



Linda S. Adams  
Secretary for  
Environmental Protection



## Department of Toxic Substances Control

Maureen F. Gorsen, Director  
5796 Corporate Avenue  
Cypress, California 90630



Arnold Schwarzenegger  
Governor

Sent Via Email

March 20, 2007

The Honorable Nora McDowell, Chairperson  
Fort Mojave Indian Tribe  
500 Merriman Avenue  
Needles, California 92363

**RESPONSE TO FORT MOJAVE INDIAN TRIBE COMMENTS ON UPLAND PROJECT ASSOCIATED WITH THE PACIFIC GAS AND ELECTRIC COMPANY (PG&E), TOPOCK COMPRESSOR STATION, NEEDLES, CALIFORNIA (EPA ID NO. CAT080011729)**

Dear Chairperson McDowell,

The Department of Toxic Substances Control (DTSC) received the March 8, 2007 comment letter from your legal counsel on the subject Initial Study and Proposed Negative Declaration, which were public noticed on February 7, 2007. In addition, DTSC received comments from Hargis + Associates, Inc. and your legal counsel with respect to the Upland Project workplans. The comment sets include:

- *“Fort Mojave Indian Tribe Comments to DTSC’s Initial Study and Proposed Negative Declaration re: Analysis of Potential Impacts to a Proposed In-Situ Hexavalent Chromium Reduction Pilot Test, Proposed Aquifer Testing and Maintenance at Three Groundwater Wells, and the Decommissioning of a Fourth Well Near the PG&E Topock Compressor Station.”* Luce, Forward, Hamilton and Scripps LLP, March 8, 2007.
- *“Fort Mojave Indian Tribe’s Comments on Hydraulic Workplan.”* Luce, Forward, Hamilton and Scripps LLP, December 22, 2006.
- *“Fort Mojave Indian Tribe remaining concerns on the document titled, PG&E Topock Compressor Station, Needles, California, In Situ Hexavalent Chromium Reduction Pilot Test Work Plan Upland Plume Treatment.”* Hargis + Associates, Inc., December 15, 2006.

Honorable Chairperson McDowell  
March 20, 2007  
Page 2 of 5

Enclosed are DTSC responses to the Fort Mojave Indian Tribe comments referenced above. In addition, DTSC also revisited specific comments received during the project proposal stages of the Upland In-situ Pilot Study to ensure that all concerns raised by the Fort Mojave Indian Tribe are properly addressed. Although DTSC is providing written responses to these comments, DTSC notes that many of the concerns were discussed at several project communication and coordination meetings between DTSC and Fort Mojave Indian Tribes during April 18, 2006; September 14, 2006; December 4, 2006 and a conference call with Hargis + Associates, Inc. on December 8, 2006. These comments are contained in:

- *“Fort Mojave Indian Tribe Comments on PG&E Topock Compressor Station, Needles, California, In Situ Hexavalent Chromium Reduction Pilot Test Workplan, Upland Plume Treatment, by Arcadis, dated September 29, 2006.”* Luce, Forward, Hamilton and Scripps LLP, November 8, 2006.
- *“Fort Mojave Tribe Technical Comments on February 28, 2006, technical memorandum titled Well PGE-6 Decommissioning Evaluation, PG&E Topock Compressor Station and Well PGE-6 Decommissioning Work Plan, PG&E Topock Compressor Station, Needles, California.”* Hargis + Associates, Inc., March 31, 2006.

DTSC hopes that you will find our responses to your comments from Hargis+Associates and your legal counsel to be thoughtful, complete and valuable in your understanding of the proposed activities. If you have any questions regarding this letter, please feel free to contact Mr. Aaron Yue at (714) 484-5439.

Sincerely,



Karen Baker, Chief, CHG, CEG  
Geology, Permitting and Corrective Action Branch

aky:030701B

Enclosure

cc: Dr. Leo S. Leonhart  
Principal Hydrogeologist  
Hargis + Associates, Inc.  
1820 E. River Road, Suite 220  
Tucson, Arizona 85718-5991

Honorable Chairperson McDowell  
March 20, 2007  
Page 3 of 5

Ms. Linda D. Otero  
P.O. Box 5990  
Mohave Valley, Arizona 86440

Ms. Mary Adelzadeh  
Native American Coordinator  
U.S. Department of the Interior  
Bureau of Land Management  
2610 Sweetwater Avenue  
Lake Havasu City, Arizona 86406

Mr. Aaron Yue  
Senior Hazardous Substances Engineer  
Geology, Permitting and Corrective Action Branch  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630

