The CSLC also requires that all engineered structures, including pipeline alignment drawings, profile drawings, buildings, structures, and other appurtenances and associated facilities, be designed, signed, and stamped by California Registered professionals certified to perform such activities in their jurisdiction.

The faults within the Project area are discussed in the Draft EIR, Section 4.6, Geology and Soils (reference pages 4.6-19 through 4.6-31).

In Volume 1, page 12 of the Geotechnical Investigation Report prepared for the proposed Project notes that "evidence suggests that, although the Dunnigan Hills fault shows compelling evidence of surface rupture a few miles north of the proposed alignment, the fault becomes buried in the area where the proposed alignment crosses it." The Draft EIR provides an impact and mitigation measure regarding earthquake faults and seismic risks to the pipeline. A portion of Impact GEO-1 on page 4.6-39 of the Draft EIR has been revised. Mitigation Measure (MM)

GEO-1 on page 4.6-39 and 4.6-40 of the Draft EIR has also been revised. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

PT-3 Please refer to response to comment PT-2 ~~C-~~4.

PT-4 The Draft EIR accurately describes the methods required by the DOT for determining a High Consequence Area (HCA) (see Draft EIR Section 4.7, pages 4.7-14 and 4.7-15). The DOT 49 CFR 192.905 specifies two methods for determining HCAs. Method (2) was utilized for the Draft EIR, and is described as follows:

> (2) The area within a potential impact circle containing 20 or more buildings intended for human occupancy, unless the exception in paragraph (4) applies; or
>
> An identified site.

In order to determine if a HCA exists under Method 2, the operator must calculate the impact radius and associated impact circle, which are defined in DOT section 192.903. For Line 406/407 the impact radius was calculated to be 646 feet.

The second qualifier is the number of people that congregate within the impact radius and the frequency that they are in the area. The qualifying amount of people is 20 or more persons and the qualifying frequency is at least 50 days in a 12 month period (the days need not be consecutive). An “identified site” is defined in DOT section 192.903.

Durst Family Farms currently has 40 full-time employees and up to 300 people that work at the facility for periods of 12 to 16 weeks during the harvest. Durst has a processing and packaging facility, which its employees occupy for processing and packaging the produce. Durst also has a building that is open to the public for purchasing their products. The 646-foot impact radius around Alternative Options A and B along CR-16 would encompass all the buildings located at Durst Organic Farms. PG&E therefore determined that Durst Organic Farms constitutes an “identified site” and would trigger an HCA along Alternative Options A and B in the vicinity of CR-16. Klein Family Farms has a similar number of workers as Durst; however, they do not have a designated occupied area within the Line 406/407 impact radius.

Durst Family Farms currently has 40 full-time employees and up to 300 people that work at the facility for periods of 12 to 16 weeks during the harvest. Durst has a processing and packaging facility, which its employees occupy for processing and packaging the produce. Durst also has a building that is open to the public for purchasing their products. The 646-foot impact radius around Alternative Options A and B along CR-16 would encompass all the buildings located at Durst Organic Farms. PG&E therefore determined that Durst Organic Farms constitutes an "identified site" and would trigger an HCA along Alternative Options A and B in the vicinity of CR-16.

Chung's Organic Farms and Capay Fruits & Vegetables are smaller farms along CR-17 that may have seasonal workers (we were not provided any information as to their number of workers by the commenter), but do not have processing and packaging facilities that would be considered structures for employee and/or public congregation that are located within the impact radius of the proposed pipeline. Therefore, Chung's Organic Farms and Capay Fruits & Vegetables would not trigger an HCA for the proposed project.

PT-5 Please refer to response to comment B-1.

PT-6 In the unlikely event that damage should occur to vegetation or agricultural crops within the PG&E easement area during PG&E's operation of the pipeline, and that damage is determined to have been caused by that pipeline, PG&E has indicated they will work with the landowner and/or tenant farmer to make the necessary pipeline repairs and to provide fair and reasonable compensation to the landowner and/or tenant farmer for the resulting vegetation or agricultural crop and irrigation system damage, as well as crop field/property restoration costs. Many of these terms and conditions are a part of PG&E's pipeline easement with the landowner.

PT-7 Please refer to response to comment B-1.

PT-8 Habitat avoidance and minimization of impacts to sensitive plants and wildlife species are key components of any project in the State. This is because CEQA, as well as the various regulatory agencies, have specific requirements to avoid or minimize impacts to sensitive species.

PT-9 The Draft EIR on page 2-37 of Section 2.0, Project Description, states, "The [permanent] easements would be purchased from the existing landowners, who

would also be compensated for PG&E's use of temporary use areas during construction."

The Draft EIR on page 2-38 of Section 2.0, Project Description, states, "Routine maintenance along the majority of the line would consist of quarterly to annual patrolling (e.g., foot or aerial patrol), cathodic protection, and surveys. PG&E would maintain a 50-foot-wide permanent easement along the length of the Project, with the exception of the Powerline Road DFM, which would have a 35-foot-wide permanent easement. Vegetation maintenance would be as needed to maintain a 30-foot-wide corridor centered on the pipe that is free of deep-rooted plants. Because the majority of the route is grassland, row crops, or rice fields, very few areas are expected to require vegetation maintenance by PG&E." (Please note that in response to comment S-15, the 30-foot-wide corridor has been decreased to a 20-foot-wide corridor. Please refer to Section 4.0 of this Revised Final EIR for changes to the Draft EIR.)

The Draft EIR on page 2-83 of Section 2.0, Project Description, states, "The pipeline would be operated and maintained in accordance with all applicable requirements included in the DOT regulations in 49 CFR 192, 'Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards.'"

Typical testing and inspection procedures that would be conducted by PG&E in compliance with Federal regulations include:

Inspection/Testing	Frequency
Cathodic protection (Pipe to Soil Potential)	Annually
Cathodic protection (Rectifier Readings)	Six times per year
Valve testing	Annually
Pipeline patrols	Annually
Class 1 & 2	Annually
Class 3	Twice per year
Leak Surveys	Annually
High Consequence Area (HCA) Risk assessment	Every seven years
Source: PG&E 2008.	

In the unlikely event that it should become necessary for PG&E to repair the proposed pipeline during its operation, PG&E will perform its repair work to avoid impacts to agricultural crops within the PG&E pipeline easement. However, if it is

not possible to avoid impacts to agricultural crops, PG&E will work with the landowner and/or tenant farmer to minimize disruption to agricultural crops and irrigation systems. Upon completion of the pipeline repair work, PG&E will provide fair and reasonable compensation to the landowner and/or tenant farmer for agricultural crop and irrigation system damage, as well as crop field restoration costs. Many of these terms and conditions are a part of the PG&E pipeline easement with the landowner. Other routine maintenance as indicated under Testing/Inspection Frequency should be non-invasive and could be coordinated with the landowner and/or tenant farmer as to not impact their operations.

Please refer to response to comment B-6 for additional discussion regarding pipeline access.

Also, as indicated in PG&E's comments on the Draft EIR (please refer to Comment Set S), deep-rooted trees and vines will be restricted within 10 feet of pipeline centerline, rather than within 15 feet as stated in the Draft EIR. As discussed in response to comment S-15, the text in the Draft EIR has been revised to reflect a 20-foot wide corridor would be required that is free of deep-rooted plants, not 30 feet. Please refer to Section 4.0 of this Revised Final EIR for changes to the Draft EIR.

PT-10 PG&E has indicated that they work to establish good working relationships with property owners along the route of its Project. PG&E strives to ensure that project objectives are meet while property owners have their needs addressed and their losses are fully and properly compensated. PG&E has a policy of only utilizing the power of eminent domain when it is necessary to do so. A great deal of effort is made to work with property owners to resolve matters without the need for condemnation. Occasionally, even after extensive negotiations, issues remain that cannot be resolved through mutual agreement and PG&E notifies the property owner of the need to initiate eminent domain proceedings in Superior Court. However, the initiation of eminent domain proceedings in no way terminates PG&E's ongoing efforts to secure a negotiated settlement with the property owner. Public utilities have the right to acquire Prejudgment Orders of Possession, which enables PG&E to gain entry to construct facilities under circumstances when there is insufficient time to proceed with the condemnation process.

PT-11 One of the Project objectives is to install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner. An attempt has been made to locate the pipeline along edges of agricultural fields. In some areas, the

pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways. As a part of the proposed Project, PG&E has increased the soil cover beyond minimum requirements from 3 feet to 5 feet because its past experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations, such as discing or deep-ripping. The EPA defines deep-ripping as the mechanical manipulation of the soil to break up or pierce highly compacted, impermeable or slowly permeable subsurface soil layers occurring at depths greater than 16 inches (please refer to the Draft EIR, page 4.2-24).

The temporary impacts to the farmland would not result in a physical change to the environment for more than three weeks in any one area. The property referred to in this letter is currently planted in a row or field crop that will be able to continue to be cultivated within the permanent easement once the pipeline is installed. This agricultural land would not be converted to non-agricultural uses. While 20 feet of the farmland within the permanent easement would be restricted to growing only crops that do not include deep-rooted plants, attempting to determine that future uses of the farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative.

Also, see responses to comments B-1, B-4, and PT-9.

PT-12 As noted in several locations within the Draft EIR, restrictions on the planting of deep-rooted plants, such as orchards or vineyards, would only affect a twenty-foot strip within agricultural fields (10 feet on either side of the pipeline centerline). Orchards or vineyards could be planted on either side of pipeline outside of this area. Relocating the pipeline based on landowners contemplating planting deep-rooted plants in the future is speculative, as is indicating that that the planting restrictions would make orchards or vines economically non-viable. Also, see response to comment B-1.

PT-13 As discussed in Impact HWQ-2, the Project has the potential to interrupt or degrade groundwater used for private or municipal purposes. Accordingly, MM HWQ-2 (as amended in this Revised Final EIR) would required testing of wells identified as potentially at risk and consultation with landowners, should wells be affected (please refer to page 4.8-21 through 4.8-22 of the Draft EIR). Implementation of MM HWQ-2 would ensure that Project construction activities would avoid potential conflicts with private water wells, irrigation wells, and water

pipelines. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

In addition, PG&E has committed to working with landowners and their tenant farmers to avoid or minimize impacts to agricultural crops and disruption to crop irrigation systems during the proposed pipeline construction, including temporary or permanent re-configuration of crop irrigation systems to maintain irrigation to crops adjacent to the pipeline construction right-of-way. PG&E and their pipeline construction contractors will take reasonable measures to avoid damage to crop irrigation systems and will immediately repair all damage that does occur to crop irrigation systems during the proposed pipeline construction. MM HWQ-2 has been revised to also reflect these commitments. Refer to Section 4.0 of this Revised Final EIR for revisions to the Draft EIR.

PT-14 Please refer to response to comment F-4.

PT-15 Impacts to vegetation and birds are considered in Section 4.4, Biological Resources of the Draft EIR. Impacts to vegetation would be reduced through implementation of MM BIO-2a (page 4.4-89), and MM BIO-2b (page 4.4-92). Impacts to special-status wildlife, including Swainson's hawk, and protected special-status bird species, including the tri-colored blackbird and nesting raptors would be reduced through the implementation of MM BIO-4c (page 4.4-101) and MM BIO-4d (page 4.4-104), respectively. For further discussion, please refer to responses to comments F-6, H-3, X-3, and X-5).

PT-16 Please refer to response to comment E-3.

PT-17 PG&E considered aligning the pipeline along county and farm roads exclusively, but determined that impacts to agriculture would likely increase. In addition, aligning the pipeline with roads increases the overall length of the pipeline and places it in closer proximity to occupied dwellings. If the proposed pipeline were to follow a path along existing roadways rather than cross through agricultural fields, the pipeline would still be located within the agricultural fields along those roadways. There are jurisdictional requirements regarding the distance from roadways that the pipeline must be located. Paralleling roadways could result in an increase in the amount of land needed for the pipeline, and in some cases bring the pipeline closer to residences. As an example, Options D and E would increase the pipeline length by 860 and 3,480 feet, respectively, within those agricultural fields paralleling the roadways.

Even at the side of a road, the pipeline is located in the center of the required 50 foot right-of-way, resulting in a pipeline alignment in the crops rather than in the road. The temporary construction easement (TCE) is entirely in cropland in both scenarios. As described in responses to comments PT-7 and B-5 most farming practices would be allowed to resume within the permanent easement following pipeline completion. Furthermore, response to comment B-4 explains that segmenting property with a utility easement does not preclude the use of the easement for farming.

Please refer to response to comment F-9 for a discussion of the alternative options that avoid bisecting the agricultural land in the Hungry Hollow area.

PT-18 The commenter has indicated a preference for Option A. Option A would increase the overall pipeline length by approximately 2,200 feet through the edges of mostly agricultural fields, increasing the impacts to agricultural lands including existing vineyards and orchards. Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new "high consequence area" or "HCA" would potentially be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate near the pipeline.

The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

PT-19 Please refer to response to comment PT-4 regarding Durst Organic Farms.

Section 3.0 of the Draft EIR evaluated a number of alternatives or options along the proposed pipeline alignment to reduce or avoid one or more impacts of the proposed Project. This comment expresses a preference for Option F (1st choice), Option B

(2nd choice), Option E (3rd choice), and Option D (4th choice). These four options follow county roads for more of the length of the alignment and disturb less cropland.

Figure 3-2E in the Draft EIR shows Option F. From Lines 400 and 401 Option F would follow the proposed alignment for Line 406 to the eastern end of the Dunnigan Hills, where it would turn north off CR-17 approximately 5,000 feet west of CR-95A. This alternative would not alter the length of the segment, but would turn north to align with the I-5 crossing further east than the proposed alignment. This option would meet all of the basic Project objectives and would avoid more difficult trenching through hilly terrain.

Figure 3-2B in the Draft EIR shows Option B. From Lines 400 and 401, Option B would extend 1.5 miles east along farm roads, crossing CR-86 and aligning with CR-16. The route would continue along the south side of CR-16 for approximately 3 miles to CR-86, and then turn south along farm roads to a point intercepting the proposed I-505 crossing. This option would increase the overall pipeline length by approximately 2,640 feet but would meet all of the basic Project objectives, would reduce segmenting local agricultural fields in Yolo County and shift potential construction noise, air emissions, and traffic impacts to a more sparsely populated area further to the north.

Figure 3-2D in the Draft EIR shows Option E. Option E would involve a minor realignment of the proposed Line 406 route to position the route to follow CR-19, east of CR-87. At CR-19A, it would extend back to the north via an existing dirt road and underneath a large electrical transmission corridor. This route alternative would then cross an irrigation lateral and continue north where it would converge back with the proposed Line 406 route, just west of I-505. This alternative would then follow the same route as the proposed Project east of I-505. This option would increase slightly the total length of the pipeline. This option would meet all of the basic Project objectives and would reduce segmenting agricultural fields in the Hungry Hollow area. However, this alternative would require locating the Project closer to several residences situated along CR-19.

Figure 3-2D in the Draft EIR shows Option D. Option D would involve a minor variation to the proposed Line 406 in the vicinity of the Hungry Hollow area in north-central Yolo County, but it would maintain Line 406 within CR-17 east of CR-87, and then extend south after crossing an unnamed irrigation lateral where it would realign with the proposed Line 406 route, just west of the I-505 HDD crossing. East of I-505, this alternative would follow the same alignment as the proposed Project. This

option would increase slightly the total length of the pipeline but would meet all of the basic Project objectives and would reduce segmenting agricultural fields in the Hungry Hollow area. However, this alternative would require locating the Project closer to several residences situated along CR-17.

As shown in Draft EIR Table ES-2 in the Executive Summary, Options B, D, and E would have greater impacts to biological resources and cultural resources due to greater proximity to these resources. Options D and E would have greater impacts with regard to risk of upset or accident, and noise and traffic congestion during construction due to proximity to a larger number of residences. Option F would have impacts similar to the proposed Project.

PT-20 One of the Project objectives is to install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner. An attempt has been made to locate the pipeline along edges of agricultural fields. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways. As a part of the proposed Project, PG&E has increased the soil cover beyond minimum requirements from 3 feet to 5 feet because its past experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations, such as discing or deep-ripping. The EPA defines deep-ripping as the mechanical manipulation of the soil to break up or pierce highly compacted, impermeable or slowly permeable subsurface soil layers occurring at depths greater than 16 inches (please refer to the Draft EIR, page 4.2-24).

The temporary impacts to the farmland would not result in a physical change to the environment for more than three weeks in any one area. According to CEQA Guidelines Section 15358(b), effects analyzed under the CEQA must be related to a physical change in the environment. The introduction of the Draft EIR, Section 1.0, provides a definition of the affected environment as it currently exists (baseline conditions), and each major resource section of the Draft EIR provides an environmental setting, including agricultural resources. The property referred to in this letter is currently planted in a row or field crop that will be able to continue to be cultivated within the permanent easement once the pipeline is installed. This agricultural land would not be converted to non-agricultural uses. While 20 feet of the farmland within the permanent easement would be restricted to growing only crops that do not include deep-rooted plants, attempting to determine if future uses of the farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative.

PT-21 See responses to comments PT-9, PT-11, and PT-12. Impacts to aesthetics resulting from the proposed Project are discussed in Section 4.1, Aesthetic/Visual Resources, of the Draft EIR.

PT-22 Please refer to responses to comments K-2 and R-1 through R-7.

PT-23 Please refer to responses to Comment Sets K (City of Roseville), R (Sierra Vista Owner Group), and T (Placer County Community Development).

PT-24 Please refer to responses to Comment Sets K (City of Roseville), R (Sierra Vista Owner Group), and T (Placer County Community Development). ~~Responses to comments K-3 and K-4 specifically addresses proposed station locations and existing underground valves~~. PG&E has indicated that these underground valves are existing equipment installed during a previous project and have discussed with the City of Roseville allowable and compatible uses over and near existing valves. PG&E representatives are available to work with the City, County, and developers on this issue.

PT-25 Please refer to responses to Comment Sets K (City of Roseville), R (Sierra Vista Owner Group), and T (Placer County Community Development).

PT-26 The commenter refers to a CRP and states that under a CRP he is not allowed to do anything with his land: farming or building. The USDA Natural Resource Conservation Service (NRCS) Conservation Reserve Program (CRP) is administered by the Farm Service Agency. CRP is a voluntary program for agricultural landowners, and encourages farmers to convert highly erodible cropland or other environmentally sensitive acreage to vegetative cover, such as tame or native grasses, wildlife plantings, trees, filterstrips, or riparian buffers. Farmers receive an annual rental payment for the term of the contract.

Reference: (http://www.nrcs.usda.gov/programs/crp).

According to a representative of the Farm Service Agency (pers. com. Marianne Morton, 7/16/09), in order for PG&E to place a pipeline and permanent easement within land that is under the CRP, the landowner would need to request permission from the County Committee (COC) and NRCS. According to 2-CRP (Rev. 4) paragraph 274A, the CRP contract may be continued without reduction in payment if:

1. The participant gives COC the details of proposed use, including length of use.
2. COC authorizes the use.
3. NRCS certifies usage will have minimal effect, such as:
    - erosion is kept to a minimum
    - minimum effect on wildlife and wildlife habitat
    - minimum effect on water and air quality
4. The participant restores cover, at the participant's expense, to disturbed land in timeframe set by COC.

NRCS will determine whether the disturbance will have an adverse effect on the land. If NRCS determines that public use will have an adverse effect on CRP acreage, affected acreage shall be terminated and refunds assessed.

PT-27 Please refer to response to comment B-4.

PT-28 Incorporating Options I and L into the proposed pipeline route has been identified as the environmentally superior alternative (please refer to page ES-32 of the Draft EIR). However, no decision has been made regarding which of the pipeline alternative options would be implemented. The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

PT-29 The commenter indicates that using County Road 17 for the pipeline alignment may not be feasible because it is not maintained by Yolo County. Placing

the pipeline along County Road 17 in the Hungry Hollow area is considered in Alternative Option D. The proposed alignment would place the pipeline along County Road 17 between Highway 113 and the Knights Landing Ridge Cut. In either case, the proposed pipeline would not be directly below the road surface but instead adjacent to the right-of-way. As such, the lack of road maintenance would not affect the proposed pipeline alignment since PG&E would be responsible for maintaining its easement.

PT-30 Please refer to response to comment PT-10.

PT-31 Following implementation of the proposed Project, if a property owner wishes to make changes within the proposed 50-foot permanent easement, PG&E asks that they contact PG&E's land office in Auburn and discuss the proposed changes within the easement with a PG&E Land Agent. This will ensure that the proposed use will not jeopardize the safety of the property owner, the public, or the pipeline.

Also, see response to comment B-1. Both temporary and permanent economic loses of normal farm operations are required to be compensated as stated in the California Code of Civil Procedure.

PT-32 Please refer to responses to comments B-3, B-4, and F-7. An attempt has been made to locate the pipeline along edges of agricultural fields. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline closer to roadways, residences, and in some cases businesses, thereby increasing the number of people that would be at risk if rupture of the pipeline were to occur with a subsequent explosion and/or fire.

PT-33 Please refer to response to comment B-1.

PT-34 PG&E indicated that in November 2008 they offered to acquire an option to purchase an underground gas transmission line easement from Mr. Lopez. PG&E offered to purchase an option, rather than an easement because the environmental impact process was not yet complete. CEQA Section 21089 states that a lead agency may charge and collect a reasonable fee from any person proposing a project in order to recover the estimated costs incurred by the land agency in preparing an EIR for a project. CSLC prepared the EIR with assistance from an independent consultant, Michael Brandman Associates (MBA). PG&E did not prepare the EIR nor was it part of the Project team preparing the EIR.

PT-35 During engineering, environmental, and pre-construction studies, PG&E and its contractors typically have occasion to field check proposed routes to determine their feasibility for construction, operation, and maintenance. During that study period, personnel visited many properties along the proposed gas pipeline route. In February 2009, Mr. Lopez informed PG&E that PG&E and its contractors were not allowed access to his or his father's property for any reason. PG&E indicated that they notified its contractors and representatives not to access Mr. Lopez or his father's property.

PT-36 The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

PT-37 Please refer to response to comment B-1.

PT-38 Please refer to responses to comments B-3, B-4, F-7, and PT-11.

PT-39 The CSLC acknowledges that the commenter has a preference for the following options, in their respective order: No Project Alternative, Option A, and Option E.

PT-40 PG&E has indicated that during code-mandated pipeline patrolling, PG&E discovered right-of-way erosion at its Line 400/401 MP 243.8 in the spring of 2006. PG&E's Pipeline Engineering department determined that the exposure did not pose immediate risk from erosion mechanisms such as being struck by flowing debris or further erosion that might cause an unsupported span. The erosion was not caused by a creek or river, but a dry-wash drainage in flat pasture/grazing land. Further, the coating on the pipeline was not damaged so external corrosion was not an immediate threat. Plans for repair were drawn, and repairs were completed in 2006 and 2007. See the following before and after pictures.

Before:

After:

In 2008, pipeline patrols once again reported further erosion at the same site. (Note: PG&E has indicated that the date stamp on the photo is incorrect. The picture was taken on 7/18/08.)

Proposed Repair:

According to PG&E, the site was revisited by Pipeline Engineering, accompanied by a PG&E Geosciences Engineer and local PG&E Willows District Pipeline Mechanic. The protection of the pipe remained intact, however the head-cut migrated further north and westward, eroding more soil from the site. At this meeting, Mr. Howard Lopez was present and PG&E discussed the situation with him, letting him know what the process was for repair and project justification. They discussed why he thought the repair design did not halt the erosion. One of the reasons stated was that a larger size riprap rock could have been used. PG&E has repaired many of these types of erosion issues throughout its system. This type of problem is not an easy one to fix, because directing and controlling water can be a difficult process and many repairs are based on empirical models. PG&E developed an engineering plan for another repair, which is planned for repair later in 2009.

PT-41 One of the Project objectives is to install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner. The preferred alignment has been compared to several alternate options, discussed in Section 3.0 of the Draft EIR. For each Option, all impacts to the environment, as defined by CEQA, are considered, including, but not limited to, agricultural resources, biologic

resources, land use, hazards, noise, and geologic conditions. By considering all of the proposed alternative options in conjunction with the proposed route, the environmentally superior route has been identified as the proposed route plus Options I and L (please refer to page ES-32 of the Draft EIR).

The proposed Project was designed to provide the optimum alignment that would avoid biological and cultural resources, residences, and other sensitive receptors/resources. Within individual options, PG&E has provided specific solutions to individual areas where sensitive receptors/resources would be avoided. The CSLC will consider PG&E's application for a permit and all supporting documentation at a public hearing. Prior to taking action on the Project, the CSLC will also consider the environmental evaluation of the proposed Project, the range of alternatives in the EIR, comments received on the Draft EIR, and make a decision to approve the Project, approve the Project with one or more options (alternatives) or deny the Project.

PT-42 Please refer to response to comment PT-10.

PT-43 There would be limitations and restrictions contained in the easement document that PG&E would develop with landowners. These limitations and restrictions state that the property owner cannot erect or construct any building or other structure, or drill or operate any well, or construct any reservoir or other obstruction, or diminish or substantially add to the ground cover over PG&E's facilities, or construct any fences that will interfere with the maintenance and operation of PG&E's facilities. In addition, no trees or vines (including associated supporting structures), can be planted within 10 feet of the centerline of the pipeline.

When a property owner wants to "do something" on their land within a long-term 50-foot easement area PG&E asks that they contact PG&E's land office in Auburn and discuss their plans with a PG&E Land Agent. The purpose of that contact is to ensure the proposed use won't jeopardize the safety of the property owner, the public, or PG&E's facilities.

PT-44 Please refer to response to comment PT-13

PT-45 PG&E is responsible for pipeline construction and operation.

PT-46 PG&E's easement acquisition and property damage process would address the commenter's issues regarding the concrete pad and pipe crossing the road. Also, please refer to responses to comments Q-3, PT-9, and PT-13.

PT-47 Please refer to response to comment B-1.

PT-48 The comment states a preference for Option E, locating the proposed Pipeline along County Road 19 in the Hungry Hollow area. This option would require locating the Project closer to several residences situated along CR-19. Also, please refer to responses to comments B-1, F-5, Q-3, PT-9, PT-11, and PT-13.

PT-49 Names of commenters at the public hearings held in Roseville and Woodland are included in Table 3-2 of this Revised Final EIR. Comment letters are included throughout Section 3.0 of this Revised Final EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

PT-50 ~~Please refer to response to comment Q-1~~ Letter Q from Klein Family Farms provides background information on the status of the Klein Farms including the number of acres farmed, number of seasonal and full-time employees, and number of truck trips associated with the operation.

The Draft EIR accurately describes the methods required by the DOT for determining a High Consequence Area (HCA) (see Draft EIR Section 4.7, pages 4.7-14 and 4.7-15). The DOT 49 CFR 192.905 specifies two methods for determining HCAs. Method (2) was utilized for the Draft EIR, and is described as follows:

> (2) The area within a potential impact circle containing 20 or more buildings intended for human occupancy, unless the exception in paragraph (4) applies; or
>
> An identified site.

In order to determine if an HCA exists under Method 2, the operator must calculate the impact radius and associated impact circle, which are defined in DOT section 192.903. For Line 406/407 the impact radius was calculated to be 646 feet.

The second qualifier is the number of people that congregate within the impact radius and the frequency that they are in the area. The qualifying amount of people is 20 or more persons and the qualifying frequency is at least 50 days in a 12month period (the days need not be consecutive). An “identified site” is defined in DOT section 192.903.

Durst Family Farms currently has 40 full-time employees and up to 300 people that work at the facility for periods of 12 to 16 weeks during the harvest. Durst has a processing and packaging facility, which its employees occupy for processing and packaging the produce. Durst also has a building that is open to the public for purchasing their products. The 646-foot impact radius around Alternative Options A and B along CR-16 would encompass all the buildings located at Durst Organic Farms. PG&E therefore determined that Durst Organic Farms constitutes an "identified site" and would trigger an HCA along Alternative Options A and B in the vicinity of CR-16. Klein Family Farms has a similar number of workers as Durst; however, they do not have a designated occupied area within the Line 406/407 impact radius and therefore, an HCA is not triggered.

PT-51 During engineering, environmental, and pre-construction studies, PG&E and its contractors typically have occasion to field-check proposed routes to determine feasibility for construction, operation, and maintenance of the proposed gas pipeline. During this study period, PG&E personnel and contractors had occasion to visit many properties, including Mr. Ochoa's.

According to PG&E, in April 2007, Mr. Ochoa called PG&E and was concerned about people coming onto his property. Upon receiving that call, PG&E and its contractors refrained from entering Klein Farms property. PG&E and Mr. Ochoa subsequently reached agreement regarding access to his property, and PG&E has agreed to notify Mr. Ochoa 48 hours in advance of entry onto his property. We have asked Mr. Ochoa to notify PG&E if any deviation from this 48-hour notice requirement takes place so corrective action may be taken.

PG&E has indicated they have settled past equipment damage claims with Mr. Ochoa and are currently negotiating a settlement for another equipment damage claim.

PT-52 Please refer to response to comment Q-4.

PT-53 As amended by response to comment S-21, page 2-80 of the Draft EIR, indicates that construction of Line 406 would begin as soon as agency approvals have been obtained with a targeted in-service date of November 2010. Accordingly, Line 406 may be constructed during the summer. Furthermore, Line 407 East and Line 407 West and the DFM segments may be constructed in two different phases as dictated by the added load on the transmission system. Construction of Line 407 is projected to begin in 2012. Should construction take place during the summer

months, property owners would be economically compensated for the loss crops (please refer to page 4.2-25 of the Draft EIR).

As noted on Draft EIR page ES-53, topsoil would be replaced and restored to its original condition. Furthermore, soil that is not suitable for back fill or spread as topsoils, would be removed from the ROW. As noted on page 2-81 of the Draft EIR, once the proposed Project is in operation, the temporary use areas would be restored in accordance with pre-arranged landowner requirements. PG&E's contractor would obtain landowner verification that all restoration was completed to the satisfaction of the landowner prior to demobilizing from the ROW. Soil would be decompacted and reseeded in accordance with the landowners' requests.

Both temporary and permanent economic losses of normal farm operations are required to be compensated as stated in the California Code of Civil Procedure. PG&E is required to provide financial compensation for temporary and permanent loss of agricultural uses through the California Code of Civil Procedure, as follows:

- Section 1245.030(b) requires compensation for property damage, including crop damage, resulting from pre-construction project studies, testing, surveying, etc.

- Section 1263.210(a) requires all property improvements, including agricultural crops and associated facilities and infrastructure, in project land rights acquisition compensation.

- Section 1263.250(a) requires compensation for crop damage/losses resulting from project construction. It also requires scheduling project construction to avoid impacts to agricultural crops when possible.

PT-54 Please refer to response to comment B-1.

PT-55 An attempt has been made to locate the pipeline along edges of agricultural fields in order to reduce impacts to agricultural resources. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways.

Should irrigation in locations other than rice fields be preempted by Project construction, financial compensation for temporary and permanent loss of agricultural uses would be provided pursuant to the California Code of Civil Procedures, as follows (please refer to page 4.25 of the Draft EIR):

- Section 1245.030(b) requires compensation for property damage, including crop damage, resulting from pre-construction project studies, testing, surveying, etc.

- Section 1263.210(a) requires all property improvements, including agricultural crops and associated facilities and infrastructure, in project land rights acquisition compensation.

- Section 1263.250(a) requires compensation for crop damage/losses resulting from project construction. It also requires scheduling project construction to avoid impacts to agricultural crops when possible.

Also, please refer to response to comment Q-3.

PT-56 Please refer to responses to comments B-1 and PT-11. An attempt has been made to locate the pipeline along edges of agricultural fields in order to reduce impacts to agricultural resources. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways.

PT-57 Please refer to response comment B-1.

PT-58 Comment acknowledged. The CSLC will make two decisions regarding the PG&E Line 406-407 Natural Gas Pipeline Project at one of the CSLC's public meetings. The first decision will be whether to certify the EIR that was prepared for the proposed PG&E Line 406-407 Natural Gas Pipeline project. The second decision to be made by the CSLC will be whether to approve the environmentally superior alternative ~~proposed project~~, which is construction of the PG&E Line 406-407 Natural Gas Pipeline, inclusive of all project components and Options I and L. The CSLC could also choose at that time to approve any of the other options ~~and any alternatives~~ that were analyzed in the EIR. A notice of the date, time, and location of the public meeting where the Project will be considered by the Commissioners will be mailed to everyone on the CLSC mailing list and to everyone who has commented on the Draft EIR, at a minimum of 10 to 15 days prior to the date of the meeting.

PT-59 The commenter is referring to Option C which is described in the Draft EIR in Section 3.0, pages 3-12 through 3-13. This option has been included in the Draft EIR since the early stages of the CEQA process.

PT-60 Please refer to response to comment B-1.

PT-61 According to PG&E, PG&E's Lines 400 and 401 were installed in a common 100-foot right-of-way across Cache Creek. Line 400 was installed in 1963 and Line 401 in 1993. Both pipelines were installed by open trench excavation. When Line 400 was installed in 1963, Cache Creek was likely a natural meandering floodplain. Subsequently, in-stream mining of gravel, exacerbated by entrapment of recruitment gravel in upstream dams, has affected the stream system. As a result, the channel has become incised and experienced severe erosion due to high water velocities, particularly during the "El Nino" season of 1995. PG&E lowered Line 400 in the creek bed, and installed a flexible grout mat to protect both pipelines from bottom degradation, and installed a permeable spur jetty system, Ercon palisades™ to halt the lateral migration of the left (north) descending bank. Additional erosion has occurred since that time, and PG&E has made additional repairs. PG&E is continuing to monitor the crossings for changes, and will continue to develop comprehensive strategies for mitigation, including both short and long term solutions.

To address the statement regarding compensation, PG&E holds an easement for the pipeline right of way across Mr. Smith's property granted from the original property owner. It is PG&E's opinion that the palisade system constructed in 1996, not only protected the pipeline, but halted the streambed migration preventing further erosion and loss of land to Mr. Smith.

PT-62 The risk assessment included risk measurement terminology that was not defined in the document, which has resulted in some confusion. The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public due to the potential for fires and explosions, which may result from pipeline releases. A Revised System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR. The EDM report findings are summarized in the Introduction to this section (Section 3.0) of the Revised Final EIR. Revisions to the Draft EIR, Section 4.7, Hazards and Hazardous Materials, and Section 4.9, Land Use and Planning, regarding the risk analysis are provided in Section 4.0 of this Revised Final EIR.

The risk analysis was revised because the aggregate risk was calculated and reported as individual risk. In addition, the risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of

1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chance of fatality per year. The maximum risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~The Draft EIR provides an analysis of the risks associated with the proposed pipeline. A System Safety and Risk of Upset report was completed by EDM Services, Inc. for the proposed Project, and is included as a part of Appendix H. The findings are summarized in Section 4.7, Hazards and Hazardous Materials. Natural gas could be released from a pipeline leak or rupture. If the natural gas reached a combustible mixture and an ignition source was present, a fire and/or explosion could occur.~~

Please also refer to response to comment F-4.

PT-63 Please refer to responses to comments PT-43 and PT-62.

PT-64 Please refer to response to comment PT-4.

PT-65 Please refer to response to comment PT-34.

PT-66 The CSLC has prepared an EIR in accordance with the CEQA. According to the CEQA Guidelines Section 15358(b), effects analyzed under the CEQA must be related to a physical change in the environment. According to the CEQA Guidelines Section 15358(b), effects analyzed under the CEQA must be related to a physical change in the environment. The introduction of the Draft EIR, Section 1.0, provides a definition of the affected environment as it currently exists (baseline conditions), and each major resource section of the Draft EIR provides an environmental setting, including agricultural resources. Attempting to determine that future uses of farmland currently planted in field or row crops would be converted to orchard or vineyard is too speculative for evaluation.

One of the Project objectives is to install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner. An attempt has been made to locate the pipeline along edges of agricultural fields. In some areas, the pipeline has been located through agricultural fields in order to avoid placing the pipeline close to houses along the roadways. As a part of the proposed Project, PG&E has increased the soil cover beyond minimum requirements from 3 feet to 5 feet because its past experience has demonstrated that this depth is sufficient to eliminate most threats from agricultural operations, such as discing or deep-ripping. The EPA defines deep-ripping as the mechanical manipulation of the soil to break up or pierce highly compacted, impermeable or slowly permeable subsurface soil layers occurring at depths greater than 16 inches (please refer to the Draft EIR, page 4.2-24).

The temporary impacts to the farmland would not result in a physical change to the environment for more than three weeks in any one area. Most of the agricultural land along the proposed Project alignment is currently used for row or field crops. Please refer to pages 4.2-23 through 4.2-25 of the Draft EIR for a discussion of temporary and permanent impacts to agricultural land. The temporary impacts to the 511 acres of farmland would not result in a physical change to the environment for more than three weeks in any one area, or in the case of HDD, for more than four weeks. In addition, the amount of farmland permanently impacted (2.55 acres) across all four counties, and the amount of farmland converted from deep-rooted plants to other types of crops (2.0 acres of orchard loss) located within Yolo and Sutter counties does not represent a significant regional loss.

PT-67 There are three commissioners: Lieutenant Governor, John Garamendi; State Controller, John Chiang; and Director of Finance, Mike Genest who is appointed by the Governor. The CSLC website is http://www.slc.ca.gov/, where more information on the CSLC can be found.

PT-68 Comments on the Draft EIR from Yolo County Board of Supervisors are included in Comment Set H. Comments on the Draft EIR from the Yolo County Farm Bureau are included in Comment Set Y.