Mr. Steven P. McDonald  
Luce, Forward, Hamilton & Scripps LLP  
600 West Broadway, Suite 2600  
San Diego, California 92101

Mr. Tom Vandenberg, Esq  
State Water Resources Control Board  
Office of Chief Counsel  
1001 "I" Street  
Sacramento, California 95814

Mr. Robert Perdue, CHG  
Executive Officer  
Colorado River Region,  
California Regional Water Quality Control Board  
73-720 Fred Waring Drive, Suite 100  
Palm Desert, California 92260

Honorable Chairperson McDowell  
March 20, 2007  
Page 4 of 5

Mr. Christopher Guerre, CHG  
Geology, Permitting and Corrective Action Branch  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630

Mr. Watson Gin  
Deputy Director  
Hazardous Waste Management Program  
Department of Toxic Substances Control  
P.O. Box 806  
Sacramento, California 95812

Ms. Nancy Long  
Senior Staff Counsel  
Department of Toxic Substances Control  
P.O. Box 806  
Sacramento, California 95812

Ms. Barbara Coler  
Division Chief  
Permitting and Corrective Action Division  
Department of Toxic Substances Control  
700 Heinz Avenue, Suite 200  
Berkeley, California 94710-2721

Mr. Robert Doss, P.E.  
Principal Engineer  
Site Remediation Environmental Affairs  
Pacific Gas and Electric Company  
Mail Code B24A  
P.O. Box 7640  
San Francisco, California 94120

Ms. Yvonne J. Meeks  
Portfolio Manager  
Site Remediation  
4325 South Higuera  
San Luis Obispo, California 93401

Honorable Chairperson McDowell  
March 20, 2007  
Page 5 of 5

Mr. Timothy Z. Smith, Field Manager  
Lake Havasu Field Office  
Bureau of Land Management  
2610 Sweetwater Avenue  
Lake Havasu City, Arizona 86406-9071

CWG Members via email

## **Response to Fort Mojave Indian Tribe Comments on Upland Project**

DTSC has compiled the Fort Mojave Indian Tribe comments and responded to them by topic and comment date. We have reprinted each of the comments, and associated questions, below in italics. Our response is provided immediately following the comment. In addition, we have numbered each of the specific comments for ease of reference.

### **Comments on CEQA Initial Study and Draft Negative Declaration, sent by Luce, Forward, Hamilton and Scripps LLP, March 8, 2007**

1. *“The installation of multiple wells in one borehole (nested wells) is a factor that minimizes impacts to the sacred area. Conversely, if it is not technically feasible to nest wells, the project will pose greater adverse and cumulative impacts to this sensitive area. (IS, pg. 2)”*

As noted in comment letter, the DTSC Initial Study dated 1/30/07 indicates that “each set of monitoring wells will consist of three separate well completions depths in one or two borings (if feasible).” The associated impacts related to this configuration are addressed throughout the Initial Study, including impacts to Cultural Resources in Section 5 of the Initial Study.

2. *“The project components and mitigation measures are frequently described with the word ‘may include’ XYZ. While we appreciate certain potential uncertainties regarding technical aspects of the project, permissive statements ultimately make the project description and mitigation package less clear than it could or should be. (IS, pgs. 3, 4, Biological Resources Section, 20, etc.)”*

The conditions of approval applicable to the proposed activities have been documented in an approval letter dated March 14, 2007 from the landowner at the project site: the United States Fish and Wildlife Service (USFWS), Havasu National Wildlife Refuge (HNWR). The approval letter is attached for your information. The proposed activities will be implemented in accordance with all conditions established by the HNWR, as anticipated in the Initial Study. In addition, the project has been independently reviewed pursuant to Section 7 of the federal Endangered Species Act (ESA). The resulting determination by the USFWS is that no effect to sensitive biological species would result from the proposed activities.

3. (a) *“Aesthetics: The sacred nature of the area and the Mojave and other tribes’ views that this area is a cultural landscape/traditional cultural property for which views, and feeling and association are important components and provide context, including that pursuant to criteria within the National Historic Preservation Act, are not referenced here, but should be.”*

We understand and respect the Fort Mojave Indian Tribe's views regarding the sacredness of the land in the area, including the land that will be affected by the in-

situ pilot test. We know that other tribes also greatly value the Colorado River and lands associated with it, although we understand that other tribes may have their own views regarding the meaning and significance of this area.

As you know, the U.S. Department of the Interior has the primary jurisdiction to address cultural resources under the National Historic Preservation Act. The Bureau of Land Management (BLM) oversaw the preparation of a cultural resources review associated with this project and, as confirmed with us in a communication by the California State Historic Preservation Office (SHPO), we understand that this review was undertaken in consultation with the Fort Mojave and other tribes. As recommended by the California Native American Heritage Commission (NAHC) and the SHPO guidelines, baseline data was examined and no cultural landscapes/traditional cultural properties, archaeological or historical sites were noted in the immediate area of this proposed project. As explained in the documentation associated with the cultural resources review, the BLM evaluation covered potential cultural resources directly affected by the proposed activity, as well as the Topock Maze, a property listed on the National Register of Historic Places. Following the consultation, BLM determined that the proposed work would have an effect, but that the effect would not be adverse. The SHPO concurred in that determination and recognized for the purposes of this specific undertaking that the "cultural landscape" which the Tribe also believes should be taken into account.

The Initial Study analysis of aesthetics is focused on project-related physical changes that could result in impacts to the visual environment at the project site and surrounding areas. Potential impacts to related cultural resources are further addressed in Section 5 (Cultural Resources) of the Initial Study.

*(b) "We disagree with the 'proportionality' approach to impacts employed here in which the scale of the project's impacts were determined relative to existing larger activities such as the Compressor Station, etc. A proposal's impacts must be viewed for what they are - not for how they are compared to something else, particularly something developed prior to the enactment of CEQA."*

The methodology employed in analyzing the potential impacts of the proposed activities involves, as a first step, an assessment and description of the existing physical environment. Based on the anticipated physical changes to existing conditions that could result from implementation of the proposed activities, and in consideration of the thresholds provided in Appendix G of the CEQA Guidelines, a determination is then made regarding potential environmental impacts. This approach is in accordance with CEQA, the implementing CEQA Guidelines, and standard CEQA practice. The results of this approach are reflected throughout the Initial Study analysis.

*(c) "Finally, we would like to confirm that the project will not be lighted at night and that no night work will occur (see also IS, pg. 13)."*

DTSC has confirmed with PG&E that the project will not be lighted at night and no night work is anticipated except under emergency circumstances, such as spill response. DTSC will make this a condition of the project approval. Furthermore, if light use is needed due to an emergency response, DTSC will instruct PG&E to provide notice to the Fort Mojave Indian Tribe.

4. *"Biology: Instead of on an 'as needed' basis, all work area boundaries should/will be delineated with flagging or other marking to minimize surface disturbances. Based on prior experiences with projects within this open area, it is important to not assume that all project workers understand the project area and the sensitive nature of the area."*

As in approvals for previous construction activities at the Topock site, the approval from the HNWR includes a condition regarding flagging or other marking of the work area to minimize surface disturbance associated with vehicle straying. This and other stipulations provided in the HNWR approval letter will be applied during implementation of the proposed activities, as anticipated in the Initial Study analysis. As with all field activities at the site, associated personnel are required to receive prior sensitivity training that addresses both cultural and biological resources.

5. (a) *"Cultural Resources: This section poorly describes the resources at issue. It should begin with describing the area as a tribal cultural landscape, traditional cultural property and sacred place. The paragraph at IS, page 16 makes an attempt to convey this aspect. However, significance needs to be stated upfront, in the present tense and refer to ongoing spiritual use of the area. Moreover, the TCP is not recorded as CA-SBr-219, that is a designation by historians for a partial archaeological site. Finally and importantly, there is no impact analysis regarding the impacts to the traditional cultural property or cumulative impacts to it, a key issue for the Mojave in the appropriate management of this area."*

*"The actual physical archaeology should then be described second. This order and separation might help to avoid some of the incorrect statements such as "For the most part, . . . prehistoric cultural resources are located north of Interstate 40." (IS, pg. 15) The Mojave's sacred area extends on both sides of I-40, whereas remaining, recordable physical archaeology may be largely north of I-40: These are separate aspects."*

As indicated above, we understand and respect the Fort Mojave Indian Tribe's views regarding the sacredness of the land in the area, including the land that will be affected by the in situ pilot test. The BLM-led evaluation covered potential cultural resources directly affected by the proposed activity, as well as the Topock Maze, a property listed on the National Register of Historic Places. As recommended by the NAHC and the SHPO guidelines, baseline data were examined and no cultural landscapes/traditional cultural properties,

archaeological or historical sites were noted in the immediate impact area of this proposed project. DTSC believes that the Initial Study accurately reflects the available information. We do recognize that the Fort Mojave Indian Tribe is considering submitting documentation in support of designating the entire area as a cultural landscape and traditional cultural property. As noted above, SHPO took into account the Tribe's views regarding the "cultural landscape" when it evaluated the proposed project.