Section 3.0 of the Draft EIR provides a discussion of alternatives that were considered but eliminated from further evaluation (refer to Figure 3-1 of the Draft EIR). One of the main reasons for not locating the pipeline in the foothills is that it increases the risk of pipeline rupture due to placing the pipeline within the side-hills in that geographic area that has faults. One alternative included a northern route. While this alternative would locate the pipeline in a less populated area, it was eliminated from further evaluation because: 1) it would expose the proposed pipeline to the greatest risk from fault rupture due to much of the proposed right-of-way for the pipeline being located on side-hills adjacent to the county roads; 2) it would result in greater impacts to biological resources; more than 40 waterway crossings; and 3) impacts to local agricultural production would be more extensive than the proposed project. A second alternative included a southern route. This alternative was eliminated from further evaluation because: 1) it would require crossing Cache Creek and additional tributaries of Steelhead Creek; 2) would require longer crossings over agricultural lands; and 3) would affect more people due to construction through the suburban communities of North Natomas and Elverta. A third alternative included a central route. This alternative was eliminated from further evaluation because it would cause significant impacts to local water features and to habitat utilized by special-status species.

PT-69 PG&E has a public utility obligation to construct natural gas pipeline infrastructure to serve its existing customers, as well as anticipated load growth. In developing projects, PG&E identifies routes based on engineering and environmental considerations. In performing the field work prior to submitting an application for a proposed project to CSLC, PG&E often engages in discussions with landowners and may be able to address their concerns. PG&E prefers to work out property rights with landowners in a mutually agreeable manner. However, PG&E needs to have agency approval of a specific route before negotiation and agreements can by finalized. Therefore, it is not feasible to work out routing with all potential landowners along all alternative routes before submitting an application to the CSLC.

PG&E provided an application to the CSLC for a lease of State lands, thereby triggering the need for environmental review of their proposed pipeline Project. The CSLC is the lead agency for the preparation of the EIR in accordance with the

CEQA. The CEQA process is a public disclosure and participation process regarding the environmental effects of a proposed project.

The EIR process for the proposed PG&E Line 406/407 Natural Gas Pipeline Project began with the distribution of a Notice of Preparation (NOP) of an EIR by the CSLC, mailed on June 19, 2007, to landowners, agencies, and other interested parties. The 30-day comment period on the NOP solicited written comments, as well as verbal comments at the four public scoping meets held on July 9 and July 10, 2007 in Woodland and Roseville, respectively.

The EIR process also included the publication of a Notice of Availability (NOA) by the CSLC, mailed on April 29, 2009, to landowners, agencies, and other interested parties. The Draft EIR was released for public review on April 29, 2009, which included a detailed analysis of impacts in 14 environmental resource areas. The CSLC provided a public review period of 45 days for the Draft EIR. The public review period extended from April 29, 2009, to June 12, 2009. During that time, four public meetings were held on June 3 and June 4, 2009 in Roseville and Woodland, respectively. The lead agency allowed written comments on the Draft EIR to be submitted by mail, orally at the public meetings, via fax and e-mail, and in person to the CSLC office in Sacramento. The comments received by the CSLC during the public review period of the Draft EIR and at the public meetings are reproduced in this Revised Final EIR along with responses to comments provided in this Response to Comments section.

PT-70 According to PG&E, they do not have any public utility easements (PUEs) in the area. PUEs may exist in which PG&E and other utilities have installed facilities in the area but PUEs generally do not provide sufficient rights and protection for large transmission facilities. Therefore, PG&E acquires easements to install transmission facilities rather than PUEs.

PT-71 Please refer to responses to comments F-4 and K-1.

PT-72 Please refer to responses to comments E-2, F-5, K-1, and PT-13.

PT-73 Please refer to responses to comments F-4 and K-1. PG&E's existing transmission system within the Sacramento Valley region no longer provides sufficient capacity to deliver reliable natural gas service to existing customers or to extend service to planned development in the region. PG&E has indicated that without the addition of this Project, customer service reliability will be at risk and

unplanned core customer outages could occur as early as 2009. PG&E's local gas transmission system serving Yolo, Sacramento, El Dorado, Placer, Sutter, Yuba, and Nevada counties has operated at maximum capacity over the last several years and has required an escalating amount of annual investments in pipeline capacity to maintain customer service reliability and serve new customers.

The Project would serve several major residential and commercial development projects that are planned within Sutter, Placer and Sacramento Counties. These projects include: the Metro Air Park, Sutter Pointe Specific Plan, Placer Vineyards Specific Plan, Sierra Vista Specific Plan, and Curry Creek Community Plan.

PT-74 Please refer to responses to comments F-6, X-3, and PT-15.

PT-75 ~~Please refer to responses to comments C-5 and F-9~~. The commenter is referring to the use of CR-16 as a pipeline alignment. While portions of Option A and Option B follow CR-16 (refer to pages 3-12 and 3-13 of the Draft EIR), it is the portion of the Line 406 Central Alternative that would cross hillsides between Hwy 505 and I-5 for which sloughing was a primary concern. The Line 406 Central Alternative was considered but eliminated from full evaluation in the Draft EIR (refer to pages 3-10 and 3-11 of the Draft EIR) because this proposed pipeline alignment alternative would be longer than the preferred alternative (resulting in greater impacts) and would require crossing a greater amount of potential foraging habitat for Swainson's hawk, nesting habitat for burrowing owls, and other habitats utilized by special-status species. This alternative would also require construction along sidehills, which would present additional engineering, construction, and maintenance considerations.

Option A would increase the overall pipeline length by approximately 2,200 feet through the edges of mostly agricultural fields, increasing the impacts to agricultural lands including existing vineyards and orchards. Option B would increase the overall pipeline length by approximately 2,640 feet through the edges of mostly agricultural fields, increasing the impacts to agricultural lands including existing orchards. Also, for both Options A and B, by placing the pipeline in close proximity to Durst Organic Farms, a new "high consequence area" or "HCA" would potentially be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate within a certain distance (646-foot impact radius) from the proposed pipeline.

PT-76 Please refer to response to comment PT-11 and PT-17.

PT-77 Please refer to response to comment B-1 and B-5.

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4.0 REVISIONS TO THE DRAFT EIR

In accordance with section 15132 of the CEQA Guidelines, this section presents the changes that were made to the Draft EIR to clarify or amplify its text in response to comments received during the 45-day public review period.

The Revised Final EIR consists of the April 2009 Draft EIR, comments received during the Draft EIR's 45-day public comment period, responses to those comments, and changes to the text of the Draft EIR. The Revised Final EIR shows changes made to the response to comments since release of the Final EIR on July 27, 2009, as underline for new text, and ~~strike-out~~ for deleted text. The Revised Final EIR shows changes made to the Draft EIR (in their final form by incorporating any previous changes shown in the Final EIR dated July 27, 2009, and the changes made as a result of the clarifications to the risk analysis) as underline for new text, and ~~strike-out~~ for deleted text, and are organized by section of the Draft EIR.

In addition, clarifications have been made to the System Safety and Risk of Upset Report prepared by EDM Services, Inc. that was previously included as an appendix to the Draft EIR. The revised System Safety and Risk of Upset report shows changes as underline for new text, and ~~strike-out~~ for deleted text, and is included as Appendix H-3 to this Revised Final EIR.

Such changes to the Draft EIR are insignificant, as the term is used in section 15088.5 of the CEQA Guidelines, in that no new potentially significant impacts are identified, and the effectiveness of identified mitigation is not reduced.

EXECUTIVE SUMMARY

Changes made to the Executive Summary of the Draft EIR are reflected in the Executive Summary that has been reproduced in its entirety below.

PROJECT OBJECTIVES, PURPOSE, AND NEED

Pacific Gas and Electric Company (PG&E) is proposing to construct and operate multiple natural gas transmission pipelines that would ultimately cross California's Central Valley in the counties of Yolo, Sutter, Sacramento, and Placer. The proposed Project would specifically involve the construction and operation of three new transmission pipelines: Line 406, Line 407 (West and East), and the Powerline Road Distribution Feeder Main (DFM). The Project would also include the construction of six aboveground facilities. Fully constructed, the pipelines would span the lower Sacramento Valley.

PG&E identified the following objectives for the proposed Line 406/407 Natural Gas Pipeline Project (Project):

- Provide greater capacity and service reliability to the existing gas transmission and distribution pipeline system while minimizing costs to PG&E's customers;
- Extend natural gas service to planned residential and commercial developments in Placer, Sutter, and Sacramento counties;
- Install Project facilities in a safe, efficient, environmentally sensitive, and cost-effective manner; and
- Locate the pipeline to minimize the potential of environmental impacts resulting from damage by outside sources.

DESCRIPTION OF PROPOSED PROJECT

The Project would involve construction of approximately 40 miles of new pipeline, as well as aboveground features. At its western terminus, the Project would add a new major connection point to Lines 400 and 401, the Capay Metering Station, located approximately 15 miles south of the Buckeye Pressure Limiting Station in Yolo County. From this connection point, the Project would construct a large-diameter (30-inch) transmission pipeline across the lower Sacramento Valley, essentially bisecting the existing pipeline loop system. The Project would connect to existing Line 172 and Line 123 to further reinforce the reliability of the region's natural gas system by providing a second large-diameter connection point between Lines 400 and 401 and existing pipelines serving the area.

Six fenced, aboveground pressure limiting, pressure regulating, metering, and main line valve stations would be constructed along the Project alignment to ensure that proper pressures are maintained in the transmission system and to reduce the pressure of the gas before delivering it to the distribution pipeline system. These facilities would also require the installation of valve extensions, actuators, valve hand wheels, risers, meters, Supervisory Control and Data Acquisition (SCADA) pipeline system monitoring equipment, and other appurtenances within and adjacent to the stations.

PG&E proposes a 100-foot-wide temporary use area (TUA) for general pipeline trenching consisting of a 50-foot wide permanent easement and a 50-foot wide temporary construction easement (TCE) to accommodate the equipment needed to

lay the 30-inch-diameter pipe in a 3.5- to 5-foot-wide trench, an equipment travel lane, and a spoil pile for the excavated soils ~~A 60-foot wide TUA would be used for construction in constricted workspaces and would require that excavated soil be transported to an adjacent TUA.~~ Each of the twelve proposed Horizontal Directional Drilling (HDD) locations would require an additional 18,750-square-foot temporary use area for equipment that would be set up at the proposed entry ~~and exit~~ points. PG&E proposes to obtain a 50-foot wide permanent easement over the proposed alignment. Restrictions in the easement would prohibit the planting of deep-rooted plants such as trees and vines within ~~15~~ 10 feet of the pipeline centerline for protection of the pipeline, but other agricultural uses would be allowed. The primary staging areas for vehicles, equipment, materials, and other supplies required for the construction of the pipeline and regulator stations would be near the Project right-of-way (ROW) in existing industrial and commercial yards where accessible. Staging areas would generally be approximately 300 feet by 200 feet. Two areas would be used for pipe storage. One area is located in Arbuckle, and the other is located north of the City of Woodland. Both of these areas are currently disturbed land in commercial zones.

New pipeline construction would involve the following activities:

- Clearing and grading;
- Trenching and topsoil stockpiling;
- Horizontal Directional Drilling (HDD);
- Hammer boring;
- Auger boring/Jack-and-boring;
- Epoxy coating of pipe;
- Pipeline stringing and welding;
- Lowering in the pipeline and backfilling;
- Hydrostatic testing of the pipe sections; and
- Pigging.

The main travel routes that would be used for construction access and delivery of pipe along Line 406 would include County Road (CR) 85, CR-87, CR-88A, CR-17, CR-19, and some smaller roads on the east side of Interstate (I) 5. Travel routes to be used for construction access and delivery of pipe along Line 407 would include CR-16, CR-16A, CR-17, Baseline Road, Riego Road, and Powerline Road. Streets and roads perpendicular to the main routes that may also be used to access the Project area include Watt Avenue, West Elverta Road, Walerga Road, State Route (SR) 70/99, and SR-113. During construction, the transporting of the required

amount of pipe and associated construction equipment could result in a temporary increase of up to 40 trucks a day (80 trips per day) on these respective roadways.

The pipeline would be operated and maintained in accordance with all applicable requirements included in the U.S., Department of Transportation (DOT) regulations in 49 CFR 192, "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards." Further, the proposed Project would be subject to California Public Utilities Commission (CPUC) standards as embodied under General Order 112E. Operations and maintenance activities that would occur at regular intervals include the following: cathodic protection (protection against pipeline corrosion), cathodic protection monitoring, valve testing, pipeline patrols, and High Consequence Area (HCA) risk assessment.

A large proportion of the proposed pipeline would consist of 0.375-inch-wall thickness steel pipe (Grade X-65) designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; a 0.375-inch wall thickness is proposed, 20 percent greater than the minimum required. For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; a 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required. For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; a 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required.

PG&E proposes to "butt-weld" all pipeline sections (pipes are welded together without the ends overlapping). The project as proposed would include radiographic inspection of all circumferential welds. The minimum regulations (49 CFR 192.243) require only 10 percent, 15 percent and 100 percent nondestructive testing of welds in Class 1, Class 2, and Class 3 / 4 areas, respectively. This additional testing will help to ensure structural integrity. Welds that do not meet American Petroleum Institute 1104 specifications would be repaired or removed. Once the welds are approved, the welded joints would be covered with a protective coating and the entire pipeline would be electronically and visually inspected for any faults, scratches, or other damage.

RISK OF UPSET

Probability of a Pipeline Release: A fire could result from a natural gas release with two conditions present: 1) a volume of natural gas must be present within the combustible mixture range (5% to 15% methane in air); and 2) a source of ignition

must be present with sufficient heat to ignite the air/natural gas mixture (1,000 degrees F). In order for an explosion to occur, a third condition must be present: the natural gas vapor cloud must be confined, to a sufficient degree.

Over the life of the pipeline, the probability of a pipeline release that would result in a fire varies from 3.2% for a rupture to 7.5% for a puncture (1-inch diameter hole); while the probability of a pipeline release that would result in an explosion varies from 2.0% for a rupture to 4.7% for a puncture. The probability of a puncture or rupture over the 50-year life of the pipeline is very low.

Societal Risk: Societal risk is the probability that a specified number of people will be affected by a given event. Several release scenarios were used that could impact both building occupants and vehicle passengers.

The threshold values for societal risk vary greatly, depending on the agency or jurisdiction. There are no prescribed societal risk guidelines for the United States or the State of California. The Committee for the Prevention of Disasters and the Netherlands used an annual probability of 1.0×10^{-3} (1:1,000) or less. This criteria has been used to evaluate the proposed project. The societal risk posed by the proposed project is less than the significance threshold of 1:1,000 or less.

Individual Risk of Serious Injuries or Fatalities: In the following paragraphs, the impacts related to serious injuries and fatalities are described for individuals exposed to a fire or explosion if a release from the pipeline were to occur. As stated above, the probability of a release over the 50-year life of the pipeline is very low. The risks associated with Line 406 were assessed using the existing conditions. The risks associated with Line 407 and the DFM were assessed using existing conditions, plus the impacts of the proposed land developments within Sutter County and Placer County, including Sutter Pointe, Placer Vineyards, Sierra Vista, and Curry Creek.

A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of the Revised Final EIR. The risk analysis was revised because the initial calculation of aggregate risk was reported as individual risk. In addition, the initial risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000.

The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific

location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest individual risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum individual risks are summarized as follows:

- Line 406 – pre-mitigation individual risk is 1:2,137,000, and post-mitigation individual risk is 1:4,274,000.
- Line 407 – pre-mitigation individual risk is 1:2,062,000, and post-mitigation individual risk is 1:4,115,000.
- Line DFM: pre-mitigation individual risk is 1:4,255,000, and post-mitigation individual risk is 1:8,475,000.

Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

ALTERNATIVES TO PROPOSED PROJECT

The California Environmental Quality Act (CEQA) Guidelines (section 15126.6(a)) require that a range of reasonable alternatives to the proposed Project be described, analyzed, and (1) would feasibly attain most of the basic objectives of the proposed Project, and (2) would avoid or substantially lessen any of the significant impacts of the proposed Project.

The CEQA Guidelines requires the selection of an environmentally superior alternative. The determination of an environmentally superior alternative is based on the consideration of how the alternative fulfills the Project objectives and how the alternative either reduces significant, unavoidable impacts or substantially reduces

the impacts to the surrounding environment. The CEQA Guidelines section 15126.6(e)(2) state, in part, that "If the environmentally superior alternative is the "No Project" alternative, the EIR would also identify an environmentally superior alternative among the other alternatives."

Not all alternatives that were developed are completely analyzed in the EIR. Feasible alternatives that did not clearly offer the potential to reduce significant environmental impacts along with infeasible alternatives were removed from further analysis. Four alternatives were eliminated from detailed analysis. These alternatives include:

- Line 406 and 407 Northern Alternative was eliminated from further analysis since this proposed pipeline alignment alternative would be exposed to the greatest risk of fault rupture, and because a substantial segment of the alignment would be located along side-hills adjacent to CR-13;

- Line 407 Southern Alternative was eliminated from further analysis because this proposed pipeline alignment alternative would require more crossings of tributaries of Steelhead Creek, and would affect more vernal pool habitat;

- Line 406 Central Alternative was eliminated from further analysis because this proposed pipeline alignment alternative would be longer than the preferred alternative, resulting in greater impacts, including requiring crossing a greater amount of potential foraging habitat for Swainson's hawk, nesting habitat for burrowing owls, and other habitats utilized by special-status species. This alternative would also require construction along sidehills, which would present additional engineering, construction and maintenance consideration ~~parallel an ephemeral stream, passing through natural habitats to CR-14A~~; and

- Systems Alternatives was eliminated from further analysis because the proposed alignment alternative would require 15 separate projects with substantially greater amounts of pipeline resulting in greater construction impacts.

Alternatives that were analyzed include the No Project Alternative, and twelve different pipeline alignment options. Each option (or alternative) represented a particular segment of alignment that differed in location from the Project so as to attempt to reduce environmental impacts. The twelve options are briefly described below. None of the twelve options reduce the significant and unavoidable construction air quality impact associated with the proposed Project. While each of

the options may reduce the magnitude of one or more impacts associated with the proposed Project, they may also increase the magnitude of other impacts.

No Project Alternative. Under the No Project Alternative, a natural gas pipeline would not be constructed between existing Lines 400 and 401 in Yolo County and the existing Line 123 in Placer County. PG&E's studies indicate that the natural gas transmission and distribution system may not be able to serve customers reliably and planned development in Yolo, Sacramento, Sutter, and Placer counties by 2009 (see Section 2, Project Description). Additionally, continued growth in those counties would put further strain on existing natural gas infrastructure, and could result in emergency restriction or interruption of services.

Option A. From Lines 400 and 401, Option A would follow CR-16 to I-505, then head north through a grape vineyard to align with CR-15B on the west side of I-505. The route would continue east on CR-15B through the Dunnigan Hills and across Smith Creek until CR-15B becomes CR-93. From this juncture, this alternative would continue east from the intersection of CR-15B and CR-93, and proceed cross-country to Line 172A just south of the town of Dufour. It would then parallel Line 172A south to the tie-in point with Line 172A and Line 407, north of the town of Yolo. This option would increase the overall pipeline length by approximately 2,200 feet. Figure 3-2B shows Option A.

This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline construction further away from residences. This option would have similar impacts as the proposed Project in the resource areas of air quality, hydrology and water quality, recreation, population and utilities, and energy and mineral resources.

This option would result in a greater magnitude of impacts to agricultural resources, biological resources, cultural resources, soils, seismic and risk of upset hazards, land use, and traffic. These impacts would be increased in magnitude due to an increase in the length of the pipeline along the boundaries of agricultural fields, increased disturbance of soils, the potential for increased introduction of invasive species, and the potential for increased disturbance of sensitive plants. The difference in impacts to cultural resources is assumed to be greater since Option A would increase the area of disturbance and occur outside of the corridor surveyed for cultural resources. This option would increase the seismic impacts by crossing the southern end of the Dunnigan Hills Fault in the vicinity of an apparent surface fault rupture. Also, by placing the pipeline in close proximity to Durst Organic

Farmers, a new "high consequence area" or "HCA" would be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate near the pipeline. Option A would affect traffic during pipeline construction along roadways used by Durst for employees, visitors, and workers transporting their produce.

Option A would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility)~~.

Option B. From Lines 400 and 401, approximately 1.5 miles north of the proposed Project, Option B would extend east along farm roads, crossing CR-86 and aligning with CR-16. The route would continue along the south side of CR-16 for approximately 3 miles to CR-86, and then turn south along farm roads to a point intercepting the proposed I-505 crossing. This option would increase the overall pipeline length by approximately 2,640 feet. Figure 3-2B shows Option B.

This option would not result in a reduction of any impacts associated with the proposed Project. This option would have similar impacts as the proposed Project in the resource areas of air quality, hydrology and water quality, noise, recreation, population and utilities, and energy and mineral resources.

This option would result in a greater magnitude of impacts to agricultural resources, aesthetics, biological resources, cultural resources, soils, risk of upset hazards, land use, and traffic. These impacts would be increased in magnitude due to an increase in the length of the pipeline along the boundaries of agricultural fields and the placement closer to roadways where construction activities would be more visible. Option B would also increase the potential for introduction of invasive species, increase the potential for disturbance to sensitive plants, increase the number of trees impacted (potential Swainson's hawk nesting habitat), increase disturbance to soils, and place the pipeline outside of the area surveyed for cultural resources. Also, by placing the pipeline in close proximity to Durst Organic Farmers, a new "high consequence area" or "HCA" would be created along the pipeline as defined by DOT 192.903, based upon the number of employees and the number of days they would congregate near the pipeline. Option B would affect traffic during pipeline construction along roadways used by Durst for employees, visitors, and workers transporting their produce.

Option B would not reduce the significant and unavoidable construction air quality impacts associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option C. Option C would follow the proposed alignment of Line 406 from the Capay Metering Station to the Hungry Hollow Canal, which it would parallel northeast until crossing to line up with an unnamed farm road to the east. This alternative would cross CR-85 and extend east along the farm road and the northern edge of Microp Limited Property, APN # 048-140-140-191. At the end of the property, the route would turn south along another unnamed farm road until it intersects the proposed Line 406 route, which it then would follow to the Yolo Junction Station. This option would increase the overall pipeline length by roughly 1,150 feet. Figure 3-2C depicts Option C.

This option would not result in a reduction of any impacts associated with the proposed Project. This option would have similar impacts as the proposed Project in the resource areas of aesthetics, air quality, cultural resources, geologic and risk of upset hazards, hydrology and water quality, land use and planning, noise, recreation, population and utilities, energy and mineral resources, and transportation. While Option C would result in similar impacts to agricultural resources as the proposed Project, it would result in less segmenting of agricultural fields.

This option would result in a greater magnitude of impacts to biological resources and soils. These impacts would be increased in magnitude due to an increase in the number of trees impacted, the increased disturbance of soils, and the increased potential for introduction of invasive species.

Option C would not reduce the significant and unavoidable construction air quality impacts associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option D. Option D would involve a minor variation to the proposed Line 406 in the vicinity of the Hungry Hollow area in north-central Yolo County, but it would maintain Line 406 within CR-17 east of CR-87, and then extend south after crossing an unnamed irrigation lateral where it would realign with the proposed Line 406 route, just west of the I-505 HDD crossing. East of I-505, this alternative would follow the same alignment as the proposed Project. This option would increase the overall pipeline length by roughly 860 feet. Figure 3-2D shows Option D.

This option would not result in a reduction of any impacts associated with the proposed Project. This option would have similar impacts as the proposed Project in the resource areas of aesthetics, air quality, cultural resources, geologic hazards, hydrology and water quality, land use and planning, noise, recreation, population and utilities, energy and mineral resources, and transportation. While Option D would result in similar impacts to agricultural resources as the proposed Project, it would result in less segmenting of agricultural fields.

This option would result in a greater magnitude of impacts to noise, aesthetics, hazards, biological resources, soils, and cultural resources. These impacts would be increased in magnitude due to placing the construction of the pipeline closer to residences and thereby increasing the construction noise, visibility of construction activities, and the risk of upset hazards to a greater number of people. Option D would also increase the number of trees impacted, and place the pipeline outside of the area previously surveyed for cultural resources.

Option D would not reduce the significant and unavoidable <u>construction air quality</u> impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option E. Option E would involve a minor realignment of the proposed Line 406 route. This would position the route to follow CR-19, east of CR-87. At CR-19A, it would extend back to the north via an existing dirt road and underneath a large electrical transmission corridor. This route alternative would then cross an irrigation lateral and continue north where it would converge back with the proposed Line 406 route, just west of I-505. This alternative would then follow the same route as the proposed Project east of I-505. This option would increase the overall pipeline length by roughly 3,480 feet. Figure 3-2D shows Option E.

This option would not result in a reduction of any impacts associated with the proposed Project. This option would have similar impacts as the proposed Project in the resource areas of air quality, cultural resources, geologic hazards, hydrology and water quality, land use and planning, noise, recreation, population and utilities, energy and mineral resources, and transportation. While Option E would result in similar impacts to agricultural resources as the proposed Project, it would result in less segmenting of agricultural fields.

This option would result in a greater magnitude of impacts to aesthetics, noise, biological resources, soils, and cultural resources. These impacts would be

increased in magnitude due to placing the construction of the pipeline closer to residences and thereby increasing the construction noise, visibility of construction activities, and the risks of upset hazards to a greater number of people. Option E would also increase the number of trees impacted, increase the disturbance of soils, and place the pipeline outside of the area previously surveyed for cultural resources.

Option E would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option F. Option F would follow the proposed alignment for Line 406 from Lines 400 and 401 to the eastern end of the Dunnigan Hills, where it would turn north off CR-17 approximately 5,000 feet west of CR-95A. This alternative option would not alter the length of the segment, but would turn north to align with the I-5 crossing further east than the proposed alignment. Figure 3-2E shows Option F.

This option would result in a reduction in the number of trees impacted. This option would also result in a reduced number of residences to evaluate for eligibility for listing on the NRHP or the CRHR. This option would have similar impacts as the proposed Project in the resource areas of aesthetics, agricultural resources, air quality, cultural resources, hydrology and water quality, geologic and risk of upset hazards, recreation, land use, noise, population and utilities, traffic, and energy and mineral resources.

This option would increase the magnitude of impacts to biological resources by bordering an ephemeral drainage with adjacent wetlands that the Project avoids.

Option F would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option G. Option G would be located at the western end of Line 407 West, just east of the Yolo Junction Station and existing Line 172A. This alternative leaves the proposed Yolo Junction Station and aligns with an unnamed farm road, which it follows along a field edge until the intersection of CR-16A and CR-98. This alternative option would not alter the length of the segment. Figure 3-2F shows Option G.

This option would not result in a reduction of any impacts associated with the proposed Project. This option would increase the magnitude of impacts to biological

resources due to an increase in the number of trees impacted. This option would have similar impacts as the proposed Project in the resource areas of aesthetics, agricultural resources, air quality, hydrology and water quality, geologic and risk of upset hazards, recreation, land use, noise, population and utilities, traffic, cultural resources, and energy and mineral resources.

Option G would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option H. Near the western levee of the Yolo Bypass, Option H would head southeast through agricultural fields within the Yolo Bypass to a point on the Sacramento River directly across from West Elverta Road. It would then cross the Sacramento River and parallel West Elverta Road to Powerline Road. The route would head north paralleling Powerline Road to Riego Road and would then parallel Riego Road through the Natomas Basin Conservancy to Steelhead Creek. The route would parallel the northern border of the Placer Vineyards Specific Plan area along Baseline Road (Riego Road becomes Baseline Road in Placer County) until the tie-in with Line 123 at the intersection of Baseline Road and Fiddyment Road. This alternative option would reduce the overall pipeline length by roughly 2,900 feet. Figure 3-2G shows Option H.

This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline further away from residences. Because of the reduced length, this option would reduce impacts to soils and reduce the potential for introduction of invasive species.

This option would have similar impacts as the proposed Project in the resource areas of agricultural resources, air quality, hydrology and water quality, geologic and risk of upset hazards, recreation, land use, population and utilities, traffic, and energy and mineral resources.

This option would increase the magnitude of impacts to biological resources due to an increase in the number of trees, wetlands, and riparian woodland communities impacted. The difference in impacts to cultural resources is unknown since Option H would occur outside of the corridor surveyed for cultural resources.

Option H would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option I. This option would follow the proposed alignment for Line 407-E along Base Line Road to South Brewer Road, where the pipeline would extend north along the west side of South Brewer Road, crossing one seasonal wetland, to a point approximately 1,500 feet north of the intersection of Base Line Road and South Brewer Road. This alternative would then extend east for approximately 1.0 mile through agricultural land, crossing Steelhead Creek and two seasonal wetlands before reaching Country Acres Lane. From this point, this alternative would turn south and travel through pasture/fallow agricultural fields along the east side of Country Acres Lane, crossing seasonal wetlands. At the intersection with Base Line Road, the pipeline would join and follow the remainder of the proposed alignment for Line 407-E along Base Line Road. This option would increase the overall pipeline length by roughly 2,900 feet. Figure 3.2-H depicts Option I.

This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline to a location with fewer residences. This option would reduce the risk of upset hazards to a planned high school site.

This option would have similar impacts as the proposed Project in the resource areas of agricultural resources, air quality, cultural resources, hydrology and water quality, geologic hazards, recreation, land use, population and utilities, traffic, and energy and mineral resources.

This option would increase the magnitude of impacts to biological resources such as seasonal wetlands and swales, a vernal pool, and an additional creek, though it would reduce impacts to trees. This option would also increase the magnitude of disturbance to soils, which may increase the potential for introduction of invasive species.

Option I would not reduce the significant and unavoidable construction air quality impacts associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option J. This option would follow the proposed alignment for Line 407-E along Base Line Road to South Brewer Road, where the pipeline would extend north along the west side of South Brewer Road, crossing one seasonal wetland, a vernal pool, and Steelhead Creek, to a point approximately 2,600 feet north of the intersection of Base Line Road and South Brewer Road. This alternative would then extend approximately 0.5 mile east through agricultural land and seasonal wetlands before

turning south for approximately 0.1 mile. This alternative would then turn east again and extend approximately 0.5 mile along the edge of a rice field to Country Acres Lane. From this point, this alternative would turn south and travel through pasture/fallow agricultural fields along the east side of Country Acres Lane, crossing a seasonal swale and seasonal wetlands. At the intersection with Base Line Road, the pipeline would join and follow the remainder of the proposed alignment for Line 407-E along Base Line Road. This option would increase the overall pipeline length by roughly 5,250 feet. Figure 3.2-I shows Option J.

This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline to a location with fewer residences. This option would result in a reduction in the magnitude of risk of upset hazards to a planned high school by moving the pipeline to a location over 1,500 feet from the high school site. ~~This option also would reduce the risk of upset hazards to a planned high school site.~~

This option would have similar impacts as the proposed Project in the resource areas of agricultural resources, air quality, cultural resources, hydrology and water quality, geologic hazards, recreation, land use, population and utilities, traffic, and energy and mineral resources.

This option would increase the magnitude of impacts to biological resources such as seasonal wetlands and swales, and a vernal pool, though reduce impacts to trees (potential Swainson's hawk nesting habitat). This option would also increase the magnitude of disturbance to soils, which may increase the potential for introduction of invasive species.

Option J would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option K. Option K would follow the proposed alignment for Line 407-E along Base Line Road to a location approximately 3,300 feet east of Country Acres Lane. This alternative would then extend northeast, at an angle, to a point approximately 150 feet north of Base Line Road. The pipeline would then turn and extend directly east for approximately 0.2 mile, and then would turn southeast and extend, at an angle, back to Base Line Road. The pipeline would then join and follow the remainder of the proposed alignment for Line 407-E along Base Line Road. This alternative would cross a vernal pool and seasonal wetlands, and would require the redesign or

relocation of the proposed HDD at this location in order to construct this alternative alignment. This option would increase the overall pipeline length by roughly 70 feet. Figure 3.2-J shows Option K.

This option would result in a reduction in the magnitude of impacts to aesthetics and noise due to the movement of a portion of the pipeline to a location with fewer residences. This option would help reduce the risk of upset to a planned elementary school.

This option would have similar impacts as the proposed Project in the resource areas of agricultural resources, air quality, hydrology and water quality, geologic hazards, recreation, land use, population and utilities, traffic, and energy and mineral resources.

This option would increase the magnitude of impacts to biological resources such as seasonal wetlands and swales, and a vernal pool. Option K would not reduce the significant and unavoidable construction air quality impacts ~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

Option L. Option L would follow the proposed alignment for Line 407-E along Base Line Road, but would extend the proposed HDD approximately 1,345 feet to the east. This alternative would increase the depth of cover through the buffer zone to approximately 35 feet and reduce the risk potential to a planned elementary school south of Base Line Road. Approximately 1,000 feet of trenching for Line 407 E would be replaced by HDD construction. Figure 3.2-K shows Option L. This option would include the following PG&E Applicant Proposed Measure:

APM ALT-L

PG&E would partner with the Center Unified School District to jointly develop a risk analysis in accordance with section 14010(h) of Title 5 of the California Code of Regulations regarding the location of a school site within 1,500 feet of a pipeline. The risk analysis would include a quantitative risk assessment to evaluate potential pipeline impacts to the school. If the assessment determines that there is a risk of serious injury or fatality presented by the pipeline, corrective measures would be recommended to reduce the probability and/or consequence such that the risk is reduced to an acceptable level per the above-mentioned regulation.

This option would help reduce the risk of upset to a planned elementary school. This option would not result in an increase in the magnitude of any impacts associated with the proposed Project. This option would have similar impacts as the proposed Project in the resource areas of aesthetics, agricultural resources, air quality, hydrology and water quality, geologic and risk of upset hazards, recreation, land use, noise, population and utilities, traffic, cultural resources, and energy and mineral resources.

The maximum risk posed by Line 407 in the area of the planned school before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chances of fatality per year. This is less than the 1:1,000,000 threshold used by the California Department of Education for siting schools. The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

The planned elementary school is located 1,400 feet from the proposed pipeline, and the risk analysis shows no risk of fatality or serious injury at that distance. However, this option would help reduce the risk of upset by burying the pipeline deeper and reducing the potential for third-party incidents.

Option L would not reduce the significant and unavoidable construction air quality impact~~s~~ associated with the proposed Project. ~~(construction air quality, hazards from the risk of pipeline upset, and land use compatibility).~~

ENVIRONMENTAL IMPACTS AND MITIGATION

Table ES-1 presents a summary of impacts and mitigation measures for the proposed Project. This table is presented by issue area. Within each issue area, each impact that requires mitigation is described and classified, and recommended mitigation is listed, and the level of impact with mitigation is stated.

COMPARISON OF PROPOSED PROJECT AND ALTERNATIVES

The CEQA Guidelines (section 15126.6 (d)) requires that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project. A matrix displaying the major characteristics and significant environmental effects of each alternative may be used to summarize the comparison. Table ES-2 provides a comparison of the proposed Project with

each of the Alternatives evaluated in this document, including the No Project Alternative.

Table ES-1: Summary of Environmental Impacts for the Proposed Project

Impact Class	Description
I	Significant adverse impact that remains significant after mitigation.
II	Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III	Adverse impact that does not meet or exceed an issue's significance criteria.
IV	Beneficial impact.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
Section 4.1 Aesthetic/Visual Resources			
AES-1	The Project would substantially degrade the existing visual character or quality of the site and its surroundings.	II	**AES-1** Replanting of screening vegetation.
AES-2	The proposed Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	II	**AES-2** Light shielding and positioning away from residences.
Section 4.2 Agricultural Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.3 Air Quality			
AQ-1	The Project would result in construction or operational emissions that exceed quantitative significance thresholds (including quantitative thresholds for ozone precursors) established by air pollution control districts in which the Project would be constructed.	I	**AQ-1a** Fugitive PM_{10} Control. **AQ-1b** NO_x Mitigation Menu. **AQ-1c** PCAPCD Mitigation. **AQ-1d** SMAQMD Mitigation.
AQ-2	The Project would result in emissions that substantially contribute to an exceedance of a State or Federal ambient air quality standard.	I	**AQ-1a** Fugitive PM_{10} Control. **AQ-1b** NO_x Mitigation Menu. **AQ-1c** PCAPCD Mitigation. **AQ-1d** SMAQMD Mitigation.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
AQ-3	The Project would produce greenhouse gas emissions and contribute to climate change.	II	**AQ-3** GHG Emission Offset Program.
Section 4.4 Biological Resources			
BIO-1	The proposed Project would fill or alter a wetland or vernal pool, resulting in a long-term change in its hydrology or soils, or the composition of vegetation of a unique, rare, or special concern wetland community.	II	**BIO-1a** Wetland avoidance and restoration. **BIO-1b** Trench backfill and topographic restoration. **BIO-1c** Riparian avoidance and restoration.
BIO-2	The Project would result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types, riparian vegetation, or natural communities.	II	**BIO-2a** Tree avoidance and replacement. **BIO-2b** Avoidance of valley oak woodland.
BIO-3	The Project would introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities.	II	**BIO-3** Prepare and implement an invasive species control program.
BIO-4	The Project would cause a temporary loss or alteration of habitat important for one or more listed species that could result in avoidance by a listed species, or that could cause increased mortality or lowered reproductive success of the species.	II	**BIO-4a** Protect special-status wildlife. **BIO-4b** Mitigation for potential impacts to Natomas Basin Conservancy mitigation lands. **BIO-4c** Mitigation for potential impacts to Sacramento River Ranch Conservation Bank mitigation lands. **BIIO-4d** Protect special-status bird species.
Section 4.5 Cultural Resources			
PALEO-1	Project construction or operation would result in damage or loss of vertebrate or invertebrate fossils that are considered important by paleontologists and land management agency staff.	II	**PALEO-1** Proper curation of fossil collection.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
PALEO-2	The Project is considered to be a resource having scientific or educational value based on the significance criteria given in Section 4.6.3.	II	**PALEO-2** Delivery of fossil collection to appropriate location.
Section 4.6 Geology and Soils			
GEO-1	The Project would result in a risk of damage to structures from ground motion due to a seismic event or resulting phenomenon such as liquefaction or settlement, or from rupture of a known earthquake fault as delineated on the most recent Alquist Priolo Earthquake fault Zoning Map.	II	**GEO-1** Site specific seismic field investigation.
Section 4.7 Hazards and Hazardous Materials			
HAZ-1	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; but could expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	II	**HAZ-1** Minimize risk of fire.
HAZ-2	The calculated individual risk is less than the threshold of 1:1,000,000, therefore the risk is considered to be less than significant. Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset.~~The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.~~	II	**HAZ-2a** Corrosion and third party damage mitigation. **HAZ-2b** Installation of automatic shutdown valves.
Section 4.8 Hydrology and Water Quality			
HWQ-1	The Project could result in violation of Federal or State	II	**HWQ-1** Response to unanticipated release of drilling

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	Agency quantitative or qualitative water quality criteria, standards, or objectives (including objectives promulgated by the CVRWQCB and criteria set forth in the Proposed California Toxics Rule).		fluids.
HWQ-2	The Project could interrupt or degrade groundwater used for private or municipal purposes.	II	**HWQ-2** Verify well and irrigation system locations.
HWQ-3	The Project would place permanent structures within the 100-year floodplain that would be damaged by flooding.	II	**HWQ-3** Flood-proof pump houses within 100-year floodplain.
Section 4.9 Land Use and Planning			
LU-1	The proposed Project would not conflict with development plans for the Sutter Pointe Specific Plan Area, Placer Vineyards Specific Plan, the Sierra Vista Specific Plan, or the Curry Creek Specific Plan, but would cross lands included in the Natomas Basin Conservancy and River Ranch Conservation Bank. The Project could also conflict with operation of Western Area Power Administration (WAPA) power lines.	II	**LU-1a** Mitigation for impacts to the Natomas Basin Conservancy mitigation lands. **LU-1b** Mitigation for impacts to the Sacramento River Ranch Conservation Bank mitigation lands. **LU-1c** WAPA license agreement. **LU-1d** Potential Conflicts with Other Utilities
LU-2	The calculated individual risk is less than the threshold of 1:1,000,000, therefore the risk is considered to be less than significant. Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset.~~The proposed Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.~~	III	**LU-2a** Mitigation for safety risk to nearby land uses. **LU-2b** Mitigation for safety risk to nearby land uses.
Section 4.10 Noise			
NOI-1	Noise levels from Project construction would exceed	II	**NOI-1a** Limited construction hours.

Impact No.	Impact	Impact Class	Recommended Mitigation Measures
	criteria defined in a construction noise ordinance or general plan of the local jurisdiction in which the activity occurs.		**NOI-1b** Best management practices. **NOI-1c** Noise reduction plan.
NOI-2	Groundborne vibrations or groundborne noise from Project activities would have substantial direct or indirect effects on persons or structures.	II	**NOI-2a** Distance from residences. **NOI-2b** Heavy-loaded trucks. **NOI-2c** Earth-moving equipment/distance from vibration-sensitive sites. **NOI-2d** Nighttime construction.
Section 4.11 Recreation (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.12 Population and Housing/Public Services/Utilities and Service Systems (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.13 Transportation and Traffic (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			
Section 4.14 Energy and Mineral Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)			

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Table ES-2: Summary of Environmental Impacts for Proposed Project and Alternatives

Impact Class **Description**

I Significant adverse impact that remains significant after mitigation.
II Significant adverse impact that can be eliminated or reduced below an issue's significance criteria.
III Adverse impact that does not meet or exceed an issue's significance criteria.
IV Beneficial impact.

Magnitude of Alternative Option Impact as compared to the Proposed Project is shown by the following:

0 = No Impact
/ = Similar Impact
- = Lesser Magnitude of Impact
+ = Greater Magnitude of Impact

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.1 Aesthetics and Visual Resources															
AES-1	The Project substantially degrade the existing visual character or quality of the site and its surroundings.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II -	II -	II -	II /	II /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
AES-2	The Project would create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II -	II -	II -	II /	II /
Section 4.2 Agricultural Resources (No Impact)															
Section 4.3 Air Quality															
AQ-1	The Project would result in construction or operational emissions that exceed quantitative significance thresholds (including quantitative thresholds for ozone precursors) established by air pollution control districts in which the Project would be constructed.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
AQ-2	The Project would result in emissions that substantially contribute to an exceedance of a State or Federal ambient air quality standard.	I	No Impact 0	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /	I /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
AQ-3	The Project would produce greenhouse gas emissions and contribute to climate change.	II	No Impact 0	II +	II +	II +	II +	II +	II /	II /	II -	II +	II +	II +	II +
Section 4.4 Biological Resources															
BIO-1	The Project would fill or alter a wetland or vernal pool, resulting in a long-term change in its hydrology or soils, or the composition of vegetation of a unique, rare, or special concern wetland community.	II	No Impact 0	II +	II +	II /	II /	II /	II /	II /	II +	II +	II +	II +	II -
BIO-2	The Project would result in the long-term (more than 5 years) reduction or alteration of unique, rare, or special concern vegetation types, riparian vegetation, or natural communities.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
BIO-3	The Project would introduce new, or lead to the expanded range of existing, invasive noxious weed species or soil pests, so that they interfere with crop production or successful revegetation of natural communities.	II	No Impact 0	II +	II +	II +	II +	II +	II -	II +	II -	II +	II +	II -	II -
BIO-4	The Project would cause a temporary loss or alteration of habitat important for one or more listed species that could result in avoidance by a listed species, or that could cause increased mortality or lowered reproductive success of the species.	II	No Impact 0	II -	II +	II +	II +	II +	II /	II +	II +	II +	II +	II -	II -
BIO-5	The Project would result in direct or indirect impact on special-status plant species that could reduce the abundance or substantially reduce the species numbers of	No Impact	No Impact 0	II +	II +	III /	II +	II +	III /	III /	II +	II +	II +	III /	III /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	special-status plant species.														
Section 4.5 Cultural Resources															
PALEO-1	Project construction or operation would result in damage or loss of vertebrate or invertebrate fossils that are considered important by paleontologists and land management agency staff.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
PALEO-2	The Project is considered to be a resource having scientific or educational value based on the significance criteria given in Section 4.6.3.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /
CR-1	The Project would result in damage to, disruption of or otherwise adversely affect an important archeological or a listed important historic resource.	No Impact	No Impact 0	II +	II +	III /	II +	II +	III /-	III /	II +	III /-	III /-	III /	III /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.6 Geology, Soils, and Mineral Resources															
GEO-1	The Project would result in a risk of damage to structures from ground motion due to a seismic event or resulting phenomenon such as liquefaction or settlement, or from rupture of a known earthquake fault as delineated on the most recent Alquist Priolo Earthquake fault Zoning Map.	II	No Impact 0	II +	II +	II +	II +	II +	II /	II /	II -	II +	II /	II /	II /
Section 4.7 Hazards and Hazardous Materials															
HAZ-1	The Project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; but could expose people or structures to a significant	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.														
HAZ-2	The calculated individual risk is less than the threshold of 1:1,000,000, therefore the risk is considered to be less than significant. Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset. ~~The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for~~	III	No Impact 0	III ~~+~~/	III ~~+~~/	III /	III ~~+~~/	III ~~+~~/	III ~~+~~/	III /	III /	III -/	III -/	III -/	III -/

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	~~fires, explosions, or the release of natural gas into the environment.~~														
Section 4.8 Hydrology and Water Quality															
HWQ-1	The Project could result in violation of Federal or State Agency quantitative or qualitative water quality criteria, standards, or objectives (including objectives promulgated by the CVRWQCB and criteria set forth in the Proposed California Toxics Rule).	II	No Impact 0	II +	II /	II +	II -	II -	II /	II /	II +	II +	II +	II /	II /
HWQ-2	The Project could interrupt or degrade groundwater used for private or municipal purposes.	II	No Impact 0	II -	II +	II /	II +	II +	II -	II +	II -	II -	II -	II /	II /
HWQ-3	The Project would place permanent structures within the 100-year floodplain that would be damaged by flooding.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /	II /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
Section 4.9 Land Use and Planning															
LU-1	The Project would not conflict with development plans for the Sutter Pointe Specific Plan Area, Placer Vineyards Specific Plan, the Sierra Vista Specific Plan, or the Curry Creek Specific Plan, but would cross lands included in the Natomas Basin Conservancy and River Ranch Conservation Bank. The Project could also conflict with operation of Western Area Power Administration (WAPA) power lines.	II	No Impact 0	II /	II /	II /	II /	II /	II /	II +	II +	II -	II -	II -	II -
LU-2	The calculated individual risk is less than the threshold of 1:1,000,000, therefore the risk is considered to be less than significant. Even though the project	III	No Impact 0	III ~~+~~/	III ~~+~~/	III /	III ~~+~~/	III ~~+~~/	III ~~+~~/	III /	III /	III -/	III -/	III -/	III -/

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
	risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset.~~The Project would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment.~~														
Section 4.10 Noise															
NOI-1	Noise levels from Project construction would exceed criteria defined in a construction noise ordinance or general plan of the local jurisdiction in which the activity occurs.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II /	II -	II -	II /	II /

Impact No.	Impact Description	Pro-posed Project	No Project	OPTIONS											
				A	B	C	D	E	F	G	H	I	J	K	L
NOI-2	Groundborne vibrations or groundborne noise from Project activities would have substantial direct or indirect effects on persons or structures.	II	No Impact 0	II -	II /	II /	II +	II +	II -	II /	II /	II -	II -	II /	II /
Section 4.11 Recreation (Less than Significant (Class III) – No Impact Statements or Mitigation Measures)															
Section 4.12 Socioeconomics (Less than Significant (Class III) – No Impact Statements or Mitigation Measures)															
Section 4.13 Transportation and Traffic															
TRANS-1	Project related traffic or other activities could restrict one or more travel lanes of a primary or secondary arterial during peak-hour traffic, thereby reducing the roadway's capacity and creating congestion.	III	No Impact 0	II +	II +	III /	III +	III +	III /	III /	III /	III /	III /	III /	III +
Section 4.14 Energy and Mineral Resources (Less than Significant (Class III) - No Impact Statements or Mitigation Measures)															

ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The CEQA Guidelines (section 15126.6 (d)) require that an EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed Project. The Guidelines (Section 15126.6 (e)(2)) further state, in part, that "*If the environmentally superior alternative is the "No Project" alternative*, the EIR shall also identify an environmentally superior alternative among the other alternatives." (*Emphasis* added).

A narrative summary of the impacts associated with Alternative Options A through L, as compared to the proposed Project impacts, is provided above. Table ES-2 summarizes the environmental impacts for the proposed Project, the No Project Alternative, and the twelve alternative options analyzed in the Draft EIR. None of the alternative options A through L that were analyzed would reduce the significant and unavoidable (Class I) impact~~s~~ associated with the proposed Project. ~~Those~~ That impacts ~~are~~ is associated with construction air quality.~~, hazards from the risk of pipeline upset, and land use compatibility~~.

While none of the alternative options A through L reduce ~~any of~~ the Class I construction air quality impact~~s~~ to less than significant, nor any of the Class II impacts to less than significant without mitigation, some of the options do reduce the magnitude of the impacts associated with the proposed Project. Table ES-2 also depicts whether the impacts associated with the project are the same, reduced in magnitude, or increased in magnitude by each alternative option.

Under the No Project Alternative, a natural gas pipeline would not be constructed between existing Lines 400 and 401 in Yolo County and the existing Line 123 in Placer County. PG&E's studies indicate that the natural gas transmission and distribution system may not be able to reliably serve current customers and planned development in Yolo, Sacramento, Sutter, and Placer counties by 2009. Additionally, continued growth in those counties would put further strain on existing natural gas infrastructure, and could result in emergency restriction or interruption of services. The No Project alternative would not result in any of the impacts associated with the proposed Project. Therefore, the No Project alternative is considered the environmentally superior alternative. It should be noted that the No Project Alternative would not meet the Project objectives because PG&E would be unable to meet its public utility obligations to provide natural gas service to its customers in accordance with the California Public Utilities Code and associated orders, rules and tariffs.

Among the other alternatives, the determination of an environmentally superior alternative is difficult because of the many factors that must be balanced, and none of the alternative options reduce the construction air quality Class I impacts. Some of the impacts may be reduced in magnitude while, at the same time, others are increased in magnitude. In general, there would be minor differences in the magnitude of impacts between the proposed Project and the alternatives, but all would result in the same impact significance levels within each environmental resource area.

Some of the alternative options would reduce the number of agricultural fields that would be segmented by the Project pipeline. However, this would result in the movement of the pipeline closer to roadways, residences, and in some cases businesses, thereby increasing the number of people that would be at risk if a leak or rupture of the pipeline were to occur with a subsequent explosion and/or fire.

The following discussion includes alternative options that would help to reduce the magnitude of some of the impacts associated with the proposed Project, even though some of the other impacts would be greater in magnitude than the proposed alignment in the same segment area.

Alternative Option I would reduce the risk of upset hazards to a planned high school along Baseline Road by moving the pipeline to a location outside of the 1,500-foot safety buffer required by state school regulations. This option would reduce impacts to trees, and would reduce construction noise by moving the pipeline location further from residences along Baseline Road. However, this option would increase the magnitude of impacts to biological resources by impacting a seasonal wetland, swale, vernal pool and a creek not associated with the proposed alignment. All of these impacts would be mitigated in a manner similar to the proposed Project.

Alternative Option L would reduce the risk of upset hazards to a planned elementary school south of Baseline Road. This option would not result in the increase or decrease in the magnitude of any impacts associated with the proposed alignment.

The environmentally superior alternative would be incorporating Alternative Options I and L into the proposed Project alignment. The decrease in the magnitude of impacts to safety risks to planned schools would outweigh the additional impacts to biological resources, and incorporation of Option I and Option L into the proposed Project would better promote the objectives of the Project than the proposed alignment because it would increase the safety of the pipeline. The increased

magnitude of wetland and vernal pool impacts would be mitigated by the measures outlined in Sections 4.4.4 and 4.4.5.

KNOWN AREAS OF CONTROVERSY OR UNRESOLVED ISSUES

The comments received during the Notice of Preparation (NOP) public scoping period raised issues related to impacts to aesthetic/visual, agricultural, air quality, biological resources, geology and soils, hazards and safety, hydrology and water quality, land use, socioeconomics, and traffic and transportation resources. Appendix B provides a copy of the NOP, copies of comment letters received during the NOP and scoping process, and copies of the transcripts taken at the scoping meetings, and indicates the section of the EIR in which the issue is addressed.

1.0 INTRODUCTION

Page **Revision:**

1-2 Curry Creek Community Plan – a mixed use development plan in Placer County. The plan area covers 2,828 acres north of Base Line Road, north of the Placer Vineyards Specific Plan and west of the West Roseville Specific Plan.

1-3 PG&E's current 10-year investment plan for meeting the customer load growth projected for the Sacramento Valley Local Transmission System includes a new transmission pipeline that extends from Lines 400 and 401 and travels in an east-west ~~north-south~~ direction paralleling County Road (CR) 85 near Esparto to Line 172A (Line 406), a new transmission pipeline that extends from Line 172A in the town of Yolo east to Line 123 in Roseville (Line 407), and a new distribution feeder main (DFM) that extends from Line 407 south to the Sacramento Metro Air Park.

1-4 The California Public Utilities Commission (CPUC) has exclusive jurisdiction over the design and construction of the pipeline. The proposed Project would also require approvals and/or review by a number of Federal, State, and local agencies as noted in Section 1.4 - Permits, Approvals and Regulatory Requirements. However, as a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and no local discretionary permits are required for the Project.

1-8 As a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations, and local discretionary permits are not required for the Project. However, ~~In addition to action by the CSLC~~, the proposed Project may ~~will~~ require permits or approvals from the following reviewing authorities and regulatory agencies:

1-9 • ~~State Reclamation Board~~ Central Valley Flood Protection Board;

2.0 PROJECT DESCRIPTION

Page **Revision:**

2-16 Use restrictions required in the permanent easement would prohibit the planting of deep-rooted plants, such as trees or vines within 10~~15~~ feet of the pipeline centerline for protection of the pipeline, but other agricultural uses would be allowed.

2-16 The proposed pipeline traverses several different class locations, requiring different wall thicknesses and grades of steel pipe ~~(Grade X-60)~~ designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). The 10-inch DFM would be designed for a MAOP of ~~500 psig to~~ 975 psig. Industry standards for pipeline sections installed via Horizontal Directional Drill (HDD) technology require a pipe diameter to wall thickness ratio (D/t) of 50 or below. Refer to Table 2-2 for pipe wall thickness specifications required in each class location.

2-17 The following changes have been made to Table 2-1:

Water Crossings	35	35 to 80~~60~~	Prevention of unintentional drill mud release and to meet CSLC minimum depth requirements.	None

2-18 The following changes have been made to Table 2-2:

Table 2-2: Pipeline General Area Class Specifications

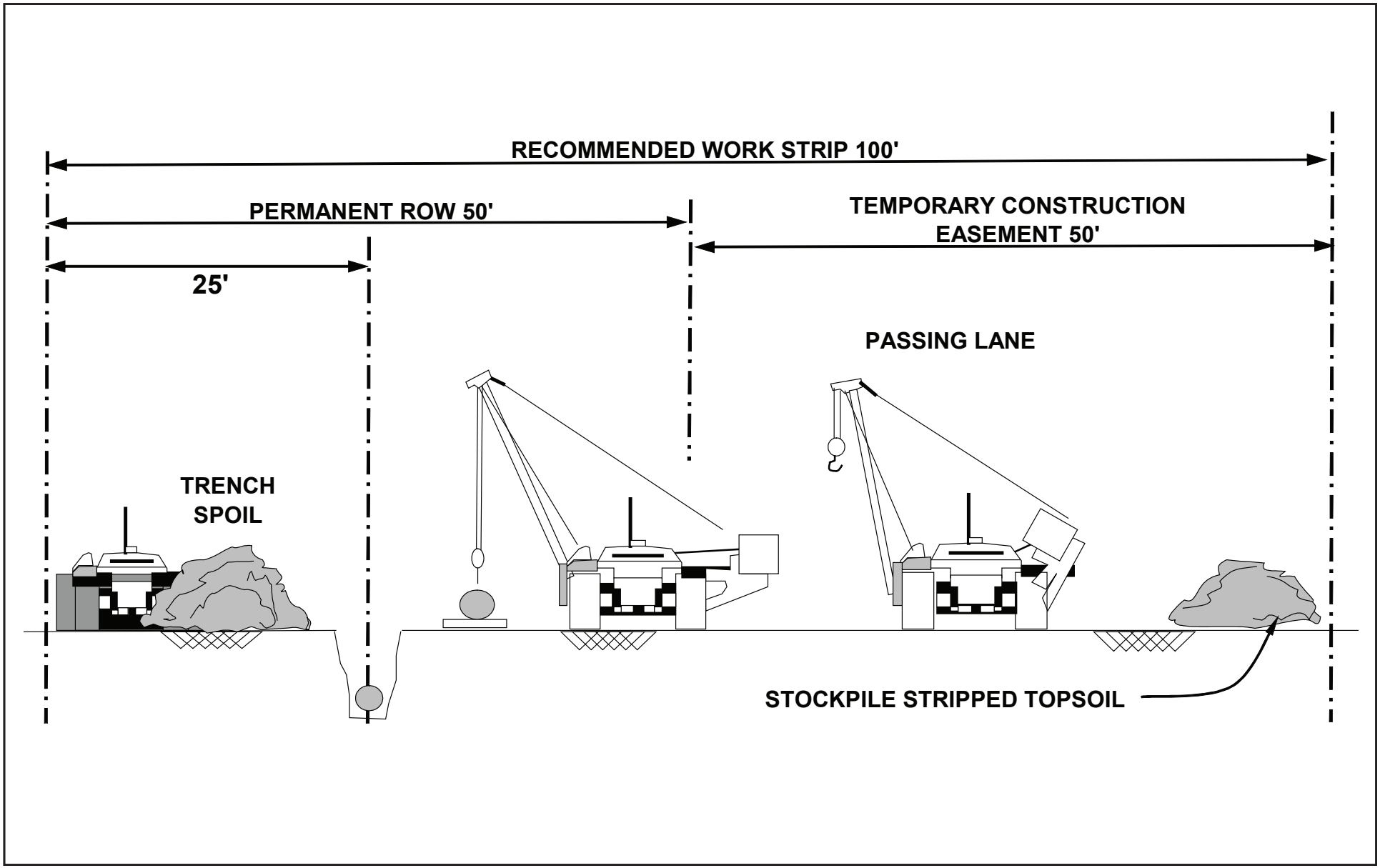
Pipeline Attribute	Class 1	Class 2	Class 3	DFM	HDD
Outside Diameter	30-inch	30-inch	30-inch	10-inch	30-inch
Grade	65,000	65,000/60,000[3]	60,000	52,000~~60,000~~	65,000
Wall Thickness	0.375	0.406/0.438[3]	0.500	0.250	0.625
Seam Type [1]	DSAW	DSAW	DSAW	ERW~~DSAW~~	DSAW
Maximum Allowable Operating Pressure	975 psig	975 psig	975 psig	~~500~~ 975 psig	975 psig
Percent SMYS at MAOP	60.0%	55.4%/55.7%	48.8%	40.3~~0~~%	36.0%
Maximum Operating Pressure (psig)	975	975	975	975	975
Normal Operating Pressure (psig)	625 to 975	625 to 975	625 to 975	~~500 to~~ 975	625 to 975
Minimum Operating Pressure (psig)	625	625	625	500	625
ANSI Rating [2]	ANSI 600	ANSI 600	ANSI 600	ANSI 600	ANSI 600

[1] DSAW - Double Submerged Arc Welding, ERW – Electric Resistance Welding.
[2] ANSI - American National Standards Institute.
[3] Second values are for Alternate Class 2 Specifications
Source: PG&E 2008.

2-20 The targeted ~~proposed~~ in-service date is ~~February~~ November 2010.

2-31 The YJS would be no greater than 10~~5~~ feet in height.

2-35 Please see revised Figure 2-9 on page 4-40~~8~~ of this section.



Source: CSLC 2007.

NOT TO SCALE

Michael Brandman Associates

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Figure 2-9
30-Inch Pipeline Construction ROW Configuration

2-37 A 60-foot wide TUA would be used for construction of the 10-inch pipeline segments for the distribution feeder main ~~in constricted workspaces and would require that excavated soil be transported to an adjacent TUA~~ (see revised Figure 2-10 on page 4-43 of this section).

2-37 Staging areas along the Project right-of-way would be within the TUA. ~~would generally be approximately 300 by 200 feet.~~

2-37 The exception to the 50-foot permanent easement occurs along the proposed Powerline Road DFM~~DMF~~, where PG&E would acquire a 35-foot permanent easement and an adjacent 25-foot TCE for a total 60-foot-wide TUA (revised Figure 2-10 on page 4-43 of this section).

2-37 Restrictions in the easement would prohibit the planting of deep-rooted plants such as trees and vines within 10~~15~~ feet of the pipeline centerline for protection of the pipeline, but other uses would be allowed.

2-38 The Arbuckle yard would be utilized for the Line 406 segment of the Project and would be used from Spring 2009 until the completion of Line 406 ~~to June 2010~~ (Figure 2-13). The Woodland yard would be utilized during ~~for~~ the construction of Line 407 East and West segments of the Project, projected to begin in 2012 ~~and would be used from January 2010 to June 2013~~.

2-38 Vegetation maintenance would be as needed to maintain a 20~~30~~-foot-wide corridor centered on the pipe that is free of deep-rooted plants.

2-39 Please see revised Figure 2-10 on page 4-43-~~11~~ of this section.

2-49 Also, PG&E would hold ~~a~~ preconstruction meetings with ~~between~~ permitting entities and ~~the~~ construction crews.

2-49 The following changes were made to Table 2-3:

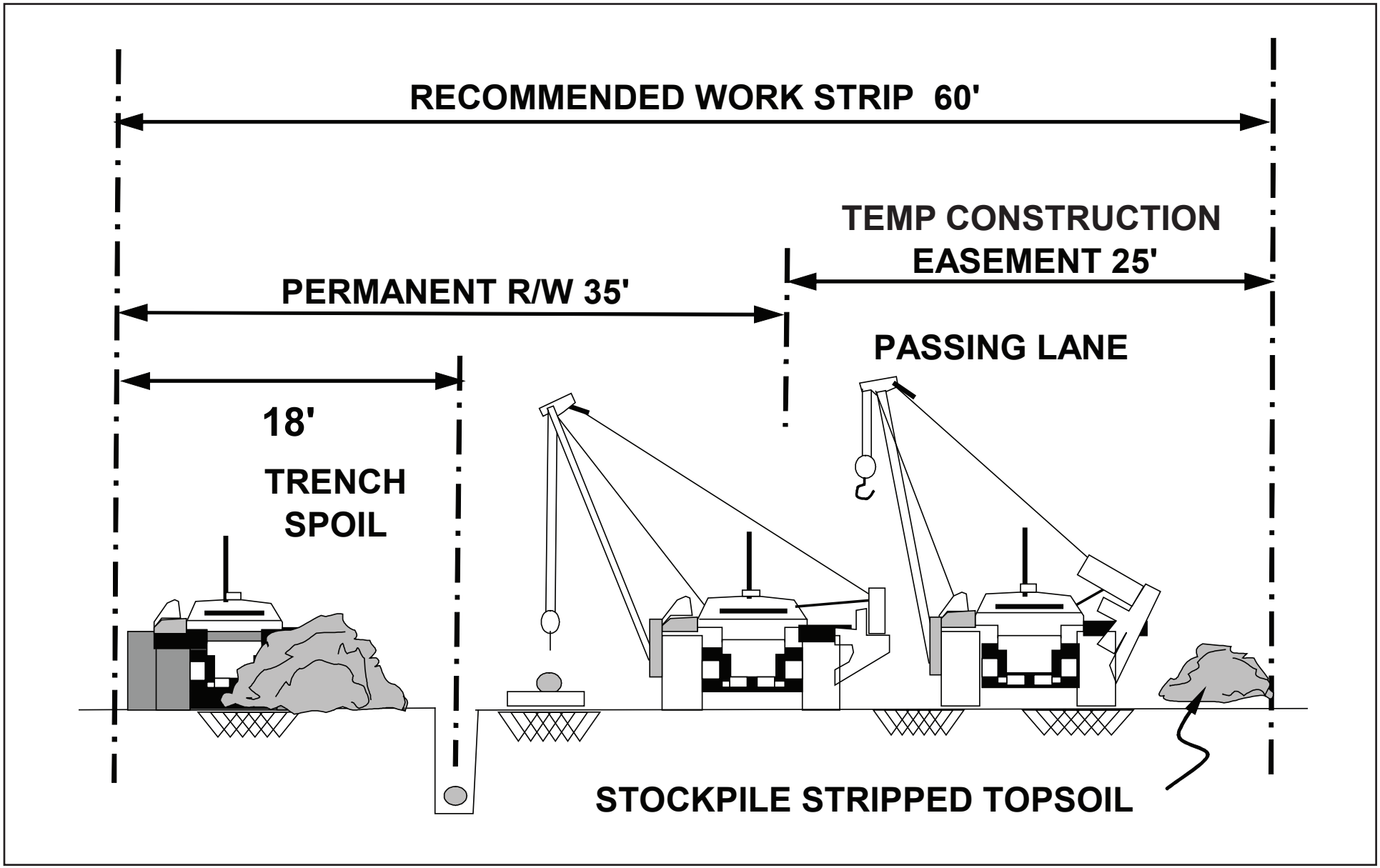
Horizontal Directional Drill	35 to 80 ~~60~~

2-50 If this could not be accomplished, PG&E would construct them during the allowable time period between May 1 and October 1, or would

consult with the USFWS and CDFG to acquire permission to construct the berms outside the GGS work window.

2-55 The pipe sections would be welded together, x-rayed, and a protective abrasion resistant coating ~~epoxy~~ applied to the joints.

2-55 The Project pipeline would be located ~~installed~~ a minimum of 60 feet underneath the bed and banks of any navigable water body and a minimum of 35 feet below any ~~other~~ water feature to be crossed by HDD technology.



Source: CSLC 2007.

NOT TO SCALE

Michael Brandman Associates

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Figure 2-10
10-Inch DFM Construction ROW Configuration

2-56 The following changes were made to Table 2-5:

Table 2-5: Pipeline Crossings Summary

Feature Name[1]	Project Segment/ Crossing #	Approximate Crossing Width (feet)	Type of Crossing[2]	Feature Acreage
Hungry Hollow Canal	Line 406/#1	124	TR or J/B	n/a
County Road (CR) 85	Line 406/#2	158	TR or J/B	n/a
CR-87	Line 406/#3	150	TR or J/B	n/a
CR-88A	Line 406/#4	59	TR or J/B	n/a
Drainage Canal (406 #1)	Line 406/#5	125	TR	n/a
I-505/CR-90A/Goodnow Slough	Line 406/#6	1,210	HDD	n/a
Yolo County Flood Control - Irrigation Canal	Line 406/#7	94	TR or J/B	n/a
CR-17	Line 406/#8	102	TR or J/B	n/a
CR-96/Acacia Canal	Line 406/#9	98	TR or J/B	n/a
CR-97 F/I-5/CR-99W	Line 406/#10	1,440	HDD	n/a
CR-98	Line 407 West/#1	51	TR or J/B	n/a
CR-16A	Line 407 West/#2	110	TR or J/B	n/a
CR-16A	Line 407 West/#2	100	TR or J/B	n/a
State Route (SR) 113	Line 407 West/#3	262	J/B	n/a
CR-100	Line 407 West/#4	123	TR or J/B	n/a
Dense Trees	Line 407 West/#4	423	TR or J/B	n/a
CR-101	Line 407 West/#5	136	TR or J/B	n/a
CR-102	Line 407 West/#6	151	J/B	n/a
CR-17	Line 407 West/#7	120	TR or J/B	n/a
Knights Landing Ridge Cut	Line 407 West/#8	2,400	HDD	n/a
West Yolo Bypass/Drainage	Line 407 West/#9	1,218	HDD	n/a

Feature Name[1]	Project Segment/ Crossing #	Approximate Crossing Width (feet)	Type of Crossing[2]	Feature Acreage
East Yolo Bypass/Tule Canal	Line 407 West/#10	1,200	HDD	n/a
Drainage Canal (CR-16) #1	Line 407 West/#11	189	TR	n/a
Drainage Canal (CR-16) #2	Line 407 West/#12	184	TR	n/a
Drainage Canal (CR-16) #3	Line 407 West/#13	139	TR	n/a
Sacramento River	Line 407 West/#14	2,162	HDD	n/a
Riego Road	Line 407 West/#14	119	TR or J/B	n/a
Drainage Canal (Riego #1)	Line 407 West/#15	171	TR	n/a
Powerline Road/Irrigation Canal	Line 407 West/#16	n/a	TR	n/a
Riego Road	Powerline Road Distribution Feeder Main (DFM)/#1	148	TR or J/B	n/a
North Drainage Canal	Powerline Road DFM/#2	547	HDD	n/a
Irrigation Canal (Powerline #1)	Powerline Road DFM/#3	172	TR or J/B	n/a
Drainage Canal (Powerline #2)	Powerline Road DFM/#4	206	TR or J/B	n/a
Irrigation Canal (Powerline #3)	Powerline Road DFM/#5	184	TR or J/B	n/a
West Elverta Road	Powerline Road DFM/#6	n/a	TR	n/a
Irrigation Canal (Riego #2)	Line 407 East/#1	130	TR or J/B	n/a
North Drainage Canal (Riego #3)	Line 407 East/#2	191	TR or J/B	n/a
Irrigation Canal (Riego #4)	Line 407 East/#3	168	TR or J/B	n/a
SR 70/99/Irrigation Canals (Riego #5)	Line 407 East/#4	1,140	HDD	n/a
Irrigation Canal (Riego #6)	Line 407 East/#5	136	J/B	n/a

Feature Name[1]	Project Segment/ Crossing #	Approximate Crossing Width (feet)	Type of Crossing[2]	Feature Acreage
Pacific Avenue	Line 407 East/#6	100	TR	n/a
Drainage Canal (Riego #7)	Line 407 East/#7	120	TR	n/a
Drainage Canal (Riego #8)	Line 407 East/#8	85	TR	n/a
Seasonal Wetlands	Line 407 East/#9	n/a	TR	n/a
East Levee Road, Steelhead Creek #1, Western Pacific Railroad	Line 407 East/#9	1,208	HDD	n/a
Pleasant Grove Road	Line 407 East/#10	100	TR	n/a
Riego Road Private Residence #1	Line 407 East/#11	296	TR or J/B	n/a
Vernal Pool/Vernal Swale #1	Line 407 East/#11	150	~~TR or~~ J/B	0.03
Locust Road	Line 407 East/#12	60	TR	n/a
Seasonal Wetland #1	Line 407 East/#13	n/a	TR	0.05
Seasonal Wetland #2	Line 407 East/#14	n/a	TR	0.05
Seasonal Wetland #3	Line 407 East/#15	n/a	TR	0.09
Seasonal Wetland #4	Line 407 East/#16	n/a	TR	n/a
Brewer Road/Seasonal Wetland ~~Vernal Pool~~	Line 407 East/#17	123	TR or J/B	0.04
Seasonal Swale #1	Line 407 East/#17	n/a	TR	0.16
Riego Road Private Residence #2	Line 407 East/#18	150	TR or J/B	n/a
Seasonal Wetland #5	Line 407 East	225	TR or J/B	n/a
Riparian Wetland	Line 407 East/#19	n/a	TR	n/a
Seasonal Wetland #6	Line 407 East/#20	n/a	TR	n/a
Vernal Pool/ Vernal Swale #2	Line 407 East/#21	2,264	HDD	0.47

Feature Name[1]	Project Segment/ Crossing #	Approximate Crossing Width (feet)	Type of Crossing[2]	Feature Acreage
Seasonal Wetland #7	Line 407 East/#20	n/a	TR	0.12
Seasonal Wetland #8/ Seasonal Swale #2	Line 407 East/#22	n/a	TR	n/a
Curry Creek #1~~/Vernal Pool/Vernal Swale #3~~	Line 407 East/#24a	1,872	HDD	n/a
Seasonal Swale #3, 4/Vernal Pool #1	Line 407 East/#24b	n/a	HDD	n/a
Curry Creek #2/ Vernal Pool Complex	Line 407 East/#25	1,900	HDD	n/a
Seasonal Swale #2	Line 407 East/#26	n/a	TR	0.1
Seasonal Wetland #9	Line 407 East/#27	n/a	TR	1.07

Notes:
[1] Final routing decisions may alter some of these crossings.
[2] (TR) Trenching, (HDD) Horizontal Directional Drill, (J/B) Jack and Bore, (n/a) Not Applicable or Not Available.
Source: Adopted from PG&E 2007a (updated from information provided by PG&E 2008).

2-71 In response to these conditions, PG&E applied criteria specified in DOT 49 CFR Section 192.317 to protect the Project from flooding hazards. For those portions of the Project within the FEMA-designated 100-year flood zone, PG&E would apply a factor of safety (FS) of 1.5. In other words, the downward force acting on the pipe would be 150 percent of the upward force of buoyancy acting on the pipe. ~~to decrease the downward force of backfill acting on the pipe. In addition, a relative compaction of 80 percent would be required to ensure the backfill will be stable during the first winter season.~~

2-71 To address the potential for scour within the Yolo Bypass, cover would be increased from 5 feet to 7 feet, and a concrete coating would be applied to provide a downward force of 10 lbs/ft or 2-inch minimum thickness whichever is greater. Methods other than a concrete coating could be used if they are approved by a California licensed civil engineer, such as a slurry backfill placed in the ditch around the pipeline to a depth of 2 feet above the pipeline (5 feet below grade).

The slurry would have a minimum weight of 120 lbs/cubic foot to provide the required downward force to prevent buoyancy.

2-80 Construction of Line 406 would begin as soon as all agency approvals have been obtained ~~in September or October 2009~~ with the targeted ~~proposed~~ in-service date scheduled for November ~~February~~ 2010. The Line 407 East, Line 407 West, and DFM segments may ~~would~~ be constructed in two ~~different~~ phases as dictated by the added load on the transmission system. ~~Current projections are that Phase 1, consisting of Line 407 East and the DFM, would be constructed in May 2010 with an in-service date of September 2010. However, PG&E acknowledges that Phase 1 installation may need to occur in advance, as early as 2009, of several road improvement projects associated with developments along Baseline Road and Riego Road. Phase 2, consisting of Line 407 West, is projected to be required in 2012,~~ Construction of the Line 407 segments is projected to begin in 2012.~~but may be required earlier depending upon load growth in the area.~~

Construction would typically occur between 6:00 a.m. and 6:00 p.m., Monday through Saturday, except for the HDD operations, tie-ins, and hydrostatic testing, which may occur around the clock.

2-83 As an additional measure, to prevent third-party damage to the proposed pipeline at a future date, PG&E would take Global Positioning System (GPS) coordinates periodically along the route and tie the as-built pipeline drawings back to the original survey. Locations with GPS coordinates include tie-ins, angle points, HDD entry and exit points, class location changes, wall thickness and pipe grade changes, and at a few reference pipeline welds in order to maintain an accurate location of the proposed pipeline once it is in the ground.

2-84 Operators are also required to devote additional efforts and analysis in HCAs to ensure the integrity of the pipelines. A potential HCA exists along Line 407 East and one HCA is confirmed at Fiddyment Road. ~~The portions of the Project within Class 3 areas, including Line 407 East and the Powerline Road DFM, would be within an HCA.~~ When HCAs are confirmed, or as population density increases creating new HCAs, those ~~Certain~~ portions of the Project would be required to be

included in PG&E's Pipeline Integrity Management Plan, which provides for the assessment and mitigation of pipeline risks in an effort to reduce both the likelihood and consequences of incidents.

3.0 ALTERNATIVES AND CUMULATIVE PROJECTS

Page **Revision:**

3-12 Figures 3-2A through 3-2K show the twelve options. The environmentally superior alternative (other than the No Project alternative) is identified as incorporating Options I and L into the proposed Project alignment.

3-58 The selected alternatives would accomplish the Project objectives of serving new growth areas within the region and providing greater capacity and service reliability to the existing natural gas transmission and distribution pipeline system in California's Central Valley. The CEQA Guidelines section 15126.6(e)(2) states that if the environmentally superior alternative is the "no project" alternative, then the EIR shall identify an environmentally superior alternative among the other alternatives. The environmentally superior alternative among the alternatives is the incorporation of Options I and L into the proposed Project alignment (refer to the Executive Summary for further discussion on the environmentally superior alternative).

3-59 As provided in Section 2.0, Project Description, construction of line 406 would begin as soon as agency approvals have been obtained with the targeted in-service date scheduled for November 2010. The line 407 East, Line 407 West, and DFM segments may be constructed in two phases as dictated by the added load on the transmission system. Construction of the Line 407 segments is projected to begin in 2012. ~~in Summer or Fall 2009 with construction of the remaining pipeline segments continuing through 2012.~~

1 **3-63 & 64** Changes to Table 3-3 are as follows:

Sutter County		2. Riego Road Widening	Riego Road is scheduled to be widened in phases <u>beginning in 2011</u>~~between 2009 and 2010~~. The first section of widening, from SR-99 to Placer County, is expected to occur in <u>2011</u>~~2009~~. This first section would widen Riego Road to 4 or 6 lanes. The following Riego Road improvements are expected to be completed in <u>2011 or later</u>~~2009 or 2010~~: • From SR-99 to Power Line Road - widen to 4 lanes • From SR-99 to Pacific Avenue - widen to 6 lanes • From Pacific Avenue to Road F - widen to 6 lanes • From Road F to Pleasant Grove Road - widen to 6 lanes and include grade separation at railroad crossing • From SR-99 to 2 miles westward - widen to 4 lanes	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic

2 **3-65 to 67** Changes to Table 3-3 are as follows:

Placer County	8. Placer Vineyards Specific Area Plan (PVSP)	—	The PVSP is a mixed-use plan encompassing approximately 5,230 acres in the southwest corner of Placer County. The PVSP is generally bounded by the Sacramento/Placer County line to the south, Dry Creek along the eastern edge, Baseline Road on the north, and the railroad to the west. CEQA requirements have been fulfilled for the PVSP. However, the pending requested entitlements include approval of the PVSP, rezoning, development agreements, and other actions. Several schools are proposed within the PVSP Area, of which two would be located within 1,500 feet of the proposed pipeline. Impacts to proposed schools are discussed in Sections 4.7, Hazards and Hazardous Materials; 4.9, Land Use and Planning; 4.10, Noise; 4.12, Population and Housing/Public Services/Utilities; and 4.13, Transportation and Traffic of this Draft EIR. The construction of PVSP is expected to occur over 30 years<u>.</u>~~, starting in 2008.~~ <u>Exact construction start dates are unknown due to litigation proceedings currently in progress</u>	Aesthetics, Agriculture, Air Quality, Biology, Cultural, Geology, Hazards, Noise, Traffic, Water Resources

Placer County	9. Curry Creek Community Plan		The Curry Creek Community Plan is a mixed-use plan in Placer County. The plan covers 2,828 acres north of Base Line Road, north of the Placer Vineyards Specific Plan and west of the West Roseville Specific Plan. Construction dates are unknown at this time.	Aesthetics, Agriculture, Air Quality, Biology, Cultural, Geology, Hazards, Noise, Traffic, Water Resources
Placer County	Roadway Improvements Related to Placer Vineyards Specific Area Plan	10. Baseline Road Widening Project	Baseline Road will first be widened to 4 lanes near the PVSP, and will ultimately be expanded to 6 lanes (expected by 2015). Road improvements will occur in sections. First, Baseline Road will be widened from Fiddyment Road to Watt Avenue ~~by 2009~~. Following that, Baseline Road from Watt Avenue to the Sutter/Placer County line is expected to be widened to 4 lanes ~~by 2009~~.	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic
Placer County		10. 16th Street Construction	Currently, 16th Street is located in Sacramento County and ends at the Sacramento/Placer County Line. The 16th Street extension will be constructed between the end of 16th Street in Sacramento County and Baseline Road in Placer County. ~~Construction is expected to be completed by 2009.~~	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic
Placer County		12. Dyer Lane Widening and Extension	Dyer Lane, a 1-mile long road located south of Baseline Road and east of Watt Avenue, will be extended west and east. Both the west and east extensions will curve Dyer Lane north to Baseline Road. The east extension will intersect Baseline Road west of the Baseline/Fiddyment Road intersection. Dyer Lane will be widened to 4 lanes in accordance with the Placer Vineyards Specific Plan. ~~Construction is expected to be completed by 2009.~~	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic
Placer County		13. Walerga Road Widening	Walerga Road will be realigned from Baseline Road to the Sacramento/Placer County boundary. In addition, Walerga Road will be widened from 2 to 4 lanes~~, with construction completed by 2009~~.	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic
Placer County		14. Watt Avenue Widening	Watt Avenue will be widened to 4 lanes from Baseline Road to the Sacramento/Placer County boundary ~~by 2009~~.	Agriculture, Air Quality, Biology, Cultural, Hazards, Noise, Traffic

1

4.1 AESTHETIC/VISUAL RESOURCES

Page **Revision:**

4.1-13 Both the Powerline Road Pressure Regulating Station and the Powerline Road Main Line Valve structures would be constructed within the 100-year floodplain and would be no more than 10 feet in height ~~without the flood-proofing. The mitigation requires that the structures be raised approximately 1 foot above the 100-year storm flood profile level~~.

4.1-14 The replanting of deep-rooted vegetation, such as orchards and vineyards, would not be allowed within 10~~15~~ feet on either side of the pipeline.

4.1-15 While the majority of HDD sites are located within rural agricultural areas, some sites may be located in proximity to rural households. Continuous construction requiring the use of light plants (mobile pole lighting) could result in light trespass onto nearby homes. Similar lighting would also be utilized at hydrostatic testing and tie-in locations at which construction would take place continuously until complete.

4.1-15 **MM AES-2 Light Shielding and Positioning Away from Residences**. HDD, hydrostatic testing and tie-in sites within close proximity of rural residences that would utilize lighting and operate between dusk and dawn shall be required to appropriately shield and direct all lighting away from nearby rural residences in order to reduce light trespass to the maximum extent feasible. Lighting shall be positioned and shielded to provide adequate nighttime illumination for construction workers while minimizing affects on nearby homes.

4.2 AGRICULTURAL RESOURCES

Page **Revision:**

4.2-2 Within Yolo County, the Dunnigan Hills area is an appellation of origin for grapes used in wine making. The U.S. Department of the Treasury's Alcohol and Tobacco Tax and Trade Bureau (TTB) has designated the Dunnigan Hills appellation area as an American viticultural area. A viticultural area is defined by the TTB as a delimited, grape-growing region distinguishable by geographical

features. Designation of an appellation of origin as an American viticultural area is intended to allow wine makers to indicate the predominate region in which grapes used to produce a bottle of wine were grown. The Dunnigan Hills area is referred to as a wine appellation of origin by at least five vintners. No regulations regarding the Project are imposed by the TTB in regards to the designated Dunnigan Hills American viticultural area.

4.2-19 As a CPUC-regulated public utility, PG&E is not subject to local land use and zoning regulations. Nonetheless, as part of its environmental review under the CEQA, the following county designated compatible Williamson Act land use regulations have been considered in the assessment of impacts on agricultural resources.

4.2-22 ~~PG&E has not identified any Applicant Proposed Measures (APMs) that are relevant to agricultural resources.~~

APM AGR-1. Advanced construction notification

PG&E shall provide advance notice (between two and four weeks prior to construction), by mail, to all landowners and tenant farmers along the pipeline right-of-way to ensure that all landowners and tenant farmers along the alignment are notified of pending construction activity. A mechanism shall also be set up for contacting PG&E and/or the construction contractor to ensure that landowners and tenant farmers can work out timing concerns with their agricultural activities.

4.2-22 & 23 Restrictions on land within the permanent easement of Line 406, Line 407, and the DFM would be limited to the planting of deep-rooted vegetation within 10~~15~~ feet of the pipeline centerline (that is, 20~~30~~ feet of the permanent easement).

4.2-24 & 25 Restrictions within the permanent easement would prohibit the planting of deep rooted plants, such as trees or vines, within 10~~15~~ feet in either direction of the pipeline centerline (20~~30~~ feet of the permanent easement) in order to minimize possible disturbances from the deep roots of such vegetation. This would limit the future use of approximately 101.88 ~~152.81~~ acres of farmland to row crops, field crops, or any crops that do not involve deep rooted plants. However,

the land would not be converted to non-agricultural uses. The majority of the land within the proposed permanent easement is grassland, row crops or rice fields. These practices could continue within the permanent easement.

Project implementation would result in the permanent conversion of approximately 2.0 ~~3.1~~ acres of existing orchards, as replanting of those trees and other deep-rooted plants, would not be allowed; however, other agricultural practices could still be implemented. Because the majority of the route is currently grassland, row crops or rice fields, no other agricultural areas would experience a change of crop type over existing baseline conditions.

To summarize the above discussion, the amount of farmland that would be permanently converted to non-agricultural use by the construction of the six stations is 2.55 acres. The project would also result in the permanent conversion of approximately 2.0 ~~3.1~~ acres of existing orchards (because of restrictions related to replanting of trees and other deep-rooted plants) to other agricultural practices. The amount of farmland permanently impacted (2.55 acres), and the amount of farmland converted from deep rooted plants to other types of crops (2.0 ~~3.1~~ acres) does not represent a significant regional loss. Impacts related to the conversion of agricultural land are considered to be less than significant (Class III).

4.2-31 The amount of farmland permanently impacted (2.55 acres) and the amount of farmland converted from deep rooted plants to other types of crops (2.0 ~~3.1~~ acres) does not represent a significant regional loss.

4.3 AIR QUALITY

Page **Revision:**

4.3-5 The federal $PM_{2.5}$ attainment status of Yolo, Sutter, Sacramento, and Placer Counties in Table 4.3-1 is revised as follows:

Particulate Matter ($PM_{2.5}$)	~~Unclassified/ Attainment~~ Partial Non-Attainment	~~Unclassified/ Attainment~~ Partial Non-Attainment	~~Unclassified/ Attainment~~ Non-Attainment	~~Unclassified/ Attainment~~ Partial Non-Attainment

4.3-6 In addition, all the counties are designated nonattainment for the State PM_{10} standard. Sacramento County is designated nonattainment for the State particulate matter (less than 2.5 microns [$PM_{2.5}$]) standard. EPA has recently recommended that Sacramento County and part of Yolo, Sutter and Placer counties be designated nonattainment for the federal $PM_{2.5}$ standard.

4.3-26 ~~Public workshops for the draft 8-hour Attainment Demonstration Plan were held in September 2008 and it is expected that the draft plan will go to the air districts' respective Board of Directors for adoption in early 2009.~~ The Sacramento Regional 8-hour Ozone Attainment and Reasonable Further Progress Plan (Plan) was adopted by the various air district boards during January and February 2009. The CARB adopted the Plan in March 2009.

4.3-26 Concerning the Federal PM standards, the SMAQMD published a staff report November 2007, entitled the 2006 PM2.5 Standard: Evaluating the Nine Factors in Setting Nonattainment Area Boundaries for the Sacramento Region. The staff report evaluated ambient air quality monitoring results, population growth, traffic and commuting, and other metrics for the Sacramento Region. ~~The EPA is expected to issue a final decision for Federal PM2.5 nonattainment boundaries by December 2008. If an area is designated nonattainment, an attainment plan must be submitted not later than 3 years after the effective date of the designation.~~ On December 22, 2008, the EPA published a Federal Register notice that designated Sacramento County, and portions of El Dorado, Placer, Solano and Yolo counties as nonattainment of the federal 24-hour $PM_{2.5}$ standard. The federal $PM_{2.5}$ nonattainment area roughly corresponds with the Sacramento Federal Nonattainment Area for ozone. The effective date of the designation is 90 days after the publication of the notice. As such, the air districts are required to prepare a $PM_{2.5}$ SIP within three years of the effective designation date (early 2012), with an attainment goal of five years after the effective designation date (early 2014).

4.3-37 The construction and operational emissions thresholds in Table 4.3-4 are revised as follows:

Table 4.3-4: Daily Thresholds of Significance ~~(pounds per day)~~

Air District	Construction	Operation
YSAQMD		
NO_X	~~82~~ 10 tons/year	~~82~~ 10 tons/year
ROG	~~82~~ 10 tons/year	~~82~~ 10 tons/year
PM_{10}	~~150~~ 80 lbs/day	~~150~~ 80 lbs/day
SMAQMD		
NO_X	85 lbs/day	65 lbs/day
ROG	*None*	65 lbs/day
PM_{10}	5 percent of CAAQS/NAAQS[1]	CAAQS/NAAQS[1]
FRAQMD		
NO_X	25 lbs/day	25 lbs/day
ROG	25 lbs/day	25 lbs/day
PM_{10}	80 lbs/day	80 lbs/day
PCAPCD		
NO_X	82 lbs/day	10 lbs/day
ROG	82 lbs/day	10 lbs/day
PM_{10}	82 lbs/day	82 lbs/day
CO	550 lbs/day	550 lbs/day

Notes
[1] SMAQMD does not have a daily emission threshold for PM10; however, the criteria of significance are based on the NAAQS and CAAQS.

4.3-38 1. For the construction analysis, the 'worst-case' construction day was determined for Line 406, 407E, 407W, and the DFM, and the air emissions were modeled for that worst-case scenario, for the years of construction estimated for the respective portion of the pipeline. The analysis years and construction timeframes used were based on the schedule provided by PG&E, in accordance with the *Air Pollutant Emissions Methodology and Calculations*. A new anticipated construction schedule was developed after completion of the air quality analysis. The new schedule reflects a delay in the start of construction of Lines 407 W, 407 E, and the DFM, moving construction of those

lines to year 2012. However, the analysis completed reflects a conservative, more aggressive construction schedule. In addition, the project may still be developed under the schedule originally provided by PG&E. Therefore, for the purposes of conservative analysis, the original construction schedule was retained in the air emissions analysis.

The construction analysis differentiates between the activities in each air district in that only activities that would occur within each air district were compared to that district's thresholds. For the construction analysis for pipeline segments within Yolo County, the total annual emissions of ROG and NO_x were calculated based on total construction activities. The analysis was prepared using information provided by PG&E. Data included the anticipated construction equipment per phase of trenching, HDD and jack and bore installation. This information was used to determine the off-road construction emissions for the Project. The EMFAC2007 emission factors were utilized to estimate emissions from the anticipated construction equipment.

4.3-40 **APM AQ-11** On "spare the air" days within each county, PG&E will enact measures to promote carpooling by Project employees and limit emissions and equipment operation that do not otherwise impede Project progress. ~~Contractors will limit operation on "spare the air" days within each County.~~

4.3-42 The construction emissions associated with the Project are shown in Table 4.3-5, Table 4.3-6, Table 4.3-7, and Table 4.3-8, and Table 4.3-8a, and Table 4.3-9.

4.3-43

Table 4.3-5: Line 406 Construction Emissions (2009)

	Pollutant Emissions ~~(lbs/day)~~				
	tons/day		lbs/day		
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
~~Maximum Daily Emission~~ Project Emissions	~~373.31~~ 8.65	~~36.46~~ 0.81	107.07	80.38	14.44
YSAQMD Threshold	~~82~~ 10	~~82~~ 10	NA	80	NA
Exceed Significance Threshold?	~~Yes~~No	No	No	~~No~~ Yes	No

Notes:
Tons per year calculated using methodology in Appendix D-1 of this Final EIR. Calculations are contained in Appendix D-8 of this Final EIR. Pounds per day represents the maximum daily emissions that could occur, as provided in Appendix D-1 of this Final EIR, Table 8, and includes Trenching-18 Day Crew, Trenching-Remaining (includes Soil Hauling), and Pipe Hauling.
Source: Michael Brandman Associates 2009.

4.3-44

Table 4.3-8: Line 407W Construction Emissions (2012) Sutter County

	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	300.69	30.58	89.58	77.10	14.19
~~YSAQMD Threshold~~	~~82~~	~~82~~	~~NA~~	~~150~~	~~NA~~
FRAQMD Threshold	25.00	25.00	NA	80.00	NA
Exceed Significance Threshold?	Yes	Yes	No	No	No

Notes:
NA = Not Applicable
Source: Michael Brandman Associates 2009.

4.3-44

Table 4.3-8a: Line 407W Construction Emissions (2012) Yolo County Portion

	Pollutant Emissions				
	tons/day		lbs/day		
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Project Emissions*	6.68	0.68	89.58	77.10	14.19
YSAQMD Threshold	10	10	NA	80	NA
Exceed Significance Threshold?	No	No	No	No	No

Notes:
Tons per year calculated using methodology in Appendix D-1 in the Final EIR. Calculations are contained in Appendix D-8 in the Final EIR.
Pounds per day represents the maximum daily emissions that could occur, as provided in Appendix D-1 in the Final EIR, Table 8, and includes Trenching-18 Day Crew, Trenching-Remaining (includes Soil Hauling), and Pipe Hauling.
Source: Michael Brandman Associates 2009.

4.3-45 Although not required ~~by the individual local air districts or thresholds of significance~~, the total construction emissions were also calculated for the construction of the Project and are presented for illustrative purposes in Table 4.3 10.

4.3-46

Table 4.3-11: Operational Emissions (2010)

	Pollutant Emissions ~~(lbs/day)~~				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
~~Maximum Daily~~ Emissions (lbs/day, tons/year)	0.38, 0.01	0.08, 0.02	0.69, 0.01	0.26, 0.01	0.05, 0.00
YSAQMD Threshold	~~82~~10 tons/year	~~82~~10 tons/year	NA	~~150~~80 lbs/day	NA
FRAQMD Threshold (lbs/day)	25	25	NA	80	NA
SMAQMD Threshold (lbs/day)	65	65	NA	NA*	NA
PCAPCD Threshold	10	10	550	82	NA

	Pollutant Emissions ~~(lbs/day)~~				
	NO_X	**ROG**	**CO**	**PM_{10}**	**$PM_{2.5}$**
(lbs/day)					
Exceed Significance Threshold?	No	No	No	No	No
Notes: NA = Not Applicable Source: Michael Brandman Associates 2009.					

4.3-46 & 47 **MM AQ-1b. NO_x Mitigation Menu.** If, after completing the comprehensive inventory list identified in APM AQ-1 and associated fleet-wide NO_X and PM emission reductions, Project emissions still exceed the air district thresholds for NO_X, PG&E shall implement one or a combination of the following mitigation measures (as directed by the applicable air district) to achieve a reduction in NO_X to less than the applicable air district's daily threshold of significance for construction:

- ~~Use PuriNOX reformulated diesel fuel in some or all of the fleet of construction equipment;~~
- Install diesel catalytic reduction equipment (Cleaire Lean NO_X Catalyst or equivalent) on some or all of the fleet of construction equipment during the construction Project;
- Install the same Lean NO_X Catalyst on third-party diesel equipment operating within the Yolo-Solano/Sacramento nonattainment area for a period not less than one year of operation; or
- Pay a mitigation fee to the respective local air districts to offset NO_X emissions which exceed the applicable thresholds after all other mitigation measures have been applied.

4.3-47 The following mitigation measures have been added for Impact AQ-1:

MM AQ-1c. PCAPCD Mitigation. In addition to the applicable APMs and MM AQ-1a and MM AQ-1b, the following measure shall be implemented for all construction activities occurring in Placer County:

a) PG&E shall submit a Construction Emission / Dust Control Plan to the PCAPCD. This plan must address the minimum Administrative Requirements found in section 300 and 400 of the PCAPCD Rule 228, Fugitive Dust. PG&E shall not break ground prior to receiving PCAPCD approval of the Construction Emission / Dust Control Plan.

b) PG&E shall submit to the PCAPCD a comprehensive inventory (i.e. make, model, year, emission rating) of all the heavy-duty off-road equipment (50 horsepower or greater) that will be used an aggregate of 40 or more hours for the construction project. The inventory shall be updated, beginning 30 days after any initial work on the site has begun, and shall be submitted on a monthly basis throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least three business days prior to the use of subject heavy-duty off-road equipment, the project representative shall provide the PCAPCD with the anticipated construction timeline including start date, and name and phone number of the property owner, project manager, and on-site foreman.

c) PG&E shall provide a plan to the PCAPCD for approval by the PCAPCD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

d) PG&E shall suspend all grading operations when fugitive dust exceeds PCAPCD Rule 228, Fugitive Dust, limitations. The prime contractor shall be responsible for having an individual who is CARB-certified to perform Visible Emissions Evaluations (VEE). This individual shall evaluate compliance with Rule 228 on a weekly basis. It is to be noted that fugitive dust is not to exceed 40 percent opacity and not go beyond property boundary at any time. If lime or other drying agents

are utilized to dry out wet grading areas, they shall be controlled as to not exceed PCAPCD Rule 228, Fugitive Dust, limitations.

e) PG&E shall prepare an enforcement plan and submit to the PCAPCD for review, in order to weekly evaluate project-related on- and off-road heavy-duty vehicle engine emission opacities, using standards as defined in California Code of Regulations, Title 13, Sections 2180-2194. The CARB-certified individual that is hired by PG&E to perform VEE, shall routinely evaluate project-related off-road and heavy-duty on-road equipment emissions for compliance with this requirement. Operators of vehicle and equipment found to exceed opacity limits will be notified by the PCAPCD and the equipment must be repaired within 72 hours.

f) PG&E shall suspend all grading operations when wind speeds (including instantaneous gusts) exceed 25 miles per hour and dust is impacting adjacent properties.

g) PG&E shall use CARB ultra low sulfur diesel fuel for all diesel-powered equipment. In addition, low sulfur fuel shall be utilized for all diesel-fueled stationary equipment.

MM AQ-1d. SMAQMD Mitigation. In addition to the applicable APMs and MM AQ-1a and MM AQ-1b, the following measure shall be implemented for all construction activities occurring in Sacramento County:

a) PG&E shall provide a plan, for approval by CSLC and SMAQMD, demonstrating that the heavy-duty (>50 horsepower) self-propelled off-road vehicles to be used in construction, including owned, leased and subcontractor vehicles, will achieve a project-wide fleet average of 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at the time of construction. (SMAQMD provides that acceptable options for reducing emissions may include use of newer model year engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.)

b) PG&E shall submit to CSLC and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horse power rating, engine production year, and projected hours of use for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the construction, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, PG&E shall provide SMAQMD with the anticipated construction timeline including start date, and the name and phone number of the project manager and on-site foreman.

c) PG&E shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified within 48 hours of identification of non-compliance equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulations.

and/or:

If at the time of construction, the SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. Consultation by PG&E with SMAQMD prior to construction will be necessary to make this determination.

4.3-47 MM AQ-1a reduces the estimated fugitive dust emissions from the Project construction. The mitigated output for Line 406 is provided in

Appendix D-9. The mitigated URBEMIS output for Line 407 East and the DFM is provided in Appendix D-4 and D-5. Incorporation of this measure reduces the maximum daily emissions of PM_{10} to 29.19 lbs/day for the DFM and to 29.69 lbs/day for Line 407 East, for a total of 58.87 lbs/day of PM_{10}, which is less than significant. Incorporation of this measure reduces the maximum daily emissions of PM_{10} from Line 406 to 30.28 lbs/day.

4.3-47 MM AQ-1c and MM AQ-1d were requested by the PCAPCD and SMAQMD, respectively, to further reduce air quality impacts associated with construction of the project in their respective jurisdictions. MM AQ-1c is applicable to all construction activities that would occur in Placer County, and would further reduce fugitive PM emissions (dust) and equipment exhaust emissions from project construction. MM AQ-1d is applicable to all construction activities that would occur in Sacramento County, and would further reduce construction equipment-generated emissions.

4.3-48 **Mitigation Measures for Impact AQ-2 Construction or Operation Emissions Exceeding State or Federal Standards**

MM AQ-1a: Fugitive PM_{10} Control.

MM AQ-1b: NO_X Mitigation Menu.

MM AQ-1c: PCAPCD Mitigation.

MM AQ-1d: SMAQMD Mitigation.

4.3-48 The Rational for Mitigation for Impact AQ-2 has been revised as follows:

As described above in Impact AQ-1, ~~above, mitigation measure~~ MM AQ-1a reduces PM_{10} and AQ-1b reduces NO_X emissions from the Project's construction. As described in Impact AQ-1 above, MM AQ-1c and AQ-1d further reduce construction equipment emissions from the Project's construction in Placer and Sacramento counties, respectively. In addition, MM AQ-1c further reduces fugitive PM (dust) from the Project's construction in Placer County.

4.3-52 **MM AQ-3 GHG Emission Offset Program.** PG&E ~~The applicant~~ shall participate in a Carbon Offsets Program with ~~CCAE, CARB, or one of the local air districts, and will~~ the Climate Action Registry (CAR), the Chicago Climate Exchange, or another provider of carbon offsets. PG&E shall purchase carbon offsets equivalent to the projected project's GHG emissions to achieve a net zero increase in GHG emissions during the construction phase prior to the beginning of the construction phase, or prior to the beginning of construction. Carbon offsets must occur within the State of California, preferably in the project region. PG&E will provide verification to the CSLC demonstrating compliance with this measure for each segment prior to the start of construction for that segment.

4.3-53 As described above under Methodology, the construction-related analysis used an estimate of peak construction activity to calculate the maximum daily air pollutant emissions of concern, as well as annual construction activity to estimate total tons of ROG and NO_x. The maximum daily emissions calculated for Line 406 reflect the worst-case construction scenario that could occur on any one day, on any portion of Line 406. The maximum daily emissions for Line 406 were calculated using the peak trenching activity, construction employee trips, water truck emissions, fugitive dust emissions, soil hauling and pipe hauling. Although lengthening the Project by approximately 2,200 feet under Option A may potentially lengthen the duration of construction, Option A would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option A would be the same as the proposed alignment (Class I). The increased length would increase construction-generated ROG and NO_x by increasing the duration of construction activities. Implementation of MM AQ-1a and AQ-1b would be required. Mitigated ~~M~~maximum daily construction emissions from Option A and Line 406 are provided in Table 4.3 14. The increase in Line 406 ROG and NO_x emissions under Option A are provided in Table 4.3 14a.

Table 4.3-14: Option A Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 406 Portion (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Option A (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Source: Michael Brandman Associates 2009.					

Table 4.3-14a: Option A Increase in Total Construction Emissions

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option A (2009) Increase	0.20	0.02
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-54 Although lengthening the Project by approximately 2,640 feet under Option B may potentially lengthen the duration of construction, thereby increasing the construction generated ROG and NO_X, Option B would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option B would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a and AQ-1b would be required. Mitigated m~~M~~aximum daily construction emissions from Option B and Line 406 are provided in Table 4.3 16. The increase in Line 406 ROG and NO_X emissions under Option B are provided in Table 4.3-16a.

Table 4.3-16: Option B Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 406 Portion (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Option A (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Source: Michael Brandman Associates 2009.					

Table 4.3-16a: Option B Increase in Total Construction Emissions

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option B (2009) Increase	0.24	0.02
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-56 Although lengthening the Project by approximately 1,150 feet under Option C may potentially lengthen the duration of construction, thereby increasing the construction generated ROG and NO_X, Option C would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option C would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a and AQ-1b would be required. Mitigated ~~M~~maximum daily construction emissions from Option C and Line 406 are provided in Table 4.3 18. The increase in Line 406 ROG and NO_X emissions under Option C are provided in Table 4.3 18a.

Table 4.3-18: Option C Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 406 Portion (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Option A (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Source: Michael Brandman Associates 2009.					

Table 4.3-18a: Option C Increase in Total Construction Emissions

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option C (2009) Increase	0.10	0.01
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-58 Although lengthening the Project by approximately 860 feet under Option D may potentially lengthen the duration of construction, thereby increasing the construction generated ROG and NO_X, Option D would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option D would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a and AQ-1b would be required. Mitigated mMaximum daily construction emissions from Option D and Line 406 are provided in Table 4.3 20. The increase in Line 406 ROG and NO_X emissions under Option D are provided in Table 4.3 20a.

Table 4.3-20: Option D Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 406 Portion (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Option D (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Source: Michael Brandman Associates 2009.					

Table 4.3-20a: Option D Increase in Total Construction Emissions

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option D (2009) Increase	0.08	0.01
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-59 Although lengthening the Project by approximately 3,480 feet under Option E may potentially lengthen the duration of construction, thereby increasing the construction generated ROG and NO_X, Option E would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option E would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a and AQ-1b would be required. Mitigated m~~M~~aximum daily construction emissions from

Option E and Line 406 are provided in Table 4.3 22. The increase in Line 406 ROG and NO_x emissions under Option E are provided in Table 4.3 22a.

Table 4.3-22: Option E Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 406 Portion (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Option E (2009)	373.31	36.48	107.07	30.28~~80.38~~	14.44
Source: Michael Brandman Associates 2009.					

Table 4.3-22a: Option E Increase in Total Construction Emissions

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option E (2009) Increase	0.32	0.03
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-61 Option F would not alter the length of the segment or change the construction methods for Line 406. Therefore, Option F would result in the same construction-generated maximum daily air emissions, total annual emissions, and total GHGs as the proposed Project. The maximum daily construction emissions for Option F are the same as for Line 406. Option F would not increase or reduce the operational emissions. Impacts would be the same as the proposed Project.

4.3-61 Option G would not alter the length of the segment or change the construction methods for Line 407 W. Therefore, Option G would result in the same construction-generated maximum daily air emissions, total annual emissions, and total GHGs as the proposed Project. The maximum daily construction emissions for Option G are the same as for Line 407 W. Option G would not increase or reduce the operational emissions. Impacts would be the same as the proposed Project.

4.3-61 Under Option H, the length of Line 407 W would be reduced by approximately 2,900 feet. The portion of Line 407 W in Yolo County would be reduced by approximately 7,000 feet. Under Option H, the length of the DFM would not change.

4.3-62 Although reducing the Project by approximately 2,970 feet under Option H may potentially reduce the duration of construction, Option H would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option H would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a, ~~and~~ AQ-1b, and AQ-1d would be required. Maximum daily construction emissions from Option H and Line 407 W are provided in Table 4.3 24. The decrease in Line 406 ROG and NO_x emissions under Option H in Yolo County are provided in Table 4.3-24a.

Table 4.3-24: Option H Maximum Daily Construction Emissions

Line (Year of Construction)	Pollutant Emissions (lbs/day)				
	NO_X	ROG	CO	PM_{10}	$PM_{2.5}$
Line 407 W Portion (2012)	300.69	30.58	89.58	77.10	14.19
Option H (2012)	300.69	30.58	89.58	77.10	14.19
Source: Michael Brandman Associates 2009.					

Table 4.3-24a: Option H Decrease in Total Construction Emissions in Yolo County

	Pollutant Emissions (Tons)	
	NO_X	ROG
Option H (2012) decrease	-0.52	-0.05
Source: Michael Brandman Associates 2009, Appendix D-10, OFFROAD		

4.3-63 Although lengthening the Project by approximately 2,900 feet under Option I may potentially lengthen the duration of construction, Option I would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from

construction activity from Option I would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a, ~~and~~ AQ-1b, and AQ-1c would be required. Maximum daily construction emissions from Option I and Line 407 E are provided in Table 4.3 26.

4.3-65 Although lengthening the Project by approximately 5,250 feet under Option J may potentially lengthen the duration of construction, Option J would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option J would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a, ~~and~~ AQ-1b, and AQ-1c would be required. Maximum daily construction emissions from Option J and Line 407 E are provided in Table 4.3 28.

4.3-67 Although lengthening the Project by approximately 70 feet under Option K may potentially lengthen the duration of construction, Option K would not modify the estimated peak daily construction activity scenario. Therefore, the amount of daily air pollutant generation from construction activity from Option K would be the same as the proposed alignment (Class I). Implementation of MM AQ-1a, ~~and~~ AQ-1b, and AQ-1c would be required. Maximum daily construction emissions from Option K and Line 407 E are provided in Table 4.3 30.

4.3-69 Implementation of MM AQ-1a, ~~and~~ AQ-1b, and AQ-1c would be required.

4.3-73 The mitigation measures listed in Table 4.3-35 are revised as follows:

Table 4.3-35: Summary of Air Quality Impacts and Mitigation Measures

Impact	Mitigation Measure
AQ-1. Construction or operational emissions exceeding regional thresholds.	**AQ-1a.** Fugitive PM_{10} control. **AQ-1b.** NO_X mitigation menu. **AQ-1c.** PCAPCD mitigation. **AQ-1d**. SMAQMD mitigation.
AQ-2. Construction or operational emissions exceeding State or Federal standards.	**AQ-1a.** Fugitive PM_{10} control. **AQ-1b.** NO_X mitigation menu. **AQ-1c.** PCAPCD mitigation. **AQ-1d**. SMAQMD mitigation.
AQ-3. Increase in GHG Emissions.	**AQ-3.** GHG Emission Offset Program.
Source: Michael Brandman Associates 2009.	

4.4 BIOLOGICAL RESOURCES

Page **Revision:**

4.4-21 Dwarf downingia (*Downingia pusilla*), a CNPS List 2 species, ~~strict endemic of the vernal pool hydrologic regime,~~ is a strict endemic of the vernal pool hydrologic regime and an annual member of the bellflower family (*Campanulaceae*).

1 **4.4-27 & 28** The following changes have been made to Table 4.4-3:

Branchinecta lynchi Vernal pool fairy shrimp	FT/—	Vernal pool fairy shrimp occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Typically, the majority of pools in any vernal pool complex are not inhabited by the species at any one time. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary.	**High.**~~**Moderate.**~~ Dry- and wet-season protocol surveys were conducted for the proposed Project on November 5, 6, and 18, 2006 by Helm Biological Consulting (2007), and between December 21, 2006 and May 18, 2007 by Gallaway Consulting, Inc (2007b), to determine the presence or absence of sensitive vernal pool branchiopods, including the vernal pool fairy shrimp. Similar to the conservancy fairy shrimp, the presence of this species (*Branchinecta lynchi*) could not be concluded based on the dry season survey alone. Wet season surveys were conducted to substantiate the findings of the dry season survey and complete USFWS protocol survey requirements. This species was present in two wetland features during wet season surveys and unidentified *Branchinecta* sp. eggs were present in several features during the dry season surveys. ~~This species was not found during any of the wet season surveys and is presumed to be absent from the project site. There are several CNDDB-recorded occurrences of this species within 5 miles of the Project (CNDDB 2008).~~

2

4.4-55 Local conservation plans and policies are included below. County General Plan goals, policies, and objectives were also evaluated in preparation of this Draft EIR; however, due to their length they are appended to this Draft EIR (see Appendix E-14). Although PG&E is not subject to local conservation plans, these plans and policies are taken into consideration in evaluating Project impacts and mitigation measures.

4.4-57 The Yolo Natural Heritage Program is a Yolo county-wide Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP) for the 653,820 acre planning area. The Yolo Natural Heritage Program will conserve the natural open space and agricultural landscapes that provide habitat for many special status and at-risk species found within the habitats and natural communities in the County.

The Yolo County NCCP/HCP Joint Powers Agency ("JPA") manages the Natural Communities Conservation Plan/Habitat Conservation Plan (NCCP/HCP), now known as the Yolo Natural Heritage Program. The JPA governing Board is composed of representatives from member Agencies, which include two members of the Yolo County Board of Supervisors, one member each from the City Councils of Davis, Woodland, West Sacramento and Winters, and one ex-officio member from UC Davis. The JPA recently completed the first phase of the Yolo Natural Heritage Program. The next major phase is underway and focuses on development of conservation strategies and preserve design alternatives. (http://www.yoloconservationplan.org/index.html).

4.4-62 **APM BIO-8:** Workday Schedule: To the extent possible, PG&E will conduct all construction activity during daylight hours only, with the exception of the following: HDD, which will continue 24 hours per day, 7 days per week to minimize the potential for frac-out;~~.~~ hydrostatic testing which may require holding test pressure in the pipelines past sundown;~~,~~ and tie-in locations which require natural gas service interruption. Where it is deemed necessary and feasible, night lighting and monitors will be used for work that occurs after sundown.

4.4-81 & 83 **MM BIO-1a. Wetland Avoidance and Restoration.** PG&E shall avoid, minimize, and/or compensate for damage and/or loss of wetland

vegetation types due to pipeline construction activities by completing the following:

- Maximum avoidance of jurisdictional wetlands by fencing wetlands and appropriate buffer zones within the 100-foot ROW and a 50-foot wide buffer on either side of the ROW or as determined in consultation with the USACE.
- Restricted vegetation removal and topsoil storage and replacement.
- Consultation with the USACE and RWQCB for any unavoidable wetland impacts, obtaining the appropriate permits, and implementation of the conditions of those permits.
- Preparation and implementation of wetlands restoration for any unavoidable impacts to wetlands.
- Supervision and verification of the implementation of these measures by the Environmental Monitor (see APM BIO-6).

Avoidance will consist of fencing any ~~the~~ wetlands that are to be avoided within the ROW, including appropriate buffer zones, to minimize impacts to wetland vegetation types. If construction work areas and/or associated overland travel in wetlands in a saturated or ponded condition is unavoidable, all equipment, vehicles and associated construction materials shall be placed on protective mats to avoid soil compaction, such that they do not make direct contact with the wetland. This requirement is not intended for use in dry soils, where the risk of compaction is low. Vegetation clearing and/or installation of mats shall be conducted only from areas scheduled for immediate construction work (within 10 days) and only for the width needed for completion of activities within each active construction area~~activities~~. Mats are not required for work in rice fields. Mats shall be removed immediately following completion of activities within each active construction area. During pipeline construction, the 12 inches of topsoil shall be salvaged (or less where topsoil is less than 12 inches deep, as verified by the construction monitor), stored in an upland location, and replaced

wherever the pipeline is trenched in wetlands. Prior to permit issuance and final design, project construction plans shall depict appropriate measures for topsoil protection and storage that will allow survival of existing ~~native~~ seed within the topsoil. Topsoil shall be placed at the surface on top of fill material and not be used to backfill the trench, and excavated trench spoils or excess fill shall be placed on top of the pipeline under topsoil and not dispersed onto the surface of the ROW. Implementation of these measures prior to and during construction will be supervised and verified by the Environmental Monitor (see APM BIO-6).

Unavoidable direct impacts to wetland vegetation types during construction and/or associated overland travel will require consultation with the appropriate jurisdiction (USACE, RWQCB, CDFG) and will likely require a permit. These impacts shall be mitigated by restoration of the affected area to pre-construction conditions in accordance with permits issued by the USACE, RWQCB, and CDFG. Consistent with requirements set forth in permits issued by the USACE, RWQCB, and CDFG for work in wetlands and waters, and with other plans developed for the pipeline construction project, including (but not limited to) the Restoration and Monitoring Plan (see APM BIO-17), the following procedures shall be implemented:

- A delineation of potentially affected wetlands for any areas not included in the jurisdictional delineation performed by CH2MHill (2008) and Galloway (2007a; 2008a; 2008b).

- A discussion demonstrating how maximum practicable avoidance has been accomplished and why the wetlands proposed to be impacted cannot be avoided.

- Methods proposed for restoring the affected wetlands, including topsoil preservation (inclusive of restoration of an impermeable layer, i.e., hardpan, if approved) and backfilling, soil and grade preparation such that there is no change in pre-construction contours, regionally native seed and/or plant materials to be used and installation methods, and maintenance measures, including

weed control (with the exception of work within cropped wetlands, such as rice fields).

- Minimum 1:1 replacement ratio (in-kind~~in-land~~, on-site) for area and function of temporarily damaged wetland areas.

- A minimum five-year monitoring program with detailed success criteria regarding species cover, species composition, species diversity, wetland area and depth as compared with pre-construction conditions documented prior to construction by a qualified biologist such that the function of the affected wetland and hydrology is fully restored, the methods and results of which shall be described in the Plan. (These measures and the monitoring program below do not apply to work within cropped wetlands, such as rice fields, since those will be returned to their agricultural crops.)

- Annual monitoring over a minimum five-year period to evaluate whether the pipeline installation is substantially altering surface or subsurface flow of water as determined through (1) topographic assessments of the pipeline sites and (2) assessments of vegetation and hydrology conditions within adjacent wetlands (as compared to pre-construction conditions).

- Methods for correcting observed alterations to surface or subsurface flows.

- Annual reporting requirements to responsible agencies.

- Detailed contingency measures in case of restoration failure, as determined by the responsible agencies following the five-year monitoring period, requiring additional off-site wetland creation at a minimum ratio of 2:1 for created wetland acreage or as otherwise determined in the USACE 404 permit and the RWQCB 401 water quality certification.

4.4-83 & 84 **MM BIO-1b. Trench Backfill and Topographic Restoration.** The purpose of this measure is to prevent temporary and permanent hydrologic alteration to wetlands and associated sensitive vegetation from backfill activities associated with pipeline installation by requiring:

- Appropriately-timed work so that trenches are not excavated or backfilled during the wet season.

- Preparation and implementation of soil and grade restoration measures including backfill and compaction methods and an annual monitoring program.

- Supervision and verification of the implementation of these measures by the Environmental Monitor.

Prior to construction, responsible agencies (including the RWQCB, CDFG, and USACE, ~~and County agencies~~) shall evaluate soil and grade restoration measures to be implemented along the ROW. Restoration of wetlands directly impacted by pipeline construction is addressed in MM BIO-1a. To prevent hydrologic impacts to wetlands and associated vegetation resulting from pipeline backfill activities the following procedures shall, at a minimum, be addressed in accordance with any permit conditions issued by responsible agencies:

- Excavation, soil storage and backfill methods to ensure that topsoil returned to the surface and is not be used to backfill the trench, and subsoil is not be dispersed onto the surface.

- Requirements for the separation of topsoil and subsoil in upland storage locations.

- Methods to ensure ~~native~~ existing seed survival within stored topsoil.

- Circumstances requiring use of imported soils, proposed source of soil.

- Backfill compaction specifications to ensure that changes in infiltration and lateral flow do not substantially alter subsurface hydrology.

- Specifications for the restoration of pre-construction surface topography to ensure that mounds or berms, due to overfill, or

trenches, due to soil settling, are not created that will substantially alter surface hydrology.

Implementation of these measures during and after construction shall be supervised by the Environmental Monitor.

4.4-84 & 87 MM BIO-1c. Riparian Avoidance and Restoration. PG&E shall avoid, minimize, and compensate for impacts to riparian habitat during construction due to trenching, open cut crossings of streams, and pit excavation for bore crossings of streams by:

- Identification and avoidance of riparian forest by boring under streams where feasible.
- Consultation with CDFG for any unavoidable impacts to riparian vegetation.
- Fencing riparian vegetation within the 100-foot ROW and a 50-foot wide buffer on either side of the ROW or as determined in consultation with CDFG ~~adjacent to work areas~~ to prevent impacts.
- Preparation and implementation of riparian restoration, including replanting and monitoring elements.
- Supervision and verification of implementation of these measures by the Environmental Monitor.

Riparian habitat within the ROW shall be identified by a qualified ecologist, mapped on construction plans, and where avoidable fenced prior to construction. These areas should be avoided to the maximum extent feasible. If riparian habitat cannot be avoided by boring under the stream, the following impact minimization measures, at a minimum, shall be implemented during construction in accordance with any permit conditions imposed by responsible agencies:

- The work area shall be limited to the minimum necessary and shall be fenced prior to construction.

- Vegetation within the work area shall be cleared in a manner that does not damage the root system of adjacent remaining vegetation.

- The upper 12 inches of topsoil shall be salvaged (or less where topsoil is less than 12 inches deep, as verified by the construction monitor), stored at an upland location, and returned to the surface after trench backfilling is complete.

- Existing vegetation shall be cleared only from areas scheduled for immediate construction work (within 10 days).

The Environmental Monitor shall supervise compliance with these protective measures prior to and during construction activities.

Unavoidable direct impacts to riparian vegetation during construction will require consultation with the appropriate jurisdiction (CDFG) and will likely require a permit (portions of riparian habitat, specifically riparian wetland and willow riparian, are federally jurisdictional wetlands and impacts to these areas would need to be addressed in consultation with USACE). These impacts shall be mitigated by restoration of the affected area to pre-construction conditions in accordance with permits issued by CDFG. A qualified ecologist shall dictate the following procedures to ensure that they will be consistent with ~~applicable local jurisdiction requirements, such as County Tree Ordinances, and with~~ any additional permit conditions imposed by ~~the local agency as well as~~ CDFG and other State or federal agencies. If a tree within the riparian forest to be removed qualifies as a Protected Tree under the local jurisdiction, MM BIO-2a and 2b shall be applied and any mitigation standards shall default to the one requiring the higher standard. Riparian habitat removal shall not be permitted until the following procedures are documented:

- Identification of proposed riparian habitat removal (and subsequent restoration) locations from CH2MHill and Galloway Consulting, Inc. Jurisdictional Delineation Reports (see Appendix E-1).

- A discussion demonstrating how maximum avoidance has been accomplished and why the riparian habitat proposed for removal cannot be avoided.
- Methods to restore streambanks to pre-construction conditions.
- Discussion of appropriate replacement ratios (in accordance with issued permit conditions, or, at a minimum, a 1:1 replacement ratio of habitat acreage and at least 3:1 replacement ratio of the number of trees and shrubs present prior to construction).
- Proposed native tree and shrub species matching pre-construction conditions, where appropriate. (Pre-construction conditions may include undesirable non-native species, and therefore matching those conditions will not always be appropriate.)
- Proposed understory native seed mix composition and application methods.
- Planting methodology, including spacing and proper timing of plant installation.
- Description of protective staking and caging measures for installed plants.
- Description of irrigation and plant maintenance regime.
- Description of five-year monitoring effort to measure replacement success.
- Success criteria (including survival rates and habitat function as compared to pre-construction conditions) and contingency measures for off-site habitat creation in case of mitigation failure.
- Submission of an annual monitoring report to responsible agencies evaluating mitigation success.

Successful implementation of the riparian restoration procedures shall be evaluated five years after all human support (e.g., replanting, fertilization, irrigation) has ceased. At that time, a report

shall be submitted to the responsible agencies summarizing the results and a determination will be made by these agencies as to whether continued monitoring is required and/or whether implementation of contingency measures is required.

4.4-89 & 91 **MM BIO-2a. Tree Avoidance and Replacement.** PG&E shall avoid, minimize, and compensate for impacts to trees, including those protected by local ordinances, by:

- Pre-construction identification (including species, size, and condition of trees), fencing and avoidance of trees to the maximum extent during construction within the 100-foot ROW and a 50-foot wide buffer on either side of the ROW or as determined in consultation with CDFG.

- Consultation with local jurisdiction if unavoidable impacts to locally protected trees ("Protected Trees") are likely to occur.

- Development and implementation of a Tree Replacement Plan for loss and/or significant damage to trees.

- Supervision and verification of the implementation of these measures by the Environmental Monitor.

The initial step for this measure shall be to determine the size and location of all trees located within and adjacent to the project right-of-way, work areas, staging areas, and launcher/receiver stations. These trees will be then assessed by a qualified arborist to identify and map Protected Trees. If it is determined that the project will trim, remove, or damage the roots of Protected Trees, avoidance measures shall be taken. Avoidance will consist of installing protective fencing around the dripline of any Protected Tree. All construction activities, including excavation, grading, leveling, and disposal or deposition of harmful materials will be prohibited inside the dripline fence. Attachment of wires, ropes, or signs to Protected Trees shall also be prohibited. The approved Environmental Monitor shall supervise compliance with these protective measures prior to and during construction activities.

If trimming, removal or root damage to a Protected Tree is unavoidable, the appropriate jurisdiction will be consulted. Further actions may require a permit that will include fees and/or replacement for affected trees. For example, Placer County's permit application requires, in part, a site plan map, an arborist report, and a justification statement. Mitigation measures are required for trees designated to be saved that are located within 50 feet of any development activity. Permit approval may require replacement of trees removed, implementation of a revegetation plan, or payment into a tree preservation fund.

Proposed trimming or other damage to Protected Trees along the proposed route shall be evaluated by a qualified arborist, who shall identify appropriate measures to minimize tree loss and shall supervise all associated activities in accordance with permit conditions issued by the responsible jurisdiction.

If the proposed Project requires removal of trees (Protected Trees or others), a qualified forester, arborist, or restoration ecologist shall evaluate the tree replacement procedures to ensure that the replacement will be consistent with applicable local jurisdiction requirements, such as the Placer County Tree Ordinance, and with additional permit conditions imposed by the local agency (e.g., local oak tree protection requirements). Within Yolo County, consultation with the Natural Communities Conservation Plan / Habitat Conservation Plan Joint Powers Agency manager prior to the removal or disturbance of trees or vegetation and before construction of above ground facilities is required to ensure tree removal does not conflict with the Natural Heritage Program and Swainson's Hawk Interim Mitigation requirements. Additional mitigation may be required by CDFG for impacts to riparian trees (refer to MM BIO-1c). Tree removal shall not be permitted until a qualified forester, arborist, or restoration ecologist has reviewed the following procedures (see also MM BIO-2b):

- Identification of proposed tree removal locations~~.~~, including suitable Swainson's hawk nest trees that cannot be avoided.

- A discussion demonstrating how maximum avoidance has been accomplished and why the trees proposed for removal cannot be avoided.

- Discussion of appropriate tree replacement ratios, as defined by the local jurisdiction, or, at a minimum, a 3:1 replacement to removed/impacted ratio for non-protected trees. Removed potential Swainson's hawk nesting trees will be replaced at a minimum 3:1 ratio to offset the temporary loss of nesting habitat associated with the loss of mature trees, and the significant amount of time required for mitigation plantings to attain similar canopy size as those trees removed.

- Identification of suitable tree replacement locations within or immediately adjacent to the original tree impact area.

- Tree species and size specifications. Potential Swainson's hawk nesting trees that are removed shall be appropriately mitigated for with a mix of native tree species typical of those utilized by Swainson's hawk for nest sites (valley oak, cottonwood, sycamore, black walnut, willow).

- Proposed understory native seed mix composition and application methods.

- Planting methodology, including spacing and proper timing of plant installation.

- Description of protective staking and caging measures.

- Description of irrigation and plant maintenance regime.

- Description of five-year monitoring effort to ensure 100 percent survival of replacement trees ~~measure replacement success~~.

- Success criteria (including survival rates) and contingency measures in case of mitigation failure.

- Submission of an annual monitoring report to responsible agencies evaluating mitigation success.

Successful implementation of tree replacement shall be evaluated five years after all human support (e.g., replanting, fertilization, irrigation) has ceased. At that time, a report shall be submitted to ~~the local jurisdiction, and~~ CDFG, if requested, summarizing the results. A determination will be made by these agencies as to whether continued monitoring is required and/or whether contingency measures are required.

4.4-93 & 94 **MM BIO-3. Prepare and Implement an Invasive Species Control Program.** Prior to Project initiation, all construction equipment shall be ~~steam~~ cleaned ~~before the equipment crosses any county border~~ to remove potential soil and/or water-borne contaminants before the equipment comes onto the Project site and again if the equipment is used off-site before returning to the Project site. Equipment shall be made available for inspection by any State or county agricultural officials upon request. The California Department of Food and Agriculture, Control and Eradication Division shall be notified before equipment crosses into the state (if equipment for the Project is coming from outside of California) and county agricultural commissioners shall be notified before equipment enters their counties.

Plant materials and mud shall be cleaned from construction equipment regularly in a controlled area to avoid the spread of noxious weeds in sensitive areas (prime agricultural land, special native plant communities, and rare plant habitats).

Weed management procedures will be developed and implemented to monitor and control the spread of weed~~week~~ populations along the pipeline.

The following measures shall be implemented to control the introduction of weed species within areas disturbed during pipeline construction; implementation of these measures during construction will be verified by the Environmental Monitor:

- Vehicles used in pipeline construction will be cleaned prior to operation off maintained roads.

- ~~Fill material, soil amendments, gravel, etc. required for construction/restoration activities on land shall be obtained from a source that can certify the soil as being "weed free."~~

- Existing vegetation shall be cleared only from areas scheduled for immediate construction work (within 30 days for agricultural areas and other non-sensitive habitat features and within 10 days for wetlands and riparian areas) and only for the width needed for completion of activities within each active construction area ~~activities~~.

- During pipeline construction, the upper 12 inches of topsoil (or less depending on existing depth of topsoil, as verified by the construction monitor) shall be salvaged and replaced wherever the pipeline is trenched through open land (not including graded roads and road shoulders).

- Disturbed soils shall be revegetated with an appropriate seed mix that does not contain weeds (as defined below).

4.4-102 **MM BIO-4a Protect Special-status Wildlife.** Where construction will occur within or near known or potential special-status species habitat, as defined below, PG&E shall perform the actions defined in the following paragraphs.

General Wildlife Protection During Construction. PG&E shall provide all excavated, steep-walled holes and trenches in excess of three feet in depth with one or more escape ramps constructed of earthen fill or a wood/metal plant. If wildlife-proof barricade fencing is available, it will also be used where appropriate. Escape ramps shall be less than a 45 degree angle. Trenches and pits shall be inspected for entrapped wildlife each working day before construction activities resume. Before such pits and trenches are filled, they shall be thoroughly inspected for entrapped animals. If any wildlife species are discovered, they should be allowed to escape voluntarily, without harassment, before construction activities resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded. All construction pipes, culverts, or similar structures that are stored at a construction site overnight shall be thoroughly

inspected for trapped animals before the pipe is buried, capped, or otherwise used or moved. Pipes laid in trenches overnight shall be capped. If an animal is discovered inside a pipe, that section of the pipe shall not be capped or buried until the animal has escaped. PG&E shall not use plastic mono-filament netting (erosion control matting) or similar material because amphibians and snakes may become entangled or trapped in it. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

Valley Elderberry Longhorn Beetle. Prior to initiating construction, focused surveys for elderberry shrubs will be conducted within any areas not included in the Valley Elderberry Longhorn Beetle Survey performed by Galloway Consulting, Inc. (2007f) (Appendix E-11).

Elderberry shrubs shall be avoided to the greatest extent feasible. According to the Conservation Guidelines for the Valley Elderberry Longhorn Beetle (USFWS 1999), complete avoidance is assumed when a 100-foot (or wider) buffer is established and maintained around elderberry shrubs. PG&E biological surveys indicate that the pipeline route will not come closer than 30 feet to any elderberry shrub. The buffer zones in Temporary Use Areas will be coordinated with the USFWS. For all shrubs that would be avoided, the following measures are required:

1. Protective fencing shall be erected around each elderberry shrub that would be avoided that occurs within the 100-foot ROW and a 50-foot wide buffer on either side of the ROW, unless USFWS requires additional fencing. The fencing shall be located no greater than 100 feet from the greatest dripline of the shrub.

2. Contractors shall be briefed on the need to avoid damage to elderberry shrubs and the possible penalties for not complying with requirements. In addition, work crews shall be instructed on the status of the beetle and the need to protect its host plant.

3. Signs shall be erected every 50 feet along the edge of the avoidance areas with the following information: “This area is habitat of the valley elderberry longhorn beetle, a threatened

species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be readable from a distance of 20 feet and must be maintained for the duration of construction.

For any activities that inadvertently impact avoided elderberry shrubs, the following measures are required:

1. Restore any damage done to the buffer area. Provide erosion control and revegetate with native plants.

2. No insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant shall be used in the buffer areas during either construction or maintenance activities.

3. Mowing to reduce fire hazard may occur from July through April. No mowing should occur within 5 feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants.

The USFWS must be contacted if encroachment within the 100-foot buffer is expected, and Section 7 Federal Endangered Species Act consultation is required if elderberry bushes will be disturbed as a result of project activities. Typically, the USFWS requires a minimum setback of at least 20 feet from the dripline of each elderberry plant. If complete avoidance of elderberry plants is not possible, transplantation may be necessary as prescribed by the Guidelines. However, at the discretion of the USFWS, a plant that would be extremely difficult to move because of access problems may be exempted from transplantation (USFWS 1999). Planting of additional seedlings or cuttings may be required under the mitigation guidelines, depending upon the absence or percentage of elderberry plants with emergence holes found in the project area. The Conservation Guidelines require that each elderberry stem measuring 1 inch or greater in diameter that is impacted must be replaced, and additional native species planted. Replacement ratios for replaced shrubs and planting of native species varies depend on the diameter of the stems impacted and whether or not they are located in a riparian area. Mitigation shall occur in

accordance with the mitigation ratios outlined in the guidance, and shall be approved by USFWS prior to Project implementation.

Western Pond Turtle. Where construction is to occur near known or potential habitat for western pond turtle (i.e., pipeline water crossing and near ponds), pre-construction surveys shall be conducted to determine the presence or absence of this species. If pond turtles are observed, a determination shall be made in consultation with CDFG as to whether or not construction will adversely impact this species and what measures shall be implemented. Potential impacts to this species shall be minimized through implementation of the proposed water crossing techniques (HDD, bore) outlined in Table 2-5.

California Tiger Salamander. Where construction is to occur near known or potential habitat for California tiger salamander (i.e., ephemeral pools and waterways and adjacent upland habitats), pre-construction surveys shall be conducted to determine the presence or absence of this species. If California tiger salamanders are observed, a determination shall be made in consultation with CDFG as to whether or not construction will adversely impact this species and what measures shall be implemented.

Swainson's Hawk. If project activities will occur during the breeding period (February 15 ~~March 1~~ to September 15) qualified biologists shall conduct pre-construction surveys within a 0.5 mile radius of the project right-of-way, within 15 days ~~at least two weeks~~ prior to construction. If any occupied Swainson's hawk nests are found within 0.5 mile that could potentially be impacted by construction activities, a no-construction buffer zone of at least 0.25 mile will be maintained by construction personnel at all times around any occupied Swainson's hawk nest tree. These no-construction buffer zones will be clearly delineated, with construction personnel instructed to maintain all construction activities and staging areas outside of the 0.25 mile buffer until all Swainson's hawk young have fledged, as verified by CDFG. Swainson's hawk nest sites within 0.5 mile of active construction will be monitored by a qualified biologist to evaluate whether the construction activities are disturbing nesting hawks. If the nesting birds appear distressed, the monitor shall halt all construction activities within 0.5 mile of the nest site and CDFG will be contacted to identify

appropriate contingency measures. PG&E will implement any additional necessary protection measures as required by the CDFG in the Section 2018 Incidental Take Permit, to prevent nest abandonment or forced fledging as a result of Project activities. If construction occurs between September 15 ~~16~~ and February 15 ~~28~~, no pre-construction surveys or other mitigation measures for Swainson's hawk will be necessary. ~~PG&E will consult with the CDFG to determine if mitigation for the temporary loss of Swainson's hawk foraging habitat will be required. CDFG considers loss of foraging habitat within a 10-mile radius of any active nest as an impact to this species.~~

American Badger. Pre-construction surveys for burrows suitable for American badger shall be conducted within suitable habitat along the proposed alignment for Line 406 West near the Dunnigan Hills no more than 30 days prior to initiation of ground disturbing activities. If no burrows are identified, no additional mitigation is required. If suitable burrows are identified, they shall be mapped and CDFG shall be consulted to determine the avoidance measures necessary to prevent direct impacts to this species.

4.4-104 & 105

MM BIO-4b. Mitigation for Potential Impacts to Natomas Basin Conservancy Mitigation Lands. Prior to Project construction, PG&E shall provide a detailed Project Description to the Natomas Basin Conservancy and shall discuss with the Conservancy the potential for impacts to Mitigation Lands. The following mitigation is required for project implementation:

~~1. Project construction within Mitigation Lands shall occur only during the months of November through February when Swainson's hawk is generally absent from the state;~~

1~~2~~. Under APM BIO-16 and APM BIO-17, PG&E shall ensure that Mitigation Lands are restored to pre-construction conditions;

2~~3~~. No tree located on Mitigation Lands or with canopy extending into Mitigation Lands and that is suitable for nesting by Swainson's hawk shall be directly or indirectly impacted by Project construction; and

34. If the above measures cannot be met, PG&E shall notify CDFG and the Natomas Basin Conservancy and shall implement MM BIO-1, BIO-2, and BIO-4a and any other measures determined by CDFG and the Natomas Basin Conservancy to be required to protect resources. If agreements regarding mitigation of impacts to resources within the Conservancy cannot be reached, PG&E shall implement Alternative Option H, which avoids Natomas Basin Conservancy Mitigation Lands (Figure 3-2).

4.4-105 **MM BIO-4c.** Mitigation for Potential Impacts to Sacramento River Ranch Conservation Bank Mitigation Lands.

1. Project construction within the Conservation Bank shall occur only during the months of November through February when Swainson's hawk is generally absent from the state;

12. Under APM BIO-16 and APM BIO-17, PG&E shall ensure that Mitigation Lands are restored to pre-construction conditions;

23. No tree located on Mitigation Lands or with canopy extending into Mitigation Lands and that is suitable for nesting by Swainson's hawk shall be directly or indirectly impacted by Project construction;

34. Project construction shall not directly or indirectly impact wetlands located in the wetlands mitigation area; and

45. If the above measures cannot be met, PG&E shall notify CDFG and the Sacramento River Ranch and shall implement MM BIO-1, BIO-2, and BIO-4a and any other measures determined by CDFG and the Sacramento River Ranch to be required to protect resources. If agreements regarding mitigation of impacts to resources within the Sacramento River Ranch cannot be reached, PG&E shall implement Alternative Option H, in consultation with Sacramento River Ranch, which crosses only a very small corner of Sacramento River Ranch Conservation Bank (Figure 3-2).

4.4-105 & 106

MM BIO-4d. Protect Special-status Bird Species. Where construction is proposed to occur near riparian or wetland habitats (e.g., riparian wetland, willow riparian) that support special-status bird species, as defined below, PG&E shall limit construction periods to outside the respective breeding season of the affected species.

- Tricolored Blackbird, western yellow-billed cuckoo, loggerhead shrike, bank swallow. Within 15 days ~~No more than two weeks~~ prior to construction between February 15 and September 15 ~~March 1 and August 31~~, for project activities within 250 feet of potential nesting habitat of the tricolored blackbird, western yellow-billed cuckoo, loggerhead shrike, and bank swallow, pre-construction surveys shall be conducted to determine the presence of nesting birds. If pre-nesting or nesting activity is identified, a determination shall be made in consultation with CDFG as to whether or not construction will adversely impact nesting birds. If it is determined that construction will impact nests or nesting behavior, construction within 250 feet of the nesting locations shall be delayed until juvenile birds have fledged. The 250-foot buffer is considered an initial guideline that may be modified at specific sites following consultation with CDFG.

Protect Raptor Nests. PG&E shall avoid disturbance to active raptor nests at all locations. Pre-construction surveys shall be performed in all areas to identify potential raptor nesting sites within or near the ROW.

No pre-construction surveys shall be required if construction activities are to occur only during the non-breeding season (September 15 ~~1~~ through February 15 ~~January 31~~). If, however, construction activities are scheduled to occur during the breeding season (February 15 through September 15 ~~August 31~~), within 15 days prior to construction, pre-construction surveys of all potentially active nest sites within 500 feet of the construction corridor shall be conducted in areas that may potentially have nesting raptors, including ground nesting raptor species such as northern harrier and short-eared owl. If surveys indicate that nests are inactive or

potential habitat is unoccupied during the construction period, no further mitigation shall be required.

If active nests are found, a 500-foot, no-disturbance buffer shall be established around the active nest(s). The size of individual buffers can be adjusted, following a site evaluation by a qualified raptor biologist, which shall depend upon the presence of topographical features that obstruct the line of site from the construction activities to the nest or observations of the nesting pair during construction based on the level of ongoing disturbance (e.g., farming activities or road traffic) and the observed sensitivity of the birds. Site evaluations and buffer adjustments shall be made in consultation with the local CDFG representative. The portion of the project that is within the designated buffer shall be identified in the field by staking and flagging.

Consultation to Minimize Impacts. If avoidance of sensitive wildlife species habitat is not feasible (e.g., by modifying the route or boring), PG&E shall develop appropriate mitigation in consultation with the resource agencies (CDFG and USFWS). No construction activity shall be permitted until the applicable resource agencies determine that the proposed mitigation (in the Biological Opinion) will result in less than significant impacts to the affected species.

4.4-120 & 121

MM BIO-5. Rare Plant Avoidance. PG&E shall avoid impacts to special-status plant species by:

- Having a qualified biologist conduct habitat classification surveys along unsurveyed portions of the alignment.
- Conducting pre-construction surveys during the appropriate flowering period for special-status plant species with potential to occur within un-surveyed locations of the proposed right-of-way.
- Flagging, mapping, and fencing to protect any special-status plant species within the 100-foot-wide right-of-way and a 50-foot-wide

buffer zone on each side of the right-of-way ~~200-foot-wide study area~~ during construction.

~~• Limiting all proposed roadway construction to the existing roadway surface(s) where adjacent special-status plant species occur.~~

Prior to construction, the location of special-status plant species will be determined through appropriately-timed surveys according to established botanical protocol (e.g., CNPS, CDFG). Determination of potential habitat for rare species, and surveys conducted for presence of rare plant species will be performed by a qualified botanist. These surveys will be appropriately timed to cover the blooming periods of the special-status plant species with the potential to occur in the area.

Any rare plant species within the study area (including the 100 foot-wide right-of-way and a 50 foot-wide buffer zone on each side of the right-of-way, work areas, staging areas, and/or launcher/receiver stations), excluding areas adjacent to the 100 foot right-of-way where access permission has not been granted by landowners, will be flagged, accurately mapped on construction plans, and fenced to protect the area occupied by the species during construction, per APM BIO-3.Compliance with these measures prior to and during construction will be supervised and verified by the Environmental Monitor per APM BIO-6.

4.5 CULTURAL RESOURCES

Page **Revision:**

4.5-1 Several~~Three~~ separate cultural resources studies were conducted for the Project; the first was conducted by Garcia and Associates (see Appendix F-1) and included Line 406 from the western edge of the Project to a terminus near County Road (CR) 98 in Yolo County.

4.5-3 Public Consulting

Public consulting letters and maps were sent by GPA to the following historical organizations and agencies on September 11, 2008:

Table 4.5-1: Public Consultation Mailing List

Placer County	
Placer County Genealogical Society Attn: Director P.O. Box 7385 Auburn, CA 95604	Placer County Historical Society Attn: Director P.O. Box 5643 Auburn, CA 95604
Placer County Planning Department Attn: Michael Johnson, Planning Director 3091 County Center Drive Auburn, CA 95603	Rocklin Historical Society Attn: Director P.O. Box 752 Rocklin, CA 95677
Sacramento County	
The California Museum for History, Women and the Arts Attn: Claudia French, Executive Director 1020 O Street Sacramento, CA 95814	Planning & Community Development Dept. County of Sacramento 827 7th Street, Room 230 Sacramento, CA 95814
Sacramento Historical Society Attn: Director P.O. Box 160065 Sacramento, CA 95816-0065	West Sacramento Historical Society Attn: Director 324 Third Street West Sacramento, CA 95691
Sutter County	
Community Memorial Museum of Sutter County Attn: Julie Stark 1333 Butte House Road Yuba City, CA 95993	Sutter County Historical Society Attn: Phyllis Smith P.O. Box 1004 Yuba City, CA 95993
Sutter County Planning Department Attn: Danielle Stylos, Division Chief 1130 Civic Center Blvd. Yuba City, CA 95993	
Yolo County	
Yolo County Historical Museum Gibson House Attn: Barbara Shreve, Director 512 Gibson Road Woodland, CA 95695	Yolo County Archives 226 Buckeye Street Woodland, CA 95695
Yolo County Historical Society Attn: B.J. Ford, Director P.O Box 1447 Woodland, CA 95776	Yolo County Planning & Public Works Attn: John Bencomo, Director 292 West Beamer Street Woodland, CA 95695

Heidrick Ag History Center Attn: Colleen Thompson 1962 Hays Lane Woodland, CA 95776	
Source: Galvin Preservation Associates 2008.	

As of the date of this report, no responses have been received regarding this Project or any historic resources associated with it.

4.5-3 All of the field surveys were conducted by qualified archaeologists meeting the Secretary of the Interior's Standards. Newly recorded resources were documented on California Department of Parks and Recreation (DPR) 523 forms. ~~Any~~ ~~p~~Previously documented cultural resources within or immediately adjacent to the cultural study area~~Area of Potential Effects (APE)~~ were revisited during the surveys to confirm their locations and assess their present status. In some cases, the sites had been destroyed by modern development; in other instances, they were found not to extend into the Project area. Existing site records were updated, as necessary. Ten new site records were created for ten buildings recorded during the architectural survey. Existing site records were updated on DPR 523 forms, as necessary.

4.5-3 Any previously documented cultural resources within or immediately adjacent to the cultural study area ~~Area of Potential Effects (APE)~~ were revisited during the surveys to confirm their locations and assess their present status.

4.5-4 While some of the archaeological and historical resources described in this Section are not in the cultural study area ~~Project APE~~, they are included here to help develop this context.

4.5-8 Two homes in the Project vicinity date to this period: the Lewis Cramer house (within the cultural study area ~~Project APE~~) and the John Laugenour house (outside the cultural study area~~Project APE~~).

4.5-11 & 12 ~~Public Consulting~~

~~Public consulting letters and maps were sent by GPA to the following historical organizations and agencies on September 11, 2008:~~

1 **Table 4.5-1: Public Consultation Mailing List**

Placer County	
Placer County Genealogical Society Attn: Director P.O. Box 7385 Auburn, CA 95604	Placer County Historical Society Attn: Director P.O. Box 5643 Auburn, CA 95604
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Sacramento County	
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Sacramento Historical Society Attn: Director P.O. Box 160065 Sacramento, CA 95816-0065	West Sacramento Historical Society Attn: Director 324 Third Street West Sacramento, CA 95691
Sutter County	
Community Memorial Museum of Sutter County Attn: Julie Stark 1333 Butte House Road Yuba City, CA 95993	Sutter County Historical Society Attn: Phyllis Smith P.O. Box 1004 Yuba City, CA 95993
Sutter County Planning Department Attn: Danielle Stylos, Division Chief 1130 Civic Center Blvd. Yuba City, CA 95993	
Yolo County	
Yolo County Historical Museum Gibson House Attn: Barbara Shreve, Director 512 Gibson Road Woodland, CA 95695	Yolo County Archives 226 Buckeye Street Woodland, CA 95695
Yolo County Historical Society Attn: B.J. Ford, Director P.O Box 1447 Woodland, CA 95776	Yolo County Planning & Public Works Attn: John Bencomo, Director 292 West Beamer Street Woodland, CA 95695

~~Heidrick Ag History Center~~ ~~Attn: Colleen Thompson~~ ~~1962 Hays Lane~~ ~~Woodland, CA 95776~~	
~~Source: Galvin Preservation Associates 2008.~~	

~~As of the date of this report, no responses have been received regarding this Project or any historic resources associated with it.~~

4.5-21 One Native American asserted that he knew of sites near the Project corridor, but none within the cultural study area~~APE~~.

4.5-22 The cultural study area~~Area of Potential Effects (APE)~~ for the Project was established to include all resources that could potentially be directly or indirectly affected by the proposed undertaking. All of the resources are located within 50 feet of either side of the pipeline centerline and are within Yolo County. Appendix F-5, APE map, illustrates the boundaries delineating the cultural study area~~APE~~ and notes the location of the ten properties evaluated during the historic architectural survey.

During the course of the historic architectural survey, nine properties located within the cultural study area ~~Project~~ ~~APE~~ required evaluation.

4.5-23 During the course of the architectural survey, nine farmstead properties were identified within the cultural study area~~Project APE~~

4.5-24 Of the nine farmstead properties identified within the cultural study area ~~Project APE~~ that required consideration for inclusion on the NRHP or the CRHR, only one historic property that may be affected by the Project was considered to meet the NRHP and CRHR criteria.

4.5-25 At this location, the section of pipeline within the cultural study area ~~APE~~ involves 2,000 feet of horizontal directional drilling (HDD).

4.5-28 In consultation with the SHPO/THPO and other entities that attach religious and cultural significance to identified historic properties, the lead agency shall apply the criteria of adverse effect to historic properties within the cultural study area ~~APE~~.

4.5-35 **APM CR-1.** PG&E will evaluate all unavoidable unevaluated resources in the project cultural study area ~~APE~~ for their National Register or California Register eligibility through test excavations (for archaeological sites), archival research (for historic-era properties), HABS/HAER recordation (for standing structures), or other means, as appropriate. Resources determined through evaluation to be ineligible will be dropped from further management; those determined eligible will be subject to APM CR-2.

4.5-36 **APM CR-2.** PG&E will protect all significant/eligible resources in the project cultural study area ~~APE~~ from project impacts, including all contributing or potentially contributing features of RD 1000. Where impacts cannot be avoided, a Finding of Effect will be prepared for each significant/eligible resource. Where the Finding of Effect identifies an adverse impact to a significant/eligible resource, the impact(s) will be mitigated through data recovery excavations, archival research, HABS/HAER recordation, or other means, as appropriate.

4.5-36 **APM CR-3.** Prior to construction, PG&E will complete a geo-archaeological study of areas identified as sensitive for buried resources, as well as backhoe testing at ~~test~~ the reported location of the historic Eagle Hotel, and other areas identified as sensitive for buried archaeological remains by a geo-archaeologist, prior to construction by backhoe trenching. If the geo-archaeological study is not completed by the time of construction, an archaeologist or geo-archaeologist will monitor any ground disturbing and all trenching activities in the areas identified as sensitive for buried resources. If resources are identified during either the geo-archaeological study or during construction activities, work at the resource location will stop temporarily until a qualified archaeologist can assess the resource and determine the appropriate actions to be taken. ~~All trenching will be supervised by a qualified professional archaeologist and/or geo-archaeologist. If any buried materials are uncovered, work will stop temporarily at that location, until the monitor can assess the find and determine the appropriate action.~~

4.5-39 The Project pipeline route would be located approximately 100 feet south of the Herman Richter historic residence. At this location, the

section of the Project pipeline within the cultural study area ~~APE~~ involves 2,000 feet of HDD operations.

4.5-40 These tasks would enhance subsequent evaluation and curation by the chosen repository. With incorporation of MM PALEO-1, impacts to potential paleontological resources would be less than significant.

4.5-41 The mitigation measure ensures that any fossil collection would be permanently incorporated into the larger collection of an appropriate curatorial facility so that the specimens would be properly curated and available to present and future generations of research scientists and students. With incorporation of MM PALEO-2, impacts to potential paleontological resources would be less than significant.

4.5-43 **MM CR-1 Alternative Option Pre-Construction Cultural Resource Surveys.** If Alternative Option A, B, D, E or H becomes the preferred route, ~~T~~to ensure protection of undiscovered cultural resources, pedestrian field surveys will be conducted for areas~~all Alternative Options~~ that were not included in the ~~original~~ field survey efforts. The surveys will be conducted by qualified archaeologists meeting the Secretary of the Interior's Standards and utilizing appropriate transect intervals, typically 15 to 20 meters, walked in a zigzag pattern to ensure complete coverage of the Alternative Options ~~Area of Potential Effects (APE).~~ Previously recorded cultural resources located within or immediately adjacent to the Alternative~~'s APE~~ would be re-located and their current condition described and recorded on Department of Parks and Recreation (DPR) update forms. Any previously unknown cultural resources discovered during the course of the Alternative Options surveys would be evaluated for historic significance if the resource would be impacted by the Project. ~~and recorded on appropriate DPR forms.~~ In cases where significant impacts would be unavoidable, resource specific, appropriate mitigation would be required to reduce the impacts to less than significant levels as described in APMs CR-1 through CR-5.

4.5-45 Potential impacts to cultural/historic resources ~~would be slightly fewer~~ under Option F would be similar to ~~than for~~ the proposed Project. Cultural Resource impacts associated with Option F, similar to the proposed Project, would be less than significant (Class III).

4.5-47 The potential Cultural Resource impacts associated with Option I would be similar to ~~slightly fewer than~~ the proposed Project. Similar to the proposed Project, impacts associated with Option I would be less than significant (Class III).

4.5-47 The potential Cultural Resource impacts associated with Option J would be similar to ~~slightly fewer than~~ the proposed project. Similar to the proposed project, impacts associated with Option J would be less than significant (Class III).

4.5-48 **Table 4.5-2: Comparison of Alternatives for Cultural Resources**

Alternative	Comparison with Proposed Project
No Project	No Impacts
Option A	Greater Impacts
Option B	Greater Impacts
Option C	Similar Impacts
Option D	Greater Impacts
Option E	Greater Impacts
Option F	Similar ~~Slightly Fewer~~ Impacts
Option G	Similar Impacts
Option H	Greater Impacts
Option I	Similar ~~Slightly Fewer~~ Impacts
Option J	Similar ~~Slightly Fewer~~ Impacts
Option K	Similar Impacts
Option L	Similar Impacts
Source: Michael Brandman Associates 2009.	

4.6 GEOLOGY AND SOILS

Page **Revision:**

4.6-5 A linear feature created by the displacement of this unit extends to within less than ~~then~~ 2 miles of the Project area.

4.6-19 According to the elastic rebound theory, these stresses cause strain to build up in the earth's crust ~~curst~~ until enough strain has built up to exceed the strength along a fault and cause ~~case~~ a brittle fracture.

4.6-23 The Dunnigan Hills fault is considered to be a zone of discontinuous tonal ~~total~~ lineaments near the base of the northeast-facing escarpment of the Dunnigan Hills.

4.6-39 Due to the regional tectonic setting, ~~proposed pipeline crossing of the three faults,~~ the Project area is subject to ground shaking due to earthquakes. Historically, the area has experienced a low to moderate seismicity. The Project could be exposed to ground motion due to a seismic event or any resulting phenomenon such as liquefaction or settlement that could substantially damage structural components.

4.6-39 & 40 MM GEO-1 Site Specific Seismic Analysis ~~Field Investigation~~

During the detailed design phase for the proposed project, PG&E shall perform a site specific field investigation, including, but not limited to, geophysical investigation, such as seismic surveys. The report of field investigation certified by a California certified engineering geologist shall be submitted to CSLC for review and comments. ~~PG&E shall perform a site-specific seismic field investigation as part of its detailed design phase for the proposed Project.~~ The field investigation would determine whether any engineering/design solutions are needed to mitigate against any hazards of seismic displacements along the fault crossings. If the field investigation determines the presence of any active faults in project location, then the following shall be completed:

- PG&E shall determine the engineering/design solutions that are appropriate to mitigate against the hazard of seismic displacements along any active faults.

- PG&E shall develop a computer model to determine the soil-pipe interaction with the proposed applied displacement. The model would evaluate various combinations of pipe wall thickness and pipe grade to determine which pattern yields the best performance under displacement conditions. The design shall also incorporate additional methods as necessary.

- PG&E shall design the proposed pipelines and any other proposed facilities using current industry standards for seismic-resistant design for seismic wave propagation in liquefaction-prone areas.

- PG&E shall provide a copy of the final design, as well as any related geotechnical information, to the CSLC before construction of the proposed Project.

- A certified engineering geologist shall observe the construction excavation in the vicinity of the fault crossings to verify the presence or absence of surface deformation due to fault movement displacement. If the certified engineering geologist determines the presence of fault movement under the proposed project alignment, then PG&E shall modify the design of the pipeline in that area.

- ~~A certified engineer shall observe the construction excavation in the vicinity of the fault crossings to verify that the design assumptions are valid and the design measures (if any) are centered in the correct location.~~

- To determine the traveling wave effects, PG&E shall develop calculations for the pipeline bending stresses due to traveling seismic waves in long straight runs of the pipeline using industry accepted procedures (American Lifelines Alliance "Guidelines for the Design of Buried Steel Pipe", PRCI "Guidelines for the Seismic Design and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines", and ASCE "Guidelines for the Seismic Design of Oil and Gas Pipeline Systems").

- To determine the effect of liquefaction, PG&E shall undertake buried pipeline deformation analysis to assess the effects of liquefaction-induced permanent ground displacements for various scenarios. The various scenarios will be dependent on soil conditions and depth of cover, pipe-soil spring properties, amplitude and distribution of the ground displacement profile due to liquefaction and the location of any significant geometry change features along the alignment in the areas of interest. The maximum pipe tension and compression strains developed in the analysis models will be compared to appropriate strain limits (PRCI "Guidelines for the Seismic Design

and Assessment of Natural Gas and Liquid Hydrocarbon Pipelines") to develop a demand vs. capacity assessment.

- If the analysis yields results below the designed pipelines specified minimum yield strength, the analysis will be summarized and concluded. If the stresses are above the SMYS, further review will be required. Further review may include reviewing the current pipeline design criteria or performing further site-specific seismic field investigations.

4.7 HAZARDS AND HAZARDOUS MATERIALS

PLEASE NOTE: The revised System Safety and Risk of Upset report prepared by EDM Services, Inc. has been reproduced in its entirety, with changes shown as underline for new text, and ~~strike out~~ for deleted text, and is included in Appendix H-3 of this Revised Final EIR.

4.7-7 During the next 15-year period between 1984 and 2001 there were 2,845 incidents resulting in 1,523 injuries and 340 fatalities. As in the earlier data, the primary cause of the incidents are similar, namely damage by outside forces, which accounted for nearly 4~~6~~0 percent of the incidents.

4.7-9 Most unintentional natural gas releases are small and do not cause injury or death. Only under the right conditions will leaks and ruptures result in fire and/or explosions causing injuries and/or fatalities. A fire or explosion could result when the natural gas has a sufficient mixture with air to be within the ~~or~~ combustible range, 5 to 15 percent methane in air. Another requirement is an ignition source with sufficient heat to ignite the air/natural gas mixture. In order for an explosion to occur the natural gas vapor cloud must be confined (EDM Services, Inc. 2009).

4.7-9 Nevertheless, the average of 3.1 public fatalities per year is relatively small considering the approximately 300,000 miles of transmission and gathering lines in service nationwide, resulting in an annual risk of fatality by gas transmission and gathering lines of approximately 1 x 10^{-5} fatalities per year (Entrix, Inc. 2007).

4.7-14 The HCAs may be defined in one of two ways. Both methods are prescribed by 49 CFR 192.903. (PG&E has adopted method two,

Potential Impact Circle, as its chosen method for determining HCA's in relation to its transmission system.) The first includes:

4.7-15 In the second method (PG&E's adopted method), an HCA includes any area within a potential impact circle that contains:

4.7-31 **MM HAZ-1.** Minimize Risk of Fire. During all construction activities, PG&E shall implement the following:

- Maintain all areas clear of vegetation and other flammable materials for at least a 50-foot-radius, or to the outside edge of the permanent right-of-way or the temporary use area if a 50-foot radius would extend beyond the limit of the land rights obtained to support construction, of any welding or grinding operations, or the use of an open flame;
- Spray nearby vegetation with water, using a water truck or other suitable equipment, prior to any welding or grinding operations or the use of an open flame;
- All equipment, gasoline-powered hand tools, and vehicles shall be equipped with spark arresters;
- Equip all vehicles entering the right-of-way, welding trucks or rigs with minimal fire suppression equipment (e.g., ax, bucket, 5-pound fire extinguisher, shovels, etc.);
- Park vehicles equipped with catalytic converters only in cleared areas;
- Maintain at least one half-full water truck or water tanker at each rural work site during all periods of work and for one-hour after all work has ceased for the day; and
- Require the contractor to use dedicated fire watch during all hot work within existing operational stations (e.g., Capay or Yolo Station ~~Concord or Sacramento Station~~).

4.7-32 **Impact HAZ-2: System Safety and Risk of Serious Injuries and Fatalities Due to Project Upset**

The Project could expose people to ~~an unacceptable~~ a risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment (Less Than Significant, Class III ~~Significant, Class I~~).

~~An unacceptable risk is defined as a one in a million (1:1,000,000) chance of a fatality (CDE 2007).~~ The significance threshold used for individual risk is an annual likelihood of one in a million (1:1,000,000) chance of fatality. This threshold is used by the California Department of Education as a part of their school siting criteria (CDE 2007).

4.7-32 Probability of a Pipeline Release

A fire could result from a natural gas release if two conditions are present: 1) a volume of natural gas must be present within the combustible mixture range (5% to 15% methane in air); and 2) a source of ignition must be present with sufficient heat to ignite the air/natural gas mixture (1,000 degrees F). In order for an explosion to occur, a third condition must be present: the natural gas vapor cloud must be confined, to a sufficient degree.

Over the life of the pipeline, the probability of a pipeline release that would result in a fire varies from 3.2% for a rupture to 7.5% for a puncture (1-inch diameter hole); while the probability of a pipeline release that would result in an explosion varies from 2.0% for a rupture to 4.7% for a puncture. The probability of a puncture or rupture over the 50-year life of the pipeline is very low.

4.7-32 Societal Risk: Societal risk is the probability that a specified number of people will be affected by a given event. Several release scenarios were used that could impact both building occupants and vehicle passengers.

The threshold values for societal risk vary greatly, depending on the agency or jurisdiction. There are no prescribed societal risk guidelines for the United States or the State of California. The Committee for the Prevention of Disasters and the Netherlands used an annual

probability of 1.0 x 10^{-3} (1:1,000) or less. This criteria has been used to evaluate the proposed project.

The societal risk posed by the proposed project is less than the significance threshold of 1:1,000 or less.

The California Department of Education (CDE) approach for evaluating the risk to the student population uses two calculated parameters: an average individual risk across the depth of the campus site, and a site population risk indicator parameter. The CDE does not specify numerical criteria of acceptability or unacceptability for these indicators (CDE Guidance Protocol for School Site Pipeline Risk Analysis, 2007).

4.7-32 & 33 Consequences of a Pipeline Release: Individual Risk of Serious Injuries or Fatalities

In the following paragraphs, the impacts related to serious injuries and fatalities are described for individuals exposed to a fire or explosion if a release from the pipeline were to occur. As stated above, the probability of a release over the 50-year life of the pipeline is very low. The risks associated with Line 406 were assessed using the existing conditions. The risks associated with Line 407 and the DFM were assessed using existing conditions, plus the impacts of the proposed land developments within Sutter County and Placer County, including Sutter Pointe, Placer Vineyards, Sierra Vista, and Curry Creek.

The Revised Final EIR provides a clarifying analysis that accounts for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The earlier risk assessment included risk measurement terminology that was not defined and has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the initial calculation of aggregate risk was reported as individual risk. In addition, the initial risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be

expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum individual risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum individual risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum individual risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~as well as the total risk from the Project. As seen in Table 4.7-5 the risk to building occupants and vehicle occupants exceeds the 1:1,000,000 acceptable risk threshold. The anticipated individual frequency of serious injury or fatality from the proposed project is approximately 6.1 x 10-5. This represents a 1:16,000 likelihood of a serious injury or fatality annually, which is roughly sixty times greater than the generally accepted criteria of 1:1,000,000. The individual risks posed by each of the individual line segments are also summarized. As noted, the risk for each of the individual line segments, except Line DFM, exceeds the individual risk significance~~

~~criteria. As a result the individual risk posed by the proposed Project is considered significant (Class I).~~

Table 4.7- 5 below summarizes the calculated individual risk for each segment of the Project. These are maximum individual risk values, which would occur directly over the top of each pipeline. As the distance from each pipeline increases, the individual risk decreases. The individual risk for each pipeline segment would be less than the significance threshold of 1:1,000,000. The individual risks have been evaluated using two approaches: a simplified and an enhanced approach.

The individual risk for each of the three project components used the same methodology that was used to determine the aggregate risk presented in Appendix H-3 of the Revised Final EIR. (It should be noted that this aggregate risk was incorrectly identified as individual risk in the Final EIR.) The July 2009 Final EIR analysis was simplified by making the following assumptions:

- A single release angle at 45° above the horizon was used.
- All releases were assumed to be oriented downwind, which resulted in the worst case impact footprint (e.g., greatest length of exposure measured perpendicular to the pipeline).
- For flash fire impacts which were located overhead, the horizontal extent of the hazard was projected to grade level. This results in some overstatement of the impact since an overhead flash fire would not normally impact those on the ground. However, if the release angle were lower that the single 45° release angle assumed, the flash fire could impact those at ground level.

The enhanced analyses results in a worst case situation, and included the following additional release modeling.

- Five different release angles were considered: 15° above the horizon downwind, 45° above the horizon downwind, vertical, 45° above the horizon upwind, and 15° above the horizon upwind. (Because the pipeline is buried, 15° above the horizon was assumed to be the lowest feasible release angle.) Twenty percent (20%) of the releases were assumed to be directed at each of these angles.

- The Final EIR used a single end point for torch fire impacts, 50% mortality at 8,000 btu/hr-ft_2 for a 30 second exposure. The enhanced analyses included

three torch fire end points – 100% mortality at 12,000 btu/hr-ft$_2$, 50% mortality at 8,000 btu/hr-ft$_2$, and 1% mortality at 5,000 btu/hr-ft$_2$ for 30 second exposures.

4.7-5: Individual Risk Result Summary

Pipeline Segment	Pre-Mitigation Maximum Annual Risk of Fatality	Pre-Mitigation Maximum Annual Probability of Occurrence	Significance Threshold
Simplified Analysis			
Line 406	3.94×10^{-7}	1:2,538,000	1:1,000,000
Line 407	3.83×10^{-7}	1:2,610,000	1:1,000,000
Line DFM	1.61×10^{-7}	1:6,219,000	1:1,000,000
Enhanced Analysis			
Line 406	4.68×10^{-7}	1:2,137,000	1:1,000,000
Line 407	4.85×10^{-7}	1:2,062,000	1:1,000,000
Line DFM	2.35×10^{-7}	1:4,255,000	1:1,000,000

Source: EDM Services, Inc. 2009.

~~4.7-5: Individual Risk Summary~~

	~~Line 406~~	~~Line 407 E~~	~~Line 407 W~~	~~Line DFM~~	~~Total~~
~~Building Occupants~~	~~$1.05 X 10^{-6}$~~	~~1.99×10^{-5}~~	~~4.54×10^{-6}~~	~~7.00×10^{-7}~~	~~2.62×10^{-5}~~
~~Vehicle Occupants~~	~~1.84×10^{-6}~~	~~2.94×10^{-5}~~	~~3.21×10^{-6}~~	~~2.06×10^{-7}~~	~~3.46×10^{-5}~~
~~Probability of Serious Injury or Fatality~~	~~2.89×10^{-6}~~	~~4.93×10^{-5}~~	~~7.75×10^{-6}~~	~~9.06×10^{-7}~~	~~6.08×10^{-5}~~
~~Annual Likelihood of Serious Injury or Fatality~~	~~1:350,000~~	~~1:27,000~~	~~1:130,000~~	~~1:1,100,000~~	~~1:16,000~~
~~Percentage of Total Risk to Building Occupants~~	~~4.8%~~	~~81.1%~~	~~12.7%~~	~~1.4%~~	~~100%~~
~~Source: EDM Services, Inc. 2009.~~					

4.7-34 & 35

Table 4.7-6: Consequence versus Distance Summary

Distance to Impact (feet)	Description of Potential Consequence
~~35 feet~~	~~1.0 psig overpressure from 1-inch diameter release explosion, release 45° above horizon. Windows usually shattered and occasional damage to window frames. 1 percent probability of serious injury or fatality to occupants in reinforced concrete or reinforced masonry building from flying glass and debris.~~
~~50 feet~~	~~0.7 psig overpressure from 1-inch diameter release explosion, release 45° above horizon. Minor damage to residential structures. Some injuries to those indoors due to flying debris, but very unlikely to be serious.~~
48~~50~~ feet	8,000 btu/hr-ft^2 heat flux from 1-inch diameter release torch fire, downwind release 45° above horizon. 50 percent mortality anticipated to those exposed after 30 second exposure.
66 feet	8,000 btu/hr-ft^2 heat flux from 1-inch diameter release torch fire, downwind release 15° above horizon. 50% mortality anticipated to those after 30 seconds of exposure.
70 feet	3,500 btu/hr-ft^2 heat flux from 1-inch diameter release torch fire, downwind release 45° above horizon. Second degree skin burns after ten seconds of exposure.
90 feet	1,600 btu/hr-ft^2 heat flux from 1-inch diameter release torch fire, downwind release 45° above horizon. Second degree skin burns after thirty seconds of exposure.
367~~360~~ feet	Distance to lower flammability limit (flash fire boundary) from full bore downwind release at 45° above horizon for flash fire. This would likely result in serious injury or death to those exposed to the ignited vapor cloud under typical conditions.
~~380 feet~~	~~1.0 psig overpressure from full bore release explosion, release 45° above horizon. Windows usually shattered and occasional damage to window frames. 1 percent probability of serious injury or fatality to occupants in reinforced concrete or reinforced masonry building from flying glass and debris.~~
~~420 feet~~	~~1.0 psig overpressure from full bore release explosion, horizontal release. Windows usually shattered and occasional damage to window frames. 1 percent probability of serious injury or fatality to occupants in reinforced concrete or reinforced masonry building from flying glass and debris.~~
422 feet	12,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. 100% mortality after 30 seconds of exposure.

Distance to Impact (feet)	Description of Potential Consequence
517~~520~~ feet	8,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. 50 percent mortality anticipated to those exposed after 30 seconds of exposure.
534 feet	Distance to lower flammability limit (flash fire boundary) from full bore downwind release at 15° above horizon for flash fire. This would likely result in serious injury or death to those exposed to the ignited vapor cloud under typical conditions.
~~540 feet~~	~~0.7 psig overpressure from full bore release explosion, release 45° above horizon. Minor damage to residential structures. Some injuries to those indoors due to flying debris, but very unlikely to be serious.~~
~~600 feet~~	~~0.7 psig overpressure from full bore release explosion, horizontal release. Minor damage to residential structures. Some injuries to those indoors due to flying debris, but very unlikely to be serious.~~
600 feet	5,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. California Department of Education uses 1 percent mortality to those exposed for 30 seconds.
640 feet	Distance to lower flammability limit (flash fire boundary) from full bore release at horizontal for flash fire. This would likely result in serious injury or death to those exposed to the ignited vapor cloud under typical conditions.
643 feet	12,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 15° above horizon. 100% mortality after 30 seconds of exposure.
673 feet	8,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 15° above horizon. 50% mortality after 30 seconds of exposure.
730 feet	3,500 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. Second degree skin burns after ten seconds of exposure.
~~800 feet~~	~~8,000 btu/hr-ft^2 heat flux from full bore release torch fire, horizontal release. 50 percent mortality anticipated to those exposed.~~
~~746~~820 ~~feet~~	5,000 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 15° above horizon~~horizontal release~~. ~~California Department of Education uses~~ 1 % mortality after 30 seconds of exposure ~~to those exposed~~.
	Boundary of Serious Harm
820 feet	Distance to lower flammability limit (flash fire boundary) from full bore downwind release at horizontal for flash fire. This would likely result in serious injury or death to those exposed to the ignited vapor cloud. This result is for the worst case modeling inputs, as defined by the United States Environmental Protection Agency.
	Worst Case Boundary of Serious Harm

Distance to Impact (feet)	Description of Potential Consequence
940 feet	1,600 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. Second degree skin burns after thirty seconds of exposure. No fatalities anticipated for reasonable exposure duration.
980 feet	1,600 btu/hr-ft^2 heat flux from full bore release torch fire, downwind horizontal release. Second degree skin burns after thirty seconds of exposure. No fatalities anticipated for reasonable exposure duration.
~~1,260 feet~~	~~0.3 psig overpressure from full bore release explosion, release 45° above horizon. 10 percent window glass breakage. No injuries.~~
1,370 feet	440 btu/hr-ft^2 heat flux from full bore release torch fire, downwind horizontal release. Prolonged skin exposure causes no detrimental effect.
1,540 feet	440 btu/hr-ft^2 heat flux from full bore release torch fire, downwind release 45° above horizon. Prolonged skin exposure causes no detrimental effect.
~~1,890 feet~~	~~0.2 psig overpressure from full bore release explosion, release 45° above horizon. Some window glass breakage, no injuries to building occupants.~~

Notes:
Psig = pounds per square inch gauge
btu/hr-ft^2 = British thermal units /hour-square foot
Source: EDM Services, Inc. 2009.

4.7-36 ~~Regulations required for the proposed Project include a minimum 0.375-inch pipe wall thickness. PG&E would meet those requirements, and in some areas of the pipeline go beyond the required pipe thickness for the proposed Project.~~ A large proportion of the proposed pipeline would consist of 0.375-inch-wall thickness steel pipe (Grade X-65~~60~~) designed for a Maximum Allowable Operating Pressure (MAOP) of 975 pounds per square inch gauge (psig). For Class 1 areas, the minimum regulated pipe wall thickness is 0.3125-inch; a 0.375-inch wall thickness is proposed, 20 percent greater than the minimum required. For Class 2 areas, the minimum regulated pipe wall thickness is 0.375-inch; a 0.406-inch wall thickness is proposed, 8 percent greater than the minimum required. For Class 3 areas, the minimum regulated wall thickness is 0.4875-inch; a 0.500-inch wall thickness is proposed, 3 percent greater than the minimum required.~~The Project Class 2 locations would consist of 0.406- to 0.438-inch thickness steel pipe, Class 3 locations would consist of 0.500-inch-wall thickness steel pipe, and HDD sections would consist~~

~~of 0.625-inch-wall thickness steel pipe, for added strength during the installation.~~

4.7-36 PG&E proposes to "butt-weld" all pipeline sections (pipes are welded together without the ends overlapping). The project as proposed would include radiographic inspection of all circumferential welds. The minimum regulations (49 CFR 192.243) require only 10 percent, 15 percent and 100 percent nondestructive testing of welds in Class 1, Class 2, and Class 3 / 4 areas respectively. This additional testing will help to ensure structural integrity. ~~All welds (100 percent) would be x-rayed to ensure structural integrity and compliance with applicable DOT regulations. This goes beyond the DOT Code of Federal Regulations 49 Part 192.243 that requires a certain percentage of welds to be tested.~~ Welds that do not meet American Petroleum Institute 1104 specifications would be repaired or removed. Once the welds are approved, the welded joints would be covered with a protective coating and the entire pipeline would be electronically and visually inspected for any faults, scratches, or other damage.

4.7-37 The required DOT regulations, along with PG&E Project features that exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, ~~However,~~ additional measures ~~are required to attempt~~ shall be implemented to further reduce risks of project upset ~~he proposed Project impacts~~.

4.7-37 MM HAZ-2a Corrosion and Third Party Damage Mitigation.

The following shall be required:

- Line pipe shall be manufactured in the year 2000 or later;
- Before placing the pipeline into service, PG&E would perform post-construction geometry pig surveys, which would locate any construction related dents.
- PG&E shall prepare and implement an Operation and Maintenance Plan in accordance with the requirements in Title 49 CFR Part 192. Required by regulation.

- Within the first 6 months of placing the pipeline into operation, PG&E shall conduct a baseline internal inspection with a high resolution instrument (smart pig) of the pipeline in order to obtain baseline data for the pipeline.

- Following the baseline inspection, internal inspections with a high resolution instrument (smart pig) would be conducted on a periodic basis, at a minimum of one inspection every 7 years, or sooner if the evidence suggests that significant corrosion or defects exist or if any new Federal or State regulations require more frequent or comparable inspections. ~~The existing pipeline system is monitored and controlled 24 hours a day for pressure drops in the pipeline that could indicate a leak or other operating problem through a Supervisory Control and Data Acquisition system, which is a computer system for gathering and analyzing real-time systems. The system is programmed to take appropriate immediate action when alarm conditions are present.~~

- PG&E shall prepare an Emergency Response Plan that would be coordinated and tested (through drills and exercises) with local fire/police departments and emergency management agencies.

4.7-38 MM HAZ-2b Installation of <u>Automatic</u> ~~-~~Shutdown Valves

~~PG&E plans to install remotely operated valves at the Capay Station and the Yolo Junction Station, which would help to control the flow of gas into Lines 406 and 407.~~ PG&E shall install automatic shutdown valves ~~in three~~ <u>at all</u> locations: <u>Capay Station No. 0+00, Yolo Junction Station No. 732+00</u>, Power Line Road MLV Station No. 752+00 (which includes the Riego Road Regulating Station), <u>Power Line Road Regulating Station No. 129+00</u>, Baseline Road/Brewer Road MLV Station No. 1107+00, and Baseline Road Pressure Regulating Station No. 1361+00. These remotely operated automatic shut down valve locations would enhance public safety protection in the planned populated areas, which include schools and other existing and planned developments. <u>The automatic shutdown valves shall be controlled such that they will automatically go to the closed position should the parameters associated with a line rupture be identified by the local control system (e.g., rapid rate of pressure loss or line pressure falling</u>

below an established set point). If deemed necessary by PG&E, the automatic closure feature may be over-ridden by the pipeline controller, if the controller determines that the impacts can be minimized by operating in another manner.

4.7-38 Rationale for Mitigation

Corrosion has been found to be one of the main causes of leaks or ruptures. Studies have shown that corrosion occurs more often in older pipes, therefore using pipe manufactured after 2000 would help reduce corrosion. In addition, corrosion can be slowed down by increasing the thickness of the coating on the outside of the pipe, increasing the thickness of the pipe, and by increased surveillance through cathodic protection. The corrosion mitigation measure would reduce the incidence of leaks and therefore would reduce the individual risk of serious injury or fatality. Increased wall thickness allows more time to pass before a leak may result. During that time inspections may be able to identify the potential leak and take precautionary measures. Close interval cathodic protection surveys can identify coating defects and potential metal loss before an incident occurs. Internal inspections using modern techniques can identify external corrosion and other possible causes for an incident.

Another cause of incidents has been outside forces, which accounted for 54 percent of the incidents (see Table 4.7-3). These included equipment operated by an outside party, equipment operated by or for the operator, earth movement, and weather. With implementation of the mitigation measures, the incidence of leaks and possible explosion due to outside forces would be reduced, thereby reducing the individual risk of serious injury or fatality. Studies from western Europe have shown that increased wall thickness reduced the frequency of unintentional releases by third parties by 80 percent, increased depth of cover of 48 inches or more reduced third party-caused incidents by 30 percent, and pipelines protected by some form of warning device reduced third-party caused incidents by 10 percent (HSE 2001).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum individual risk posed by

Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum individual risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum individual risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, and mitigation would reduce the individual risk by fifty percent (50%). The post-mitigation individual risk results are presented below.

Post Mitigation Individual Risk Result Summary

Pipeline Segment	Post Mitigation Maximum Annual Risk of Fatality	Post Mitigation Maximum Annual Probability of Occurrence	Significance Threshold
Simplified Analysis			
Line 406	1.97×10^{-7}	1:5,076,000	1:1,000,000
Line 407	1.92×10^{-7}	1:5,220,000	1:1,000,000
Line DFM	8.04×10^{-8}	1:12,440,000	1:1,000,000
Enhanced Analysis			
Line 406	2.34×10^{-7}	1:4,274,000	1:1,000,000
Line 407	2.43×10^{-7}	1:4,115,000	1:1,000,000
Line DFM	1.18×10^{-7}	1:8,475,000	1:1,000,000

Source: EDM Services, Inc. 2009.

4.7-39 ~~Residual Impacts~~

~~The Project design features and the proposed mitigation measures reduce the risk by 50 percent; however, the individual risk would still be approximately 1:30,000, which exceeds individual risk significance thresholds by a factor of thirty. In addition, the sensitive receptors located within certain distances described in this section along the~~

~~proposed Project alignment would be significantly impacted due to risks of explosion, torch fires, and flash fires. Therefore, impacts remain significant (Class I).~~

4.7-40 Option A

Option A would realign a portion of Line 406 along CR-16 and CR-15B. This would increase the length of Line 406.~~, which would pose an impact to existing residences and roadways. The annual likelihood of serious injury or fatality along Line 406 would increase by 22 percent, from 2.89x10-6 to 3.52x10-6. The overall likelihood of serious injury or fatality for all of the proposed line segments would increase by 1 percent, from 6.08x10-5 to 6.16x10-5 (EDM Services, Inc. 2009).~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option A ~~would increase the risk but the impacts~~ would be the same as for the proposed Project (less than significant).

Option B

Similar to Option A, Option B would realign a portion of Line 406. This would increase the length of Line 406.~~, which would pose an impact to existing residences and roadways. The annual likelihood of serious injury or fatality along Line 406 would increase by 29 percent, from 2.89x10-6 to 3.72x10-6. The overall likelihood of serious injury or fatality for all of the proposed line segments would increase by 2 percent, from 6.08x10-5 to 6.18x10-5 (EDM Services, Inc. 2009).~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option B would ~~increase the risk but the impacts would~~ be the same as for the proposed Project (less than significant).

Option C

Option C would realign a portion of Line 406, but would not increase the length of Line 406. ~~, and therefore would not pose an impact to existing residences and roadways.~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option C would be the same as for the proposed Project (less than significant). ~~The annual likelihood of serious injury or fatality along Line 406 would be the same~~

~~for Option C as for the proposed Project. Therefore, impacts would be the same as for the proposed Project.~~

Option D

Option D would realign a portion of Line 406. The primary change would be to extend the portion along CR-17. This would increase the length of Line 406~~., which would pose an impact to existing residences and roadways. The annual likelihood of serious injury or fatality along Line 406 would increase by 30 percent, from 2.89x10-6 to 3.75x10-6. The overall likelihood of serious injury or fatality for all of the proposed line segments would increase by 2 percent, from 6.08x10-5 to 6.18x10-5 (EDM Services, Inc. 2009).~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option D would ~~increase the risk but the impacts would~~ be the same as for the proposed Project (less than significant).

4.7-41 **Option E**

Option E would realign a portion of Line 406. The primary change would be to extend the portion along CR-19. This would increase the length of Line 406. ~~, which would pose an impact to existing residences and roadways. The annual likelihood of serious injury or fatality along Line 406 would increase by 24 percent, from 2.89x10-6 to 3.57x10-6. The overall likelihood of serious injury or fatality for all of the proposed line segments would increase by 1 percent, from 6.08x10-5 to 6.16x10-5 (EDM Services, Inc. 2009).~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option E would ~~increase the risk but the impacts would~~ be the same as for the proposed Project (less than significant).

Option F

Option F would realign a portion of Line 407 West. ~~The realignment would result in minimal changes to the risks posed to the public. The annual overall likelihood of serious injury or fatality along Line 407 would increase 3 percent, from 7.75x10-6 to 7.99x10-6 (EDM Services, Inc. 2000). However, the overall likelihood of serious injury or fatality for all of the proposed line segments would increase less than 1~~

~~percent from 6.08x10-5 to 6.12x10-5.~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option F would ~~increase the risk but the impacts would~~ be the same as for the proposed Project (less than significant).

Option G

Option G would realign a portion of Line 407 West, but would not increase the length of Line 407. ~~, and therefore would not pose an impact to existing residences and roadways.~~ Impacts regarding fire risk, and the individual risk and societal risk associated with Option G would be the same as for the proposed Project (less than significant). ~~The annual likelihood of serious injury or fatality along Line 407 would be the same for Option G as for the proposed Project. Therefore, impacts would be the same as for the proposed Project.~~

Option H

Option H would realign a portion of Line 407. Option H would extend the Project through the Sacramento Metropolitan Airport property about 0.5 mile north of the northernmost runway. Should a leak or rupture and a fire occur in this Section of the pipeline, there is potential to disrupt air traffic at the airport. However, impacts regarding fire risk, and the individual risk and societal risk associated with Option H would be the same as for the proposed Project (less than significant). ~~Option H would result in slight changes to the risks posed to the public. The annual likelihood of serious injury or fatality along Line 407 would increase 28 percent, from 7.75x10-6 to 9.92x10-6. The overall likelihood of serious injury or fatality for all of the proposed line segments would increase less than 4 percent, from 6.08x10-5 to 6.31x10-5(EDM Services, Inc. 2009). Although the risk would increase under Option H, the impacts would be the same as for the proposed Project.~~

4.7-42 Option I

Option I would realign a portion of Line 407 to place the pipeline outside the 1,500-foot study ~~buffer~~ zone around a planned high school (PG&E 2009). This alternative would:

- Add approximately 3,000 feet of pipe to the overall pipeline length.

- Remove one mile of line from potential impacts to vehicle occupants and planned commercial development along Baseline Road.

- Add 1,500 feet of potential impacts to vehicle occupants along both South Brewer and Country Acres Roads.

- Add impacts to existing rural residences.

~~The annual likelihood of serious injury or fatality along Line 407 would decrease 14 percent, from 1.99x10-5 to 1.71x10-5. The overall likelihood of serious injury or fatality for all of the proposed line segments would decrease 5 percent, from 6.08x10-5 to 5.80x10-5 (EDM Services, Inc. 2009).~~

The California Education Code, section 17213 specifies that a school district may not approve a project involving the acquisition of a school site unless it determines that the property to be purchased or built upon does not contain a pipeline situated underground or aboveground that carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line used only to supply that school or neighborhood. The California Code of Regulation, Title 5, section 14010(h) states that, "the site shall not be located near an above-ground water or fuel storage tank or within 1,500 feet of the easement of an above ground or underground pipeline that can pose a safety hazard as determined by a risk analysis study, conducted by a competent professional." This realignment would place the pipeline beyond the specified 1,500-foot school <u>study zone</u> ~~buffer~~.

<u>Impacts regarding fire risk, and the individual risk and societal risk associated with Option I would be the same as for the proposed Project (less than significant).</u>

~~Although the risk would decrease under Option I, the impacts would be the same as for the proposed Project.~~

4.7-43 & 4.7-44

Option J

Option J would realign a portion of Line 407 to place the pipeline outside the 1,500-foot ~~buffer~~ study zone around a planned high school (PG&E 2009). This alternative would:

- Add approximately 5,200 feet of pipe to the overall pipeline length;
- Remove one mile of line from potential impacts to vehicle occupants and planned commercial development along Baseline Road;
- Add 2,600 feet of potential impacts to vehicle occupants along South Brewer Road; and
- Add ~~roughly~~ 2,600 ~~lineal~~ feet of potential impacts to vehicle occupants along Country Acres Road.
- Add impacts to existing rural residences.

Impacts regarding fire risk, and the individual risk and societal risk associated with Option J would be the same as for the proposed Project (less than significant).

~~The annual likelihood of serious injury or fatality along Line 407 would decrease 10 percent, from 1.99x10-5 to 1.80x10-5. The overall likelihood of serious injury or fatality for all of the proposed line segments would decrease 3 percent, from 6.08x10-5 to 5.89x10-5 (EDM Services, Inc. 2009). This realignment would place the pipeline line beyond the specified 1,500-foot school buffer.~~

~~Although the risk would decrease under Option J, the impacts would be the same as for the proposed Project.~~

Option K

This alternative would realign a portion of Line 407, Phase I approximately 150-feet further to the north, just beyond the 1,500-foot

~~buffer~~ study zone of a planned elementary school. Impacts regarding fire risk, and the individual risk and societal risk associated with Option K would be the same as for the proposed Project (less than significant). ~~This alternative would reduce the length of line affecting vehicle occupants from the impacts of 1-inch diameter releases along Baseline Road. The annual likelihood of serious injury or fatality along Line 407, Phase I would decrease less than 2 percent, from 1.99x10-5 to 1.96x10-5. The overall likelihood of serious injury or fatality for all of the proposed line segments would decrease less than 1 percent, from 6.08x10-5 to 6.05x10-5 (EDM Services, Inc. 2009).~~

Although this realignment would place the proposed natural gas line outside the 1,500-foot study zone ~~buffer~~, it is unlikely that serious risks would be posed to the student body from the applicant proposed pipeline location, which is approximately 1,400 feet from the school boundary. The distances to various impacts from the proposed pipeline are summarized below. As noted in Table 4.7-6 and in Appendix H-3, the impacts would not be expected to cause serious injuries or fatalities at distances greater than 1,000 feet.

It should be noted that the California Department of Education (CDE), Guidance Document for School Site Pipeline Risk Analysis (Guidance Document) considers 1 percent mortality (fatality probability of 1 percent) to be the reasonable estimate of the boundary of serious harm. It is considered the demarcation between threat (1 percent mortality) and no-threat (0 percent mortality). Using this criterion, the following boundary distances could be established from the proposed Line 407 to proposed school sites:

- Explosion – The peak overpressure level of an outdoor explosion from any of the three pipeline segments is 0.38 psig (medium fuel reactivity and low obstacle density). This overpressure is less than the level required to cause serious injuries or fatalities. ~~420 feet. This is the distance to the 1.0 psig overpressure level from a full bore, horizontal release. This level of overpressure is considered by some sources to result in a 1 percent probability of serious injury or fatality to occupants in reinforced concrete or reinforced masonry building from flying glass and debris. It should be noted that this is a conservative result. For reference, the CDE Guidance Document~~

~~indicates that an overpressure level of up to 2.3 psig will not result in any fatalities to persons inside buildings or outdoors; the maximum anticipated peak overpressure level from the proposed pipeline is 1.5 psig at distances less than 420 feet from the source.~~

- Flash Fire – 534 ~~640~~ feet. This is the downwind distance to the lower flammability limit of an unignited vapor cloud from a full bore ~~horizontal~~ release at 15° above the horizon, under the typical conditions outlined in Table 4.7-6 It should be noted that the size of the combustible vapor cloud can vary significantly depending on atmospheric and other conditions. For example, if the wind speed was decreased from 2.0 to 1.5 meters per second and the stability class was changed from D to F, the downwind distance to the lower flammability limit of the unignited vapor cloud would increase to 820 feet; these conditions are considered the worst case for off-site consequence modeling from stationary sources by the United States Environmental Protection Agency.

- Torch Fire - 746 ~~820~~ feet. This is the distance to the 5,000 btu/hr-ft^2 heat flux which is considered by the CDE to be the level of exposure resulting in 1 percent mortality after a 30 second exposure. For reference, the CDE Guidance Document provides charts for determining radiant heat from torch fires. Although these charts were developed using a different modeling software, they show a distance of 975 feet from the release to the 5,000 btu/hr-ft2 heat flux. (CDE 2007).

~~Although the risk would decrease under Option K, the impacts would be the same as for the proposed Project.~~

4.7-45 Option L

Option L would involve installing the portion of Line 407, which is within the 1,500 foot study zone ~~buffer~~ of a planned elementary school, using horizontal directional drilling techniques. Impacts regarding fire risk, and the individual risk and societal risk associated with Option L would be the same as for the proposed Project (less than significant). However, Option L would reduce the likelihood of the line being damaged by third parties, since the line would be installed well below normal excavation depths. ~~The estimated baseline risk of unintentional~~

~~release would be reduced roughly one-third, from 1.96x 10-4 to 1.2x10-4. The annual likelihood of serious injury or fatality along Line 407 would decrease less than 3 percent, from 1.99x10-5 to 1.94x10-5. The overall likelihood of serious injury or fatality for all of the proposed line segments would decrease less than 1 percent, from 6.08x10-5 to 6.03x10-5 (EDM Services, Inc. 2009). However, although the risk would decrease under Option I, the impacts would be the same as for the proposed Project.~~

4.7-46 **4.7.7 Summary of Impacts and Mitigation Measures**

The potential to interfere with emergency plans and the potential for wildland fires during construction activities would be reduced to a less than significant level through the implementation of Mitigation Measure HAZ-1.

Between 1970 and 1984 there were 5,862 reportable gas pipeline incidents resulting in 438 injuries and 74 deaths. From 1984 to 2004 there were 2,845 incidents causing 1,523 injuries and 340 deaths. The major causes of the incidents were corrosion and third party incidents. These two causes were responsible for 71 percent of the incidents between 1970 and 1984 and 63 percent of the incidents between 1986 to 2001.

~~The potential individual risk of serious injury or fatality attributed to the proposed Project has been estimated to be one in 16,000 (1:16,000) annually, roughly 60 times greater than the generally acceptable level of one in one million (1:1,000,000) per year. Mitigation measures HAZ-2a and HAZ-2b reduce the potential for leaks due to corrosion and serve to enhance public safety, but they do not reduce the risk of upset impact to a less than significant level. The impact is therefore considered significant and unavoidable (Class I).~~

<u>The Revised Final EIR provides an analysis that has been clarified to account for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The risk assessment included risk measurement that was not defined in earlier versions of the document, which has resulted in some confusion. A revised System Safety and Risk of Upset report was completed by EDM</u>

Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the initial calculation of aggregate risk was reported as individual risk. In addition, the initial risk analysis incorrectly compared the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. Even though the project risk impacts are less than significant, additional measures would be implemented to further reduce risks of project upset. The required DOT regulations, along with PG&E Project features that meet and exceed the minimum requirements, and mitigation would reduce the individual risk by fifty percent (50%).

The maximum risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation is 1:4,274,000 chance of fatality per year. The maximum individual risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation is 1:4,115,000 chance of fatality per year. The maximum individual risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation is 1:8,475,000. Because

the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

Table 4.7-9-9 summarizes the impacts and mitigation measures for hazards and hazardous materials.

Table 4.7-9: Summary of Hazards and Hazardous Materials and Mitigation Measures

Impact	Mitigation Measure
HAZ-1. Emergency plans/Wildland fires.	**HAZ-1.** Minimize risk of fire.
HAZ-2. System Safety and Risk of Serious Injuries and Fatalities Due to Project Upset.	**HAZ-2a.** Corrosion mitigation. **HAZ-2b.** Installation of automatic shut-down valves.
Source: Michael Brandman Associates 2009.	

4.8 HYDROLOGY AND WATER QUALITY

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4.8-17 to 19 **MM HWQ-1. Response to Unanticipated Release of Drilling Fluids.** Sixty days prior to the commencement of HDD activities near water crossings, PG&E shall prepare and submit for CSLC, RWQCB, and CDFG approval, an HDD frac-out prevention and response plan that contains the following provisions:

- HDD crews shall strictly monitor drilling fluid pressures;
- Obtain site-specific geotechnical data at all water crossings where HDD is to be used to determine the appropriate depth below bed of waterway;
- Implement sizing techniques (move bores back and forth slowly to keep track of potential frac-outs);
- Consider potential application of surface casings to add a protective outer layer;

- Conduct Geotech bores in locations that would prevent drilling mud from escaping through boreholes;
- Prohibit nighttime drilling near sensitive noise receptors unless absolutely required;
- Maintain containment equipment for drilling fluids on site;
- Monitor water quality including turbidity in accordance with applicable Regional Water Quality Control Board permit requirements ~~downstream of the drill site~~;
- Cease work immediately if a seep into a stream is detected, such as by a loss in pressure or visual observation of changes in turbidity or surface sheen;
- Immediately report all bentonite seeps into waters of the State or sensitive habitat to the Project's resource coordinator, the CSLC, and the appropriate resource agencies (i.e., NOAA, USFWS, CDFG, USACE, applicable RWQCBs, local County, and DWR);
- ~~Use non-toxic fluorescent dye in the drilling mud to allow easier identification of frac-outs;~~
- Maintain onsite boats with monitors where appropriate;
- In the event of a release during construction, PG&E shall assess the extent of potential damage to fisheries and carry out appropriate mitigation/compensation procedures. Impacts to consider include curtailment of access to fishing areas, contamination of fish and habitat, and loss of income to commercial fishing interests and businesses. Procedures for assessing damage should include field surveys to determine the extent of damage during and soon after the release and long-term monitoring to determine long-term effects to habitat, fish, and fishing interests; and
- A 3,000-gallon vacuum truck shall be available on call in case a spill or frac-out occurs.

4.8-20 **MM HWQ-2. Verify Well and Irrigation System Locations.** Prior to construction of the proposed Project, well locations within 200 feet of

the excavation, construction staging areas, and aboveground facility locations shall be verified by PG&E through field surveys to determine if private water wells and water pipelines are currently in use and if their area of influence intersects the proposed Project site. This survey will be conducted by a licensed professional hydrogeologist, who will determine any potential impacts from construction. Based on his/her professional opinion, wells will be tested as needed. ~~With the landowner's permission, PG&E shall test the wells to determine baseline flow conditions and monitor these wells during construction of the proposed Project~~. If, through monitoring, it is determined that Project construction is affecting well production, PG&E shall cease construction activities or arrange to supply water at the well location and consult with the landowner. Surveys shall be conducted by PG&E prior to construction to ensure that any unidentified springs are avoided during construction.

PG&E shall work with landowners and their tenant farmers to identify and avoid damage to crop irrigation systems during the proposed pipeline construction. PG&E shall immediately repair any damage that does occur to irrigation systems, including temporary and permanent reconfiguration of the irrigation systems in order to maintain irrigation to crops adjacent to the pipeline right-of-way.

4.8-21 & 22 Mitigation is proposed below to flood-proof any structures proposed to be constructed within a 100-year floodplain. Both proposed structures would be no more than 10 feet in height ~~without the flood-proofing. Flood-proofing would require the structures to be raised approximately 1 foot above the 100-year storm flood profile level~~.

4.8-22 Mitigation Measures for Impact HWQ-3: 100-Year Floodplain

MM HWQ-3 Flood-Proof Pump Houses Within 100-year Floodplain. If any structures (pump stations, aboveground valve housing) associated with the buried pipeline are placed within the 100-year flood zone, the structure shall be "flood-proofed" in their ~~foundation~~ design ~~and raised in elevation to a minimum of 1 foot above the 100-year storm flood profile level,~~ to reduce the risk that they would be damaged during such an event.

4.8-34 MM HWQ-3 would require the flood proofing of any structures associated with the above ground stations~~, including but not limited to, the elevation of structures to 1-foot above the 100-year storm flood profile level.~~ Implementation of MM HWQ-3 in both the proposed project and Option H would reduce impacts to less than significant.

4.9 LAND USE AND PLANNING

PLEASE NOTE: The revised System Safety and Risk of Upset report prepared by EDM Services, Inc. has been reproduced in its entirety, with changes shown as underline for new text, and ~~strike out~~ for deleted text, and is included in Appendix H-3 of this Revised Final EIR.

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4.9-18 The project would also result in the permanent conversion of approximately 2.0 ~~3.1~~ acres of existing orchards (because of restrictions related to replanting of trees and other deep-rooted plants) to other agricultural practices.

4.9-20 **MM LU-1d Potential Conflicts with Other Utilities**

PG&E shall coordinate with Yolo County, Placer County, Sutter County, Sacramento County, and the City of Roseville regarding future utility crossings for water, sewer, drainage, and other underground utilities, in order to determine the location of these existing and planned utilities and the horizontal and vertical clearances required from the proposed pipeline and other project features. PG&E shall comply with the separation requirements as determined by the local agencies.

4.9-20 through 23

Impact LU-2: Result in Safety Risk to Nearby Land Uses

The proposed Project could expose people to ~~an unacceptable~~ a risk of existing or potential hazards, including upset and accident conditions involving the risk for fires, explosions, or the release of natural gas into the environment (Less Than Significant, Class III ~~Significant, Class I~~).

For a more detailed discussion of the safety risks to land uses along the proposed pipeline, refer to Section 4.7, Hazards and Hazardous Materials.

High Consequence Areas

The U.S. Department of Transportation provides oversight for the nation's natural gas pipeline transportation system. Its responsibilities are promulgated under Title 49 United States Code (USC) Chapter 601. The Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety (OPS), administers the national regulatory program to ensure the safe transportation of gas and other hazardous materials by pipeline.

Areas at risk of pipeline releases are known as High Consequence Areas (HCAs). Federal DOT regulations define area classifications, based on population density of the pipeline vicinity and on an area that extends for 660 feet (220 yards) on either side of the centerline of any continuous one-mile length of the pipeline. The class locations along the proposed pipeline route are shown in Figure 2-7. The four area classifications are defined as follows:

- Class 1: A location with ten or fewer buildings intended for human occupancy;
- Class 2: A location with more than ten but less than 46 buildings intended for human occupancy;
- Class 3: A location with 46 or more buildings intended for human occupancy or where the pipeline lies within 300 feet (100 yards) of any building or small well-defined outside area occupied by 20 or more people during normal use; and
- Class 4: A location where buildings with four or more stories aboveground are prevalent.

Natural gas could be released from a leak or rupture. If the natural gas reached a combustible mixture and an ignition source was present, a fire and/or explosion could occur, result in possible injuries and/or deaths. The risk threshold used for determining significance is ~~An~~

~~unacceptable risk is defined as~~ an annual likelihood of one in a million (1:1,000,000) chance of a fatality (CDE 2007).

The risks associated with Line 406 were assessed using the existing conditions. The risks associated with Line 407 and the DFM were assessed using existing conditions, plus the impacts of the proposed land developments within Sutter County and Placer County, including Sutter Pointe**,** Placer Vineyards, Sierra Vista, and Curry Creek.

~~The anticipated individual frequency of serious injury or fatality from the proposed project is approximately 6.1 x 10-5. This represents a 1:16,000 likelihood of a serious injury or fatality annually, which is roughly sixty times greater than the generally accepted criteria of 1:1,000,000. The individual risks posed by each of the individual line segments are also summarized. As noted, the risk for each of the individual line segments, except Line DFM, exceeds the individual risk significance criteria.~~

During operation, the greatest risk for injury and fatality occurs with a leak or unintentional release of natural gas. The most frequent causes of incidents include corrosion and outside forces. Proper design, construction, and maintenance of the pipeline would minimize leaks and corrosion. The pipeline would be buried along its entire length, except at metering stations, regulating stations, and pressure limiting stations, which would be fenced to prevent access. PG&E has increased the cover beyond minimum requirements to 5 feet, which would provide increased protection from third party damage including agricultural operations. PG&E proposes to meet pipeline wall thickness requirements and in some areas of the pipeline go beyond the required thickness for the proposed Project. PG&E also proposes to "butt-weld" all pipeline sections, that is, welded together without the ends overlapping. All welds (100 percent) would be x-rayed to ensure structural integrity and compliance with applicable DOT regulations.

The Revised Final EIR provides a clarifying analysis that accounts for individual risks to the public if a pipeline release were to occur with a subsequent fire or explosion. The earlier risk assessment included risk measurement terminology that was not and resulted in some confusion. A revised System Safety and Risk of Upset report was

completed by EDM Services, Inc. (October 2009) for the proposed Project, and is included as Appendix H-3 of this Revised Final EIR.

The risk analysis was revised because the initial calculation of aggregate risk was reported as individual risk. In addition, the initial risk analysis incorrectly compared the the aggregate risk to the individual risk threshold of an annual likelihood of fatality of 1:1,000,000. The individual risk is defined as the frequency that an individual may be expected to sustain a given level of harm from the realization of specific hazards, at a specific location, within a specified time interval (measured as the probability of a fatality per year). Aggregate risk is the total anticipated frequency of fatalities that one might anticipate over a given time period for all of the project components (the entire pipeline system). There is no known established threshold for aggregate risk, and it is not used in practice to determine individual risk.

The individual risk significance threshold used in the EIR is an annual likelihood of one in one-million (1:1,000,000) for fatality (used by the California Department of Education for school sites). The risk level is typically determined for the maximally exposed individual (assumes that a person is present continuously—24 hours per day, 365 days per year).

The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum individual risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum individual risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation it is 1:4,115,000 chance of fatality per year. The maximum individual risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant.

~~The required regulations along with PG&E Project features that meet and exceed the minimum requirements would reduce risks of project upset.~~ The required DOT regulations, along with PG&E Project

features that meet and exceed the minimum requirements, would reduce risks of project upset. Even though the project risk impacts are less than significant, ~~However,~~ additional measures ~~are required to attempt~~ would be implemented to further reduce risks of project upset. ~~the proposed Project impacts~~.

Mitigation Measures for Impact LU-2: Result in Safety Risk to Nearby Land Uses

MM LU-2a Mitigation for Safety Risk to Nearby Land Uses. Implement MM HAZ-2a, Corrosion Mitigation, pertaining to post-construction geometry pig surveys, baseline inspection and internal inspections with a high resolution instrument (smart pig) a minimum of once every 7 years, and development of an Operation and Maintenance Plan and an Emergency Response Plan.

MM LU-2b Mitigation for Safety Risk to Nearby Land Uses. Implement MM HAZ-2b, Installation of Automatic Shut-down Valves, pertaining to the installation of automatic shutdown valves in all ~~three~~ locations: Capay Station No. 0+00, Yolo Junction Station No. 732+00, Power Line Road MLV Station No. 752+00 (which includes the Riego Road Regulating Station), Baseline Road/Brewer Road MLV Station No. 1107+00, and Baseline Road Pressure Regulating Station No. 1361+00.

Rationale for Mitigation

Corrosion has been found to be one of the main causes of leaks or ruptures. Studies have shown that corrosion occurs more often in older pipes, therefore using pipe manufactured after 2000 would help reduce corrosion. In addition, corrosion can be slowed down by increasing the thickness of the coating on the outside of the pipe increasing the thickness of the pipe, and by increased surveillance through cathodic protection. The corrosion mitigation measure would reduce the incidence of leaks and therefore would reduce the individual risk of serious injury or fatality. Increased wall thickness allows more time to pass before a leak may result. During that time inspections may be able to identify the potential leak and take precautionary measures. Close interval cathodic protection surveys

can identify coating defects and potential metal loss before an incident occurs. Internal inspections using modern techniques can identify external corrosion and other possible causes for an incident.

With the proposed mitigation, the incidence of leaks and possible explosion due to outside forces would be reduced, thereby reducing the individual risk of serious injury or fatality. Studies from western Europe have shown that increased wall thickness reduced the frequency of unintentional releases by third parties by 80 percent, increased depth of cover of 48 inches or more reduced third party-caused incidents by 30 percent, and pipelines protected by some form of warning device reduced third party-caused incidents by 10 percent (HSE 2001).

~~Residual Impacts~~

~~The Project design features and the proposed mitigation measures MM LU-2a (MM HAZ-2a) and MM LU-2b (MM HAZ-2b) reduce the risk by 50 percent. However, the individual risk would still be approximately 1:30,000, which exceeds individual risk significance thresholds by a factor of thirty. In addition, the sensitive receptors located within certain distances along the proposed Project alignment would be significantly impacted due to risks of explosion, torch fires, and flash fires. Therefore, impacts remain significant (Class I).~~

4.9-24 through 4.9-33

Option A

The area through which the Option A alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural. This alignment would avoid segmenting eight orchard fields and removing trees from an orchard at the west end of the proposed alignment. However, trees within orchards near the Sacramento River would still be disturbed. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields would be increased with this

option due to the increased length (an additional 2,200 feet) along agricultural fields. The amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would also be increased with this option.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. In addition to the HCA areas associated with the proposed Project, this option would impact Durst Organic Growers, a business that has approximately 40 employees year round, and as many as 300 during peak farming periods. By placing the pipeline in close proximity to Durst, a new "high consequence area" or "HCA" would be created along this portion of the pipeline, while the proposed alignment would not result in an HCA in this area.

While the risk impacts would remain less than significant, ~~significant impact associated with the proposed Project would not be reduced with this alignment, the impacts related to~~ the magnitude of the risks associated with the number of HCA areas would be increased under Option A.

Option B

The area through which the Option B alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural. This alignment would avoid segmenting 13 agricultural fields and removing trees from an orchard at the west end of the proposed alignment. However, trees within orchards near the Sacramento River would still be disturbed. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields would be increased with this option due to the increased length (an additional 2,640 feet) along

agricultural fields. The amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would also be increased with this option.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. In addition to the HCA areas associated with the proposed Project, this option would impact Durst Organic Growers, a business that has approximately 40 employees year round, and as many as 300 during peak farming periods. By placing the pipeline in close proximity to Durst, a new "high consequence area" or "HCA" would be created along this portion of the pipeline, while the proposed alignment would not result in an HCA in this area.

While the risk impacts would remain less than significant, ~~significant impact associated with the proposed Project would not be reduced with this alignment, the impacts related to~~ the magnitude of the risks associated with the number of HCA areas would be increased under Option B.

Option C

The area through which the Option C alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural. This alignment would avoid segmenting three agricultural fields and removing trees from an orchard at the west end of the proposed alignment. However, trees within orchards near the Sacramento River would still be disturbed. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, the amount of orchard conversion, and the amount of agricultural land restricted in the

permanent easement to allow only shallow rooted crops to be grown, would be similar to the proposed project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would remain the same as the proposed Project under Option C.

Option D

The area through which the Option D alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural and rural residential.

While Option D would move the pipeline alignment closer to seven residences located along CR 17, it would avoid segmenting ten agricultural fields. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, the amount of orchard conversion, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown, would be similar to the proposed project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would remain the same as the proposed Project under Option D.

Option E

The area through which the Option E alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural and rural residential.

While Option E would move the pipeline alignment closer to five residences along CR-19, it would avoid segmenting ten agricultural fields. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, the amount of orchard conversion, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown, would be similar to the proposed project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

<u>The</u> significant and unavoidable (Class I) impact related to <u>construction air quality</u> ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would remain the same as the proposed Project under Option E.

Option F

Option F would avoid segmenting one agricultural field by placing this short segment of pipeline along the parcel boundary and within close proximity to one additional residence.

The amount of impacts to orchards would be the same as the proposed Project. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, the amount of orchard conversion, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown, would be similar to the proposed Project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would remain the same as the proposed Project under Option F.

Option G

Option G would avoid segmenting one agricultural field by placing this short segment of pipeline along the boundary of the agricultural field near CR-17.

Trees within the orchards at the west end of the alignment and near the Sacramento River would still be disturbed under this option. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown, would be similar to the proposed project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would remain the same as the proposed Project under Option G.

Option H

The area through which the Option H alignment would pass has similar land uses and land use designations as the proposed Project. Land uses are predominantly agricultural.

This option would still pass through lands associated with the Yolo Bypass and would impact one additional agricultural field. However, this option would avoid lands within the Sacramento River Ranch Conservation Bank and the Natomas Basin Conservancy.

Trees within the orchards at the west end of the alignment and near the Sacramento River would still be disturbed under this option. The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of temporary construction impacts to agricultural fields, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown, would be increased by this option.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would be the same as for the proposed Project.

Option I

Option I would reroute a portion of Line 407-E to the north to place the pipeline outside of a 1,500-foot ~~safety buffer~~ study zone around a planned high school to be located on the south side of Baseline Road.

Instead of placing this segment of the pipeline route along Base Line Road the option would cross three agricultural fields, and cross five wetlands or water bodies. The pipeline would remain near residences along South Brewer Road and Country Acres Lane, but would be located farther away from six residences along Base Line Road.

The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of impacts to

orchards would be the same as the proposed Project; however, the amount of temporary construction impacts to agricultural fields and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would be increased by this option.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, the impacts would be similar to the proposed Project.

Option J

Option J would reroute a portion of Line 407-E to the north to place the pipeline outside of a 1,500-foot ~~safety buffer~~ study zone around a planned high school to be located on the south side of Base Line Road.

Instead of placing this segment of the pipeline route along Base Line Road, the option would be placed near the boundaries of three agricultural fields and would cross five wetlands or water bodies. The pipeline would remain near residences along South Brewer Road and Country Acres Lane, but would be located farther away from six residences along Base Line Road.

The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of impacts to orchards would be the same as the proposed Project; however, the amount of temporary construction impacts to agricultural fields and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would be increased by this option.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Therefore, impacts would be similar to the proposed Project.

Option K

Option K would reroute a portion of Line 407-E approximately 150 feet to the north to place the pipeline outside of a 1,500-foot ~~safety buffer~~ study zone around a planned elementary school to be located south of Base Line Road. Rather than following Base Line road, the pipeline would cross through annual grassland, a vernal pool, and seasonal wetland.

The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of impacts to orchards, the amount of temporary construction impacts to agricultural fields, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would be the same as the proposed Project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative.

Although this realignment would place the proposed natural gas line outside the 1,500-foot study zone ~~buffer~~, it is unlikely that serious risks would be posed to the student body from the applicant proposed pipeline location, which is approximately 1,400 feet from the school site

boundary. The distances to various impacts from the proposed pipeline are summarized below. As noted in Table 4.7-6 and in Appendix H-3, the impacts would not be expected to cause serious injuries or fatalities at distances greater than 1,000 feet.

It should be noted that the California Department of Education (CDE), Guidance Document for School Site Pipeline Risk Analysis (Guidance Document) considers 1 percent mortality (fatality probability of 1 percent) to be the reasonable estimate of the boundary of serious harm. It is considered the demarcation between threat (1 percent mortality) and no-threat (0 percent mortality). Using this criterion, the following boundary distances could be established from the proposed Line 407 to proposed school sites:

- Explosion – The peak overpressure level of an outdoor explosion from any of the three pipeline segments is 0.38 psig (medium fuel reactivity and low obstacle density). This overpressure is less than the level required to cause serious injuries or fatalities.

- Flash Fire – 534 feet. This is the downwind distance to the lower flammability limit of an unignited vapor cloud from a full bore release at 15° above the horizon, under the typical conditions outlined in Table 4.7-6. It should be noted that the size of the combustible vapor cloud can vary significantly depending on atmospheric and other conditions. For example, if the wind speed was decreased from 2.0 to 1.5 meters per second and the stability class was changed from D to F, the downwind distance to the lower flammability limit of the unignited vapor cloud would increase to 820 feet; these conditions are considered the worst case for off-site consequence modeling from stationary sources by the United States Environmental Protection Agency.

- Torch Fire - 746 feet. This is the distance to the 5,000 btu/hr-ft^2 heat flux which is considered by the CDE to be the level of exposure resulting in 1 percent mortality after a 30 second exposure. For reference, the CDE Guidance Document provides charts for determining radiant heat from torch fires. Although these charts were developed using a different modeling software, they show a distance of 975 feet from the release to the 5,000 btu/hr-ft2 heat flux. (CDE 2007

Option L

Option L would extend the proposed Line 406-E HDD for approximately 1,000 feet to the east along Base Line Road in order to increase the amount of covered pipeline located within a 1,500-foot ~~safety buffer~~ study zone around a planned elementary school that is to be located south of Base Line Road.

The amount of agricultural land converted to non-agricultural uses (2.55 acres) due to the six aboveground stations would be the same as the proposed alignment with this option. The amount of impacts to orchards, the amount of temporary construction impacts to agricultural fields, and the amount of agricultural land restricted in the permanent easement to allow only shallow rooted crops to be grown would be the same as the proposed Project.

This option would not reduce impacts to the Natomas Conservancy Mitigation Lands, the River Ranch Conservation Bank, or WAPA lands, since this alignment would not change the portions that pass through these lands.

The significant and unavoidable (Class I) impact related to construction air quality ~~safety risks associated with nearby land uses~~ would not be reduced with this alternative. Option L would involve installing the portion of Line 407, Phase I which is within the 1,500-foot study zone ~~buffer~~ of a planned elementary school, using horizontal directional drilling techniques. The individual risk and societal risk associated with Option L would be the same as for the proposed Project (less than significant). However, Option L would reduce the likelihood of the line being damaged by third parties, since the line would be installed at a depth of 35 feet, well below normal excavation depths. ~~This would significantly reduce or eliminate the likelihood of the line being damaged by third parties, since the line would be installed well below normal excavation depths. Although the quantifiable risk would decrease slightly under Option L, the impacts would be similar to the proposed Project.~~

4.9-31 The amount of farmland permanently impacted (2.55 acres) and the amount of farmland converted from deep rooted plants to other types

of crops (2.0 ~~3.1~~ acres) does not represent a significant regional loss and would not conflict with the Williamson Act designation.

4.10 NOISE

Page **Revision:**

4.10-26 **APM NOI-2. PG&E** will coordinate drilling activities where residents may live within 1,000 feet of the HDD temporary-use areas or tie-in locations if construction is scheduled to occur between 8 p.m. and 6 a.m.

4.10-27 The YJS would be no greater than 10~~5~~ feet in height.

4.10-34 Continuous, 24-hour construction would also occur at tie-in locations where the proposed pipeline would intersect with existing natural gas pipelines. Construction would continue until the tie-in is complete. Line 406 would tie-in to Lines 400 and 401 at the Capay Metering Station, and line 172 at the Yolo Junction Station. Line 407 East would tie-in to Line 123 at the existing valve station located at the northwest corner of the Baseline Road and Fiddyment Road intersection.

Even though construction activities could occur outside of normal daytime construction hours, this would only happen when the nature of the work would make it necessary to perform construction around the clock.

4.10-34 This would be the case with only a small portion of the overall work, such as during directional drilling, pipeline tie-in and hydrostatic testing.

4.10-35 **MM NOI 1-a.** Limited Construction Hours. Construction activities shall be limited to daytime hours (7 a.m. to 7 p.m.) when they occur within 1,000 feet of residences, except for the operation of horizontal directional drilling equipment and at tie-in locations.

4.10-35 **MM NOI-1b. Best Management Practices.** When construction activities occur within 1,000 feet of residences, the following best management practices shall be implemented:

1. All construction equipment shall be fitted with factory installed mufflers and enclosures.

2. All construction equipment shall be maintained in good working order.

3. Horizontal directional drilling equipment and tie-in operations shall be shielded from view of the nearest residences with temporary barriers (such as plywood or straw bales) that block line of sight from engines, ~~and~~ pumps, and other noise emitting equipment to the windows of those residences.

4. PG&E shall provide a noise complaint hot line, staffed on a 24-hour basis, to allow nearby residents to submit complaints about construction-related noise. The hot line number shall be clearly posted at the construction site.

5. PG&E shall respond to noise complaints in a timely manner, so that residents may obtain any necessary relief before the construction is completed.

4.10-36 **MM NOI-1c. Noise Reduction Plan.** To minimize nighttime construction noise impacts, a noise reduction plan shall be developed by a qualified acoustical professional and submitted to the California State Lands Commission for review and approval. The Noise Reduction Plan shall include a set of site-specific noise attenuation measures that apply state of the art noise reduction technology to ensure that nighttime noise levels from Project sources within do not exceed the applicable county's nighttime exterior noise threshold at nearby residences.

The attenuation measures shall include, but not be limited to, the control strategies and methods for implementation, as feasible, that are listed below and shall be implemented prior to commencement of any horizontal direction drilling (HDD) construction, ~~or~~ hydrostatic testing or tie-in activities. If any of the following strategies are determined by PG&E to not be feasible, an explanation as to why the specific strategy is not feasible shall be included in the Noise Reduction Plan:

- Plan horizontal direction drill activities to minimize the amount of nighttime construction.

- Offer temporary relocation of residents within 300 feet of nighttime construction areas.

- Install temporary noise barriers, such as shields and blankets, immediately adjacent to all nighttime stationary noise sources (e.g., drilling rigs, generators, pumps, etc.).

- Install a temporary noise wall that blocks the line of sight between all nighttime ~~HDD~~ activities and the closest residences. The noise wall shall achieve an attenuation of at least 10 dBA.

- Fit all engines associated with nighttime ~~HDD~~ activities with critical silencer muffler designs that achieve attenuation of at least 15 dBA compared to standard muffler designs.

4.10-37 The proposed shielding for the HDD, hydrostatic testing and tie-in equipment recognizes that such equipment must be operated on a continuous basis, and provides a practical reduction of noise by requiring an effective noise barrier between the ~~HDD~~ equipment and the nearest residences.

4.10-40 The residence nearest the proposed Project's HDD crossing would be located approximately 100 feet from the HDD construction pit. Option A would relocate the Line 400 and Line 401 tie-in location, but would not place it within 200 feet of any sensitive receptors. As a result, there would be fewer potential construction-related noise or vibration impacts along this segment of the pipeline.

4.12 POPULATION AND HOUSING/PUBLIC SERVICES/UTILITIES AND SERVICE SYSTEMS

Page **Revision:**

4.12-8 & 9 Sacramento County

Sacramento County is served by 16 public school districts, three~~one~~ of which, (the Natomas Unified, Center Joint Unified, and Elverta Joint School Districts) ~~Natomas Unified School District,~~ serve~~s~~ the Project

area. The Natomas Unified School Ddistrict consists of eight elementary schools, two middle schools, three high schools, three charter schools and one continuation school. Combined, these schools serve approximately 10,821 students. ~~There are~~ None of the schools located within the Natomas Unified School District are located within 0.5 mile of the pipeline ~~Project area in Sacramento County~~. Both the Center Joint Unified School District and Elverta Joint School District extend north from Sacramento County into Placer County near the project area. The Center Joint Unified School District consists of two highs schools, one middle school, four elementary schools, two charter schools, one adult school and one preschool. Combined, these schools serve approximately 5,670 students. None of the existing schools are located within 0.5 mile of the pipeline. There are three proposed school sites that would be located within 0.5 mile of the pipeline. These proposed school sites are intended to serve the population growth planned for in the Placer Vineyards Specific Area Plan and the Sierra Vista Specific Plans. The Elverta Joint School District consists of one elementary school and one middle school, serving approximately 324 students. No schools within the Elverta Joint School District are located within 0.5 mile of the pipeline.

Placer County

Placer County is served by 17 primary and secondary education school districts.~~, of which,~~ In addition to the Sacramento County school districts that serve portions of Placer County (as described above), two Placer County school districts serve the Project area. The Dry Creek Elementary School District is comprised of six elementary schools and two middle schools that combined serve approximately 7,377 students. The Roseville Joint Union High School District consists of six high schools, enrolling approximately 8,918 students. In Placer County there are two schools within 0.5 mile of the proposed Project; the Alpha School (historical) is approximately 0.5 mile north of Line 407 along Baseline Road, and the Coyote Ridge Elementary School is approximately 0.4 mile north-northeast of the eastern terminus of Line 407 at the intersection of Baseline Road and Fair Oaks Boulevard.

4.12-23 Electricity for lighting during construction would be powered by a diesel generator. At the ~~12~~ locations along the proposed pipeline where

HDD, hydrostatic testing or tie-ins would be implemented, lighting would be utilized to allow continuous, 24-hour construction operations. At the HDD locations, ~~A~~ temporary light plants would be stationed at the entry and exit points of each HDD section and would consist of four 1,000-watt fixtures.

4.12-33 Specifically, the Placer Vineyards Specific Area Plan and the Sierra Vista Specific Plan ~~are both scheduled to begin in 2008 and~~ are located south and north, respectively, of the eastern end of Line 407 East.

4.13 TRANSPORTATION AND TRAFFIC

Page **Revision:**

4.13-18 **APM TRANS-3.** Required permits for temporary lane closures will be obtained from Yolo County, Sutter County, Sacramento County, Placer County, and Caltrans. Before obtaining roadway encroachment permits from the counties, PG&E will submit a Transportation Management Plan (TMP), subject to the local jurisdiction's review and approval. As part of the TMP, traffic control measures and construction vehicle access routes will be identified. The TMP will also include discussion of expected dates and duration of construction, traffic mitigation measures, haul routes, limits on the length of open cuts, and resurfacing requirements. The TMP will address work zone hours. Construction of the pipeline will occur for 10 hours a day, 6 days a week, unless otherwise permitted by the local jurisdiction. Property owners and residents on streets where construction will occur will be notified prior to the start of construction. Advance public notification will include postings of notices and appropriate signs.

4.13-19 **APM TRANS-5.** PG&E will consult with the Center Joint Unified School District ~~Placer County Unified School District~~ at least one month prior to construction to coordinate construction activities adjacent to school bus stops. If necessary, school bus stops will be temporarily relocated or buses will be rerouted until construction in the vicinity is complete. PG&E will also consult with Yuba-Sutter Transit at least one month prior to construction to reduce potential interruption of transit services.

4.13-20 The other roadways impacted by construction of the proposed Project include: CR-16A, CR-17, CR-85, CR-87, CR-88A, CR-90A, CR-96, CR-97, CR-98, CR-99B, CR-100, CR-101, CR-102, SR-113, Powerline Road, Riego Road/Baseline Road, West Elverta Road, Locust Road, Brewer Road, Pleasant Grove Road, and Pacific Avenue.

4.13-22 ~~Staging areas would be approximately 300 feet by 200 feet.~~

4.13-23 Bus service for the Center Joint Unified School District ~~Placer County Unified School District~~ may be temporarily disrupted.

4.13-24 Staging areas would not be located at public bus stops. However, bus routes for the Center Joint Unified School District ~~Placer County Unified School District~~ may be affected. As stated in APM Trans-5, PG&E would consult with the Center Joint Unified School District ~~Placer County Unified School District~~ at least one month prior to construction to coordinate construction activities adjacent to school bus stops.

5.0 ENVIRONMENTAL JUSTICE

5-12 **Hazards and Hazardous Materials.** The Project could expose people to a ~~would expose people to an unacceptable risk of existing or potential hazards, including upset and accident conditions involving the~~ risk of ~~fires, including~~ wildland fires where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.~~, explosions, or the release of hazardous materials into the environment. Similar affects could result from the creation of a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. A majority of the pipeline would be located in agricultural lands containing low densities of population. Risk of upset or explosion of the pipeline is equal for the entire length of the pipeline and would not disproportionately impact a low-income or minority area.~~ The highest risk along a segment of pipeline is to persons located immediately above the pipeline, and the risk decreases as a person is farther away from the pipeline. The maximum individual risk posed by Line 406 before mitigation is 1:2,137,000, and after mitigation it is 1:4,274,000 chance of fatality per year. The maximum individual risk posed by Line 407 before mitigation is 1:2,062,000, and after mitigation

it is 1:4,115,000 chance of fatality per year. The maximum individual risk posed by Line DFM before mitigation is 1:4,255,000, and after mitigation it is 1:8,475,000. Because the calculated individual risk is less than the threshold of 1:1,000,000, the risk is considered to be less than significant. Furthermore, U.S. DOT class designations were identified based on population density with more stringent safety regulations as the human population density increases with Class I as the least dense and Class 4 as the densest. The proposed pipeline facilities would be constructed in areas which are presently within Class 1, 2, and 3 locations. A portion of the identified minority block group contains a Class 2 area of approximately 15 rural residences. The identified low-income block group contains a portion of a Class 2 area. In the case of Class 2 areas, the pipeline must adhere to stricter design measures, including more soil coverage, greater pipe wall thickness and increased frequency of pipeline patrols and surveys in order to increase safety, as compared to Class 1 areas. As such, the Class 2 areas of the minority or low-income block groups would not be disproportionately affected.

6.0 OTHER REQUIRED CEQA SECTIONS

6-1 6.2 SIGNIFICANT ENVIRONMENTAL EFFECTS OF PROPOSED PROJECT THAT CANNOT BE AVOIDED AND CANNOT BE MITIGATED TO LESS THAN SIGNIFICANT

Effects on all environmental resources were evaluated to determine any impacts that would remain significant after mitigation. There ~~are~~ is a significant and unavoidable (Class I) impact~~s~~ related to Construction Air Quality.~~, Hazards and Hazardous Materials, and Land Use and Planning.~~

The Class I impact related to air quality is due to the exceedance of FRAQMD's threshold for ROG during the construction of Line 407 East, the DFM, and Line 407 West. The Class I impact related to air quality is discussed in detail in Section 4.3 of this Draft EIR.

~~The Class I impacts related to Hazards and Hazardous Materials and Land Use and Planning are safety risks to nearby land uses. Natural gas could be released from a leak or rupture. If the natural gas~~

~~reached a combustible mixture and an ignition source was present, a fire and/or explosion could occur, result in possible injuries and/or deaths. The Class I impacts related to safety risks are discussed in detail in Sections 4.7 and 4.9 of this Draft EIR.~~

6.4 ~~The proposed Project would directly extend natural gas services to an area not previously served.~~ PG&E currently has 675,000 residential customers in the Sacramento Valley Local Transmission System and serves these customers with existing gas lines. The Project would accommodate the SACOG growth projections and as a result would not induce growth**.**

7.0 FINAL MITIGATION MONITORING PROGRAM

Changes made to Section 7.0, Mitigation Monitoring Program (MMP) of the Draft EIR are reflected in the MMP reproduced in its entirety below.

MITIGATION MONITORING PROGRAM

As the Lead Agency under the CEQA, the CSLC is required to adopt a program for reporting or monitoring regarding the implementation of mitigation measures for this project, if it is approved, to ensure that the adopted mitigation measures are implemented. This Lead Agency responsibility originates in Public Resources Code section 21081.6(a) (Findings), and the CEQA Guidelines sections 15091(d) (Findings) and 15097 (Mitigation Monitoring or Reporting).

MONITORING AUTHORITY

The purpose of a Mitigation Monitoring Program (MMP) is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. A MMP can be a working guide to facilitate not only the implementation of mitigation measures by the Project proponent, but also the monitoring, compliance and reporting activities of the CSLC and any monitors it may designate.

The CSLC may delegate duties and responsibilities for monitoring to other environmental monitors or consultants as deemed necessary, and some monitoring responsibilities may be assumed by responsible agencies, such as affected jurisdictions and cities, and the California Department of Fish and Game (CDFG). The number of construction monitors assigned to the project will depend on the number of concurrent construction activities and their locations. The CSLC or its

designee(s), however, will ensure that each person delegated any duties or responsibilities is qualified to monitor compliance.

Any mitigation measure study or plan that requires the approval of the CSLC must allow at least 60 days for adequate review time. When a mitigation measure requires that a mitigation program be developed during the design phase of the project, PG&E must submit the final program to CSLC for review and approval for at least 60 days before construction begins. Other agencies and jurisdictions may require additional review time. It is the responsibility of the environmental monitor assigned to each spread to ensure that appropriate agency reviews and approvals are obtained.

The CSLC or its designee will also ensure that any deviation from the procedures identified under the monitoring program is approved by the CSLC. Any deviation and its correction shall be reported immediately to the CSLC or its designee by the environmental monitor assigned to the construction spread.

ENFORCEMENT RESPONSIBILITY

The CSLC is responsible for enforcing the procedures adopted for monitoring through the environmental monitor assigned to each construction spread. Any assigned environmental monitor shall note problems with monitoring, notify appropriate agencies or individuals about any problems, and report the problems to the CSLC or its designee.

MITIGATION COMPLIANCE RESPONSIBILITY

PG&E is responsible for successfully implementing all the Applicant Proposed Measures (APMs) and the Mitigation Measures (MMs) in the MMP, and is responsible for assuring that these requirements are met by all of its construction contractors and field personnel. Standards for successful mitigation also are implicit in many mitigation measures that include such requirements as obtaining permits or avoiding a specific impact entirely. Other mitigation measures include detailed success criteria. Additional mitigation success thresholds will be established by applicable agencies with jurisdiction through the permit process and through the review and approval of specific plans for the implementation of mitigation measures.

GENERAL MONITORING PROCEDURES

Environmental Monitors. Many of the monitoring procedures will be conducted during the construction phase of the project. The CSLC and the environmental monitor(s) are responsible for integrating the mitigation monitoring procedures into

the construction process in coordination with PG&E. To oversee the monitoring procedures and to ensure success, the environmental monitor assigned to each construction spread must be on site during that portion of construction that has the potential to create a significant environmental impact or other impact for which mitigation is required. The environmental monitor is responsible for ensuring that all procedures specified in the monitoring program are followed.

Construction Personnel. A key feature contributing to the success of mitigation monitoring would be obtaining the full cooperation of construction personnel and supervisors. Many of the mitigation measures require action on the part of the construction supervisors or crews for successful implementation. To ensure success, the following actions, detailed in specific mitigation measures, will be taken:

- Procedures to be followed by construction companies hired to do the work will be written into contracts between PG&E and any construction contractors. Procedures to be followed by construction crews will be written into a separate document that all construction personnel will be asked to sign, denoting agreement.

- One or more preconstruction meetings would be held to inform all and train construction personnel about the requirements of the monitoring program.

- A written summary of mitigation monitoring procedures would be provided to construction supervisors for all mitigation measures requiring their attention.

GENERAL REPORT PROCEDURES AND PUBLIC ACCESS TO RECORDS

General Reporting Procedures. Site visits and specified monitoring procedures performed by other individuals will be reported to the environmental monitor assigned to the relevant construction spread. A monitoring record form will be submitted to the environmental monitor by the individual conducting the visit or procedure so that details of the visit can be recorded and progress tracked by the environmental monitor. A checklist will be developed and maintained by the environmental monitor to track all procedures required for each mitigation measure and to ensure that the timing specified for the procedures is adhered to. The environmental monitor will note any problems that may occur and take appropriate action to rectify the problems.

Public Access to Records. The public is allowed access to records and reports used to track the monitoring program. Monitoring records and reports will be made available for public inspection by the CSLC or its designee on request.

MITIGATION MONITORING TABLE

The following sections present the mitigation monitoring tables for each environmental discipline. Each table lists the following information, by column:

- Impact (impact number, title, and impact class);
- Mitigation Measure (includes APM and MM with summary text of the measure);
- Location (where the impact occurs and the mitigation measure should be applied);
- Monitoring/reporting action (the action to be taken by the monitor or Lead Agency);
- Effectiveness criteria (how the agency can know if the measure is effective);
- Responsible agency; and
- Timing (before, during, or after construction; during operation, etc.).

Abbreviations Used in the Mitigation Monitoring Program Tables

The following abbreviations are used in the Mitigation Monitoring Program tables:

Acronym	Definition
AES	Aesthetic/Visual Resources
AGR	Agricultural Resources
ALT-L	Alternative L
APM	Applicant Proposed Measures
AQ	Air Quality
BIO	Biological Resources
BMP	Best Management Practice
CDFG	California Department of Fish and Game
County CUPAs	Certified Unified Program Agency
CR	Cultural Resources
CFR	Code of Federal Regulations
CSLC	California State Lands Commission
FRAQMD	Feather River Air Quality Management District
GEO	Geology and Soils
GHG	greenhouse gases

HAZ	Hazards and Hazardous Materials
HDD	Horizontal Directional Drilling
HWQ	Hydrology and Water Quality
LU	Land Use and Planning
MM	Mitigation Measure
MMP	Mitigation Monitoring Program
NCIC / CHRIS	North Central Information Center / California Historical Resources Information System
NMFS	National Marine Fisheries Service
NOI	Noise
NO_x	Oxides of Nitrogen
PALEO	Cultural Resources Paleontology
PCAPCD	Placer County Air Pollution Control District
ROW	Right-of-Way
RWQCB	Regional Water Quality Control Board
SMAQMD	Sacramento Metropolitan Air Quality Management District
TMP	Traffic Management Plan
TRANS	Transportation and Traffic
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WAPA	Western Area Power Administration
YSAWMD	Yolo County Air Quality Management District

Table 7-3: Mitigation Monitoring Program - Aesthetic/Visual Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AES-1: Degrade the existing visual character or quality of the site and its surroundings	**AES-1:** Replanting of screening vegetation	Entire alignment	Compliance monitoring	Recreates the visual quality provided by the removed vegetation	CSLC	After construction
AES-2: Create new source of light or glare	**AES-2:** Light shielding and positioning away from residences	HDD, hydrostatic testing, and tie-in locations near residences	Verification of light shielding and positioning	Reduces light trespass onto nearby residences	CSLC	During construction

Table 7-4: Mitigation Monitoring Program - Agricultural Resources

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM AGR-1:** Advanced construction notification	Entire alignment	Verification of advanced notification	Advanced notice of construction activity provided to landowners and tenant farmers; establishment of mechanism for landowners and tenant farmers to contact PG&E	CSLC	Before and during construction

1 **Table ~~7-2~~ 7-5: Mitigation Monitoring Program - Air Quality**

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM AQ-1:** Compile comprehensive inventory list of heavy-duty off-road equipment	Entire alignment	Review construction equipment inventory	Exhaust emissions are minimized	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before construction
	APM AQ-2: Ensure that construction equipment exhaust emissions will not exceed visible emission limitations	Entire alignment	Equipment Inspection	Exhaust emissions are minimized	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before and during construction
	APM AQ-3: Prepare and implement a fugitive dust mitigation plan	Entire alignment	Review and verification of plan	Fugitive dust is minimized	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before construction
	APM AQ-4: Ensure that all construction equipment is properly tuned and maintained	Entire alignment	Verification of maintenance	Exhaust emissions are minimized	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	During construction
	APM AQ-5: Minimize equipment and vehicle idling time to five minutes	Entire alignment	Observation of idling time	Exhaust emissions are minimized	CSLC	During construction
	APM AQ-6: Prevent dust impacts off-site	Entire alignment	Observation of water truck operation	Fugitive dust is minimized	CSLC	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM AQ-7: Utilize existing power sources or clean fuel generators	Entire alignment	Verification of power sources	Emissions are minimized	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	During construction
	APM AQ-8: Develop traffic plan to minimize traffic flow interference	Entire alignment	Review and verification of plan	Exhaust emissions are minimized	CSLC County Agencies	Before and during construction
	APM AQ-9: Not allow open burning of removed vegetation	Entire alignment	Observation of vegetation removal	Reduces air pollution	CSLC	During construction
	APM AQ-10: Portable engines and portable engine-driven equipment units	Entire alignment	Verification of compliance	Ensures compliance with air quality standards	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before and during construction
	APM AQ-11: Limit operation on “spare the air” days within each County	Entire alignment	Observation of limited operation	Emissions are reduced on “Spare the Air” days	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AQ-1: Construction or operational emissions exceeding regional thresholds	**AQ-1a:** Fugitive PM_{10} control	Entire alignment	Observation of reduced speed on unpaved roads and application of soil stabilizers	Reduces fugitive dust emissions from Project construction	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	During construction
	AQ-1b: NO_x mitigation menu	Entire alignment	Verify implementation of NO_x reducing measures such as installation of diesel catalytic reduction or Lean NO_x Catalyst equipment or payment of mitigation fee	Reducing NO_x emissions	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before and during construction
	AQ-1c: PCAPCD mitigation	Placer County	Verify provision of required project equipment information and implementation of construction emission / dust control plan.	Exhaust emissions and fugitive dust are minimized	CSLC PCAPCD	Before and during construction
	AQ-1d: SMAQMD mitigation	Sacramento County	Verify provision of required project equipment information and reports	Exhaust emissions are minimized	CSLC SMAQMD	Before and during construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
AQ-2: Construction or operational emissions exceeding State or Federal standards	**AQ-1a:** Fugitive PM_{10} control	Entire alignment	Observation of reduced speed on unpaved roads and application of soil stabilizers	Reduces fugitive dust emissions from Project construction	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	During construction
	AQ-1b: NO_x mitigation menu	Entire alignment	Verify implementation of NO_x reducing measures	Reducing NO_x emissions	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before and during construction
	AQ-1c: PCAPCD mitigation	Placer County	Verify provision of required project equipment information and implementation of construction emission / dust control plan	Exhaust emissions and fugitive dust are minimized	CSLC PCAPCD	Before and during construction
	AQ-1d: SMAQMD mitigation	Sacramento County	Verify provision of required project equipment information and reports	Exhaust emissions are minimized	CSLC SMAQMD	Before and during construction
AQ-3: Increase in greenhouse gas emissions	**AQ-3:** GHG emission offset program	Entire alignment	Verification of carbon offsets program purchase	Offset of GHG emissions	CSLC FRAQMD YSAWMD PCAPCD SMAQMD	Before Construction

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1 **Table ~~7-3~~ 7-6: Mitigation Monitoring Program - Biological Resources**

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM BIO-1:** Worker training	Entire alignment	Verification of training attendance	Improves awareness and compliance with mitigation measures	CSLC	Before and during construction
	APM BIO-2: Educational brochure	Entire alignment	Verification of brochure distribution	Improves awareness and compliance with mitigation measures	CSLC	Before and during construction
	APM BIO-3: Exclusion zone fencing	Entire alignment	Verification of exclusion zone fencing	Avoids inadvertent intrusion into sensitive resources	CSLC CDFG USFWS USACE RWQCB	During construction
	APM BIO-4: Vegetation removal	Entire alignment	Compliance monitoring	Ensures vegetation is only removed within the approved work area	CSLC	During construction
	APM BIO-5: Work area	Entire alignment	Verification of work area	Protects sensitive areas from heavy equipment, vehicles, and construction work	CSLC	During construction
	APM BIO-6: Construction monitoring	Entire alignment	Verification of monitoring and pre-activity surveys	Avoids disturbance of special-status species and habitats	CSLC CDFG USFWS USACE	Before and during construction
	APM BIO-7: Erosion and dust control	Entire alignment	Verify application of control BMPs	Minimizes potential for impacts to sensitive resources	CSLC USACE RWQCB	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM BIO-8: Workday schedule	Entire alignment	Verification of schedule	Minimizes disturbance from construction	CSLC	During construction
	APM BIO-9: Vehicle inspection	Entire alignment	Verify that vehicles and equipment are inspected for wildlife	Avoids injury or death of wildlife	CSLC	During construction
	APM BIO-10: Speed limit	Entire alignment	Verify enforcement of speed limits	Protects sensitive habitat	CSLC	During construction
	APM BIO-11: Trench ramping	Entire alignment	Verification of trench ramping	Avoids injury or death of wildlife	CSLC CDFG USFWS	During construction
	APM BIO-12: Sensitive habitat monitoring and procedures if listed species are found	Entire alignment	Observation of sensitive habitat monitoring	Avoids unnecessary disturbance to sensitive species or habitat	CSLC CDFG USFWS	During construction
	APM BIO-13: Spill prevention/containment and refueling precautions	Entire alignment	Verify that precautions are implemented	Minimizes potential for spills that may impact sensitive species	CSLC CDFG USFWS USACE	Before and during construction
	APM BIO-14: Trash cleanup	Entire alignment	Observation of trash cleanup	Avoids unnecessary disturbance to sensitive species or habitat	CSLC	During and after construction
	APM BIO-15: Prohibitions for pets, fire, firearms	Entire alignment	Observation of prohibition	Avoids unnecessary disturbance to sensitive species or habitat	CSLC	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM BIO-16: ROW restoration	Entire alignment	Verification of restoration	Restores work areas to pre-existing contours and conditions	CSLC CDFG USACE USFWS	After construction
	APM BIO-17: ROW restoration plan	Entire alignment	Review and verification of plan; observation of restoration measures	Ensures post-construction revegetation, success criteria, and monitoring periods in natural areas	CSLC	After construction
	APM BIO-18: Seed mix and success criteria	Entire alignment	Verify seed mix and success criteria	Restores wetlands and stream crossings	CSLC	After construction
	APM BIO-19: Erosion control	Entire alignment	Observation of erosion control measures	Ensures that revegetation is successful	CSLC CDFG USACE RWQCB	After construction
	APM BIO-20: Water crossings in special-status species habitats	Entire alignment	Verification of water crossing schedule	Protects habitat for special-status aquatic species	CSLC USACE NMFS USFWS	During construction
	APM BIO-21: Wetland and waterway avoidance during final design	Entire alignment	Verification of avoidance measures	Avoids impacts to sensitive wetland habitats and waterways	CSLC USACE NMFS USFWS	Before construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM BIO-22: Wetland restoration and monitoring plan	Entire alignment	Review and verification of plan; observation of restoration and mitigation measures	Minimizes impacts to sensitive wetland habitats and waterways	CSLC CDFG USACE NMFS USFWS	Before construction
	APM BIO-23: HDD fluid release contingency plan	HDD locations	Review and verification of plan; observation of procedures	Minimizes personal injury, death, or property damage from accidental spills during construction	CSLC USACE RWQCB	Before construction
	APM BIO-24: Vernal pool invertebrate mitigation	Entire alignment	Verification of mitigation measures, compliance monitoring	Minimizes effects to vernal pool invertebrate species	CSLC USFWS	During construction
	APM BIO-25: Giant garter snake habitat buffer	Entire alignment	Verification of buffer	Avoids injury or death of giant garter snake	CSLC CDFG USFWS	During construction
	APM BIO-26: Construction window in giant garter snake habitat	Entire alignment	Verification of construction window	Avoids injury or death of giant garter snake	CSLC CDFG USFWS	Before and during construction
	APM BIO-27: Giant garter snake monitoring	Entire alignment	Verification of monitoring	Avoids injury or death of giant garter snake	CSLC CDFG USFWS	During construction
	APM BIO-28: Dewatering giant garter snake habitat	Entire alignment	Observation of dewatering	Avoids injury or death of giant garter snake	CSLC CDFG USFWS	Before and during construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM BIO-29: Bird nest surveys and monitoring	Entire alignment	Verification of surveys and observation of monitoring	Avoids disturbance of nesting birds and raptors	CSLC CDFG	Before and during construction
	APM BIO-30: Nesting birds	Entire alignment	Verification of buffer zone and avoidance	Avoids disturbance of nesting birds and raptors	CSLC CDFG	During construction
	APM BIO-31: Burrowing owl surveys	Entire alignment	Verification of pre-construction surveys	Avoids disturbance of burrowing owls	CSLC CDFG	Before and during construction
	APM BIO-32: Burrow avoidance	Entire alignment	Verification of buffer zone and avoidance	Avoids disturbance of burrowing owls	CSLC CDFG	Before and during construction
	APM BIO-33: Burrow relocation	Entire alignment	Observation of burrow relocation	Minimizes disturbance of burrowing owls	CSLC CDFG	Before and during construction
	APM BIO-34: Burrowing owl monitoring plan	Entire alignment	Review and verification of plan	Protection of burrowing owls from Project disturbance	CSLC CDFG	Before and during construction
	APM BIO-35: Species-specific and habitat-specific compensation	Entire alignment	Verification of compensatory mitigation	Minimizes disturbance to vernal pools, wetlands, giant garter snake, and other special-status species	CSLC CDFG USFWS USACE	Before and during construction
BIO-1: Wetlands	**BIO-1a:** Wetland avoidance and restoration	Entire alignment	Verification of avoidance and observation of mitigation	Ensures that impacts to wetlands are minimized to the greatest extent feasible	CSLC CDFG USACE RWQCB	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	BIO-1b: Trench backfill and topographic restoration	Entire alignment	Verification of mitigation implementation	Ensures that permanent hydrologic alternation to wetlands is minimized	CSLC CDFG USACE RWQCB	Before, during and after construction
	BIO-1c: Riparian avoidance and restoration	Entire alignment	Verification of riparian avoidance and restoration	Ensures impact to riparian habitat is avoided, minimized or restored	CSLC CDFG USACE	Before, during and after construction
BIO-2: Reduce or alter vegetation	**BIO-2a:** Tree avoidance and replacement	Entire alignment	Review of tree replacement plan, verification of avoidance and replacement	Ensures identification, protection, and replacement of native trees within the Project site	CSLC CDFG Yolo County	Before, during and after construction
	BIO-2b: Avoidance of valley oak woodland	State Route 113 vicinity	Verification and observation of trenchless excavation	Ensures that existing mature valley oak woodland is not impacted by the Project	CSLC CDFG	Before construction
BIO-3: Invasive species or soil pests	**BIO-3:** Prepare and implement an invasive species control program	Entire alignment	Verify implementation of program measures	Minimizes the introduction of new invasive weed species, soil pathogens, or aquatic invertebrates	CSLC CDFA, Control and Eradication Division	Before and during construction
BIO-4: Habitat removal or loss of special status species	**BIO-4a:** Protect special status wildlife	Entire alignment	Verification of avoidance and observation of mitigation	Ensures that habitat removal or loss of special status species is minimized to the greatest extent feasible	CSLC USFWS CDFG	Before and during construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	BIO-4b: Mitigation for potential impacts to Natomas Basin Conservancy mitigation lands	Natomas Basin Conservancy mitigation lands	Verification of mitigation measures	Reduces impacts to Natomas Basin Conservancy mitigation lands	CSLC CDFG	Before and during construction
	BIO-4c: Mitigation for potential impacts to Sacramento River Ranch Conservation Bank mitigation lands	Sacramento River Ranch Conservation Bank mitigation lands	Verification of mitigation measures	Reduces impacts to Sacramento River Ranch Conservation Bank mitigation lands	CSLC CDFG	Before and during construction
	BIO-4d: Protect special-status bird species	Entire alignment	Verification of construction timing, buffer implementation and/or mitigation consultation	Reduces potential impacts to special-status bird species	CSLC USFWS CDFG	Before and during construction

1 **Table ~~7-4~~ 7-7: Mitigation Monitoring Program - Cultural Resources**

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM CR-1:** Evaluate unavoidable unevaluated resources	Entire alignment	Verify evaluation of unavoidable unevaluated resources	Identifies and protects unevaluated resources in the Project site	CSLC NCIC/ CHRIS	During construction
	APM CR-2: Protect significant/eligible resources	Entire alignment	Compliance monitoring	Protects significant/eligible resources	CSLC NCIC/ CHRIS	During construction
	APM CR-3: ~~Test areas sensitive for buried archaeological remains at reported location of Eagle Hotel~~ Study or observe areas sensitive for buried archaeological remains at reported location of Eagle Hotel	Eagle Hotel	~~Observation of testing at Eagle Hotel~~ Completion of a geo-archeological study or observation of ground disturbing activities at Eagle Hotel	Reduces potential for damage to unknown buried archaeological remains	CSLC NCIC/ CHRIS	During construction
	APM CR-4: Consult with the local Native American community	Entire alignment	Verify consultation	Ensures appropriate treatment of archaeological materials or human remains	CSLC	Before and during construction
	APM CR-5: Provide environmental training	Entire alignment	Verification of training attendance	Improves awareness and compliance with procedures	CSLC	Before construction
	APM PALEO-1: Paleontologist will provide input for environmental training	Entire alignment	Verification of involvement in training	Improves awareness of paleontologic resource issues	CSLC	Before construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM PALEO-2: Provide environmental training	Entire alignment	Verification of training attendance	Improves awareness of compliance measures pertaining to paleontological resources	CSLC	Before construction
	APM PALEO-3: Monitoring by a qualified paleontologist for areas with high sensitivity	Entire alignment	Observation of monitoring	Reduces potential for damage to unknown buried paleontological resources	CSLC	During construction
	APM PALEO-4: Monitoring by a qualified paleontologist for area east of Yolo	Line 407 West Project area east of Yolo	Observation of monitoring	Reduces potential for damage to unknown buried paleontological resources	CSLC	During construction
	APM PALEO-5: Stop work within 25 feet of any paleontological resources discovered during Project activities if qualified monitor is not present	Entire alignment	Observe construction activities	Reduces potential for damage to unknown buried paleontological resources	CSLC	During construction
PALEO-1: Fossils	**PALEO-1:** Proper curation of fossil collection	Entire alignment	Verification or proper curation	Enhances subsequent evaluation and curation by the chosen repository	CSLC	During and after construction
PALEO-2: Scientific or educational value	**PALEO-2:** Delivery of fossil collection <u>to appropriate location</u>	Entire alignment	Verification of delivery	Ensures that the fossil collection would be permanently incorporated into the larger collection of an appropriate curatorial facility	CSLC	During and after construction

Table ~~7-5~~ 7-8: Mitigation Monitoring Program - Geology and Soils

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
GEO-1: Known earthquake faults /ground motion	**GEO-1:** Site specific seismic Analysis	Entire alignment	Review of site specific field investigation and verification of implementation	Minimizes hazards due possible seismic displacement along fault crossings	CSLC	Before and during construction

Table ~~7-6~~ 7-9: Mitigation Monitoring Program - Hazards and Hazardous Materials

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM HAZ-1:** Environmental training program	Entire alignment	Verification of training attendance	Improves awareness and compliance with mitigation measures	CSLC	Before and during construction
	APM HAZ-2: Hazardous substance control and emergency response plan	Entire alignment	Review and verify plan and observe construction activities for compliance	Minimizes personal injury, death, or property damage from accidental spills during construction	CSLC County CUPAs	Before and during construction
	APM HAZ-3: Use oil-absorbent material, tarps, and storage drums to contain and control any minor releases	Entire alignment	Verify supplies and equipment	Minimizes personal injury, death, or property damage from accidental spills during construction	CSLC	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM HAZ-4: Conduct soil sampling and potholing along the Project route	Entire alignment	Observe sampling and potholing for compliance	Minimizes potential for release of pre-existing contamination	CSLC County CUPAs	Before construction
	APM HAZ-5: Laboratory analysis of any suspected contaminated groundwater sampling	Entire alignment	Observe sampling for compliance	Minimizes potential for release of pre-existing contamination	CSLC County CUPAs	During construction
	APM HAZ-6: Prepare construction fire risk management plan	Entire alignment	Observe construction activities for compliance	Minimizes personal injury, death, or property damage from fire during construction	CSLC	During construction
	APM HAZ-7: Properties with a history of agricultural use	Entire alignment	Observe construction activities for compliance	Minimizes potential for release of pre-existing contamination	CSLC	During construction
	APM HAZ-8: Operation Fire Risk Management Plan	Entire alignment	Observe operation activities for compliance	Minimizes personal injury, death, or property damage from fire during operation	CSLC	During operation
HAZ-1: Emergency plans/wildland fires	**HAZ-1:** Minimize risk of fire	Entire alignment	Observe construction and operation activities for compliance	Minimize damage from fire	CSLC County Agencies	During construction and operation

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
HAZ-2: System safety and risk of serious injuries and fatalities due to project upset	**HAZ-2a:** Corrosion and third party damage mitigation	Entire alignment	Observe construction and operation activities for compliance	Minimize leaks or ruptures caused by corrosion and third party damage	CSLC	Before, during and after construction
	HAZ-2b: Installation of automatic shutdown valves	All project stations	Confirm installation of automatic shutdown valves	Ensures enhanced public safety through ability to shutdown pipeline during emergencies	CSLC	During construction and operation

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2 **Table ~~7-7~~ 7-10: Mitigation Monitoring Program - Hydrology and Water Quality**

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM HWQ-1:** Implement BMPs from the Water Quality Construction Best Management Practices Manual	Entire alignment	Verification of BMPs	Prevents Project-related erosion and sedimentation	CSLC RWQCB	During construction
	APM HWQ-2: Implement a hazardous substances control and emergency response plan	Entire alignment	Review and verification of plan	Minimizes personal injury, death, or property damage from hazardous material spills	CSLC RWQCB	During construction
	APM HWQ-3: Perform open-cut crossings of water bodies using a	Entire alignment	Observe operation activities for	Minimizes effects of construction activities on the waterbody	CSLC RWQCB	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	dry-crossing method		compliance			
	APM HWQ-4: Cross larger and/or more sensitive waterways with HDD or bores	HDD locations	Verify HDD locations	Minimizes effects to sensitive waterways	CSLC RWQCB	During construction
	APM HWQ-5: Prepare an HDD fluid release contingency plan	HDD locations	Review and verification of plan	Minimize effects to waterways in the event of a frac-out	CSLC RWQCB	During construction
HWQ-1: Federal or state water quality standards	**HWQ-1:** Response to unanticipated release of drilling fluids	Entire alignment	Adherence to drilling fluid release plan	Prevents and responds to unintended frac-outs	CSLC USACE CDFG County Agencies	During construction
HWQ-2: Groundwater for private or municipal purposes	**HWQ-2:** Verify well and irrigation system locations	Entire alignment	Verify well location and testing; verify irrigation system locations and need for temporary or permanent reconfiguration	Monitors potential effects to groundwater wells and irrigation systems	CSLC	Before and during construction
HWQ-3: 100-year floodplain	**HWQ-3:** Flood-proof pump houses within 100-year flood plain	Entire alignment	Verify above ground structures are flood-proof	Reduce the risk of catastrophic damage due to 100-year flood	CSLC County Agencies	During construction and operation

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Table ~~7-8~~ 7-11: Mitigation Monitoring Program - Land Use and Planning

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
LU-1: Conflict with adjacent land uses	**LU-1a:** Mitigation for impacts to the Natomas Basin Conservancy mitigation lands	Entire alignment	Verify that MM BIO-4b has been implemented	Reduces any impacts to mitigation lands	CSLC	During and after construction
	LU-1b: Mitigation for impacts to the Sacramento River Ranch Conservation Bank mitigation lands	Entire alignment	Verify that MM BIO-4c has been implemented	Reduces any impacts to mitigation lands	CSLC	During and after construction
	LU-1c: WAPA license agreement	Entire alignment	Verify submittal of Project plans	Reduces any impacts to WAPA power line operations	CSLC	Before construction
	LU-1d: Potential Conflicts with Other Utilities	Entire alignment	Verify coordination with local agencies and utility separation requirements are met	Reduces any impacts to other utilities and reduces third-party incidents to pipeline when other utilities are installed	CSLC County Agencies Roseville	Before construction
LU-2: Result in safety risk to nearby land uses	**LU-2a:** Implement MM HAZ-2a, corrosion mitigation	Entire alignment	Verify that MM HAZ-2a has been implemented	Reduces incidences of leaks caused by corrosion	CSLC	During and after construction
	LU-2b: Implement HAZ-2b, installation of automatic shut-down valves	Entire alignment	Verify that MM HAZ-2b has been implemented	Ensures enhanced public safety through ability to shutdown pipeline during emergencies	CSLC	During construction and operation

Table ~~7-9~~ 7-12: Mitigation Monitoring Program - Noise

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM NOI-1:** Limit construction hours and apply noise control best management practices	Alignment in the vicinity of residences	Verify construction schedule; verify best management practices	Avoids nighttime noise where feasible; reduces noise from construction	CSLC	During construction
	APM NOI-2: Coordinate drilling activities	HDD and tie-in areas	Verify coordination with residences	Provides advanced notice of nighttime noise	CSLC	During construction
NOI-1: Project construction	**NOI-1a:** Limited construction hours	Entire alignment	Verify construction schedule	Avoids nighttime noise where feasible	CSLC	During construction
	NOI-1b: Best management practices	Entire alignment	Verify best management practices	Provides maximum practical noise reduction	CSLC	During construction
	NOI-1c: Noise reduction plan	Entire alignment	Verify acoustical analysis and implementation	Minimizes nighttime construction noise	CSLC	During construction
NOI-2 Groundborne vibration or noise	**NOI-2a:** Distance from residences	Entire alignment	Verify distance	Reduces severity of groundborne vibration and noise near residences	CSLC	During construction
	NOI-2b: Heavy-loaded trucks	Entire alignment	Verify routes	Reduces severity of groundborne vibration and noise near residences	CSLC	During construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	NOI-2c: Earth moving equipment / distance from vibration-sensitive sites	Entire alignment	Verify distance	Reduces severity of groundborne vibration near sensitive sites	CSLC	During construction
	NOI-2d: Nighttime construction	Entire alignment	Verify construction schedule	Avoids nighttime groundborne vibration or where feasible	CSLC	During construction

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2 **Table ~~7-10~~ 7-13: Mitigation Monitoring Program - Transportation and Traffic**

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM TRANS-1:** Travel lane capacity and traffic control	Entire alignment	Verify capacity and traffic control	Reduces effect of Project on local traffic	CSLC County Agencies	During construction
	APM TRANS-2: Work zone	Entire alignment	Verify work zone	Reduces effect of Project on local traffic	CSLC County Agencies	During construction
	APM TRANS-3: Permits and transportation management plan (TMP)	Entire alignment.	Review and verification of plan; verification of permits	Reduces effect of Project on local traffic	CSLC County Agencies	Before construction

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
	APM TRANS-4: Coordinate construction activities with local law enforcement and fire protection agencies	Entire alignment	Verify coordination and notification	Increases awareness of emergency service providers	CSLC County Agencies	Before and during construction
	APM TRANS-5: Consult with the Center Joint Unified School District and Yuba-Sutter Transit	Entire alignment	Verify consultation	Reduces effect of Project on school and local bus transit	CSLC	Before construction
	APM TRANS-6: Notification of access restrictions	Entire alignment	Verify notice to residents	Reduces inconvenience to local residents	CSLC	Before construction
	APM TRANS-7: Notification of temporary parking	Entire alignment	Verify notice to residents	Reduces inconvenience to local residents	CSLC	During construction
	APM TRANS-8: Temporary pedestrian access	Entire alignment	Verify detours and safe areas	Reduces inconvenience to pedestrians	CSLC County Agencies	During construction

Table 7-14: Additional Mitigation Monitoring Program - Alternative L

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
Applicant Proposed Measures	**APM ALT-L:** Center Unified School District risk analysis	Alternative Option L alignment	Verify completion of risk analysis	Risk is reduce to proposed school sites	CSLC	Before construction

Table 7-15: Additional Mitigation Monitoring Program - Alternatives Options A, B, D, E, H

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
CR-1: Impact to unknown cultural resources	**MM CR-1:** Alternative option pre-construction cultural resource surveys	Alternative Options A, B, D, E, H	Verify completion of surveys	Avoids impacts to cultural resources near Options A, B, D, E, H	CLSC	Before construction

Table 7-16: Additional Mitigation Monitoring Program - Alternative Options A, B, D, E, H, I, J

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
BIO-5: Construction impacts on special-status plant species	**MM BIO-5**. Rare plant avoidance	Alternative Options A, B, D, E, H, I, J	Verify completion of surveys, flagging and fencing of rare plants	Avoids impacts on rare plants near Options A, B, D, E, H, I, J.	CSLC	Before construction

Table 7-17: Additional Mitigation Monitoring Program - Alternative Options A, B

Impact	Mitigation Measure	Location	Monitoring / Reporting Action	Effectiveness Criteria	Responsible Agency	Timing
TRANS-1: Project related traffic restricts travel lanes	**MM TRANS-1**. Mitigation for potential impacts to Durst Organic Growers	Alternative Options A, B	Verify coordination of construction activities with Durst Organic Growers	Reduced impacts to travel lanes near Durst Organic Growers	CSLC	Before construction

APPENDIX H-3 SYSTEM SAFETY AND RISK OF UPSET REPORT

The revised System Safety and Risk of Upset Report has been reproduced in its entirety, with changes shown as underline for new text, and ~~strike-out~~ for deleted text, and is included in Appendix H-3 of this Revised Final EIR.

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