*(b) "Regarding discovery of cultural resources, an addition should be made that the Ft. Mojave will be consulted including during resource evaluation to ensure that potential impacts are appropriately managed. (IS-16)"*

As with all work associated with the PG&E remediation project, DTSC is committed to consulting with all interested tribes during cultural resource evaluation to ensure that potential impacts are appropriately managed.

*(c) "The authority is not clear for statements regarding the applicability of the CRMP to this project and "all current and proposed project activities" (IS, pg. 16). In fact, the CRMP, which is undergoing revisions by the BLM and tribes, only applies to the IM3 project. The ND/IS and management and mitigation obligations should be listed separate from the CRMP and clearly outlined in the ND/IS itself."*

DTSC understands that the Cultural Resources Management Plan (CRMP) applies only to the IM3 project. However, the CRMP calls for the protection of resources within the expanded area of potential effects (APE). For this reason, DTSC believes that the conditions specified in the CRMP as it exists are appropriate to the proposed project.

*(d) All relevant aspects of the settlement agreements in Fort Mojave Indian Tribe v. Department of Toxic Substances Control, et al., Sacramento County Superior Court Case No. 05CS00437, should be folded into all environmental documents and workplans for any projects in this area. For example, unlike for biological resources, there are no specific conditions of project approval for cultural sensitivity training. However, the settlements do require it. Yet, the cultural sensitivity training required of management, employees and contractors is not referenced in the ND.*

DTSC believes that it is implementing its commitments under the settlement agreement that it entered into with the Tribe. That agreement requires compliance with the commitments contained therein, and provides a mechanism for assuring compliance. However, it does not suggest that all DTSC decisions relating to the Topock project should explicitly refer to or reaffirm the independent commitments made in the settlement. DTSC intends to document decisions made regarding the Topock project in its customary fashion, and in accordance with all applicable statutory and regulatory requirements, while also implementing all settlement-based requirements that impact the manner in which DTSC proceeds with this important project.

6. (a) *“Hazard and Hazardous Materials: The ND leaves open to PG&E's election whether uncontaminated soil will be returned to the place of its excavation. Without a clear condition that such soils will be returned to such locations, it cannot be concluded that there will be a less than significant impact to tribal heritage resources. (IS, pgs. 21, 34)”*

The Initial Study appropriately reflects the potential options for placement or disposal of excavated soils, and appropriately makes the determination that impacts to cultural resources would be less than significant based on the recently completed Section 106 NHPA process which resulted in a determination by the BLM and SHPO that no adverse effects to cultural resources will result from implementation of the proposed activities. It is also important to note that, DTSC does not have the authority to govern the placement of non-contaminated excavated soil. The final disposition is the responsibility of the project proponent and in consultation with the appropriate land owner.

(b) *“The Mojave should be notified in the event there is a spill or rupture of hazardous materials. (IS, pg. 22)”*

The FMIT and other concerned stakeholders will be notified in the event there is a spill or rupture resulting in a release of hazardous materials.

7. *“Land Use and Planning: There is no description of what the ‘open space’ designation within the USFWS Havasu National Wildlife Refuge means and no analysis of the project's impacts to the land and resources subject to that designation. Without such information it is not possible to make significance determinations.”*

The “open space” description noted in Section 8 (Land Use) of the Initial Study refers to a description of the physical environment, not to a legal or regulatory designation. The project site is located predominantly on federal land (i.e., the HNWR) which is not subject to local zoning or land use policies. The project will conform to all requirements set forth by the HNWR. As noted in the Initial Study, no adverse land use effect is anticipated to occur from implementation of the proposed activities.

8. *“Noise: A condition of project approval that all efforts will be made to minimize project noise within this sensitive area should be included. This is particularly important to reduce potentially significant impacts on persons who hold the belief that this area is sacred. (IS, pg. 28)”*

As noted in the Initial Study, noise generated during project construction will be short-term, and only minimal noise will be generated during project operation. No significant impacts related to noise are anticipated.

9. *"In general, the cumulative impacts statement is cursory and provides no analysis or factual support for the conclusion that there are no cumulatively considerable impacts, particularly to tribal traditional cultural properties."*

DTSC's finding related to cumulative impacts is supported by information provided in the project work plans and the analysis provided by the Initial Study. In addition, as noted previously, the NHPA Section 106 process resulted in a determination by BLM and SHPO that no adverse effects to cultural resources would result from implementation of the proposed activities.

10. *"Finally, because conditions of project approval and mitigation measures are being proposed, the document should be classified as a mitigated negative declaration, not a negative declaration. The mitigation measures should be expressly included as conditions of project approval."*

Although DTSC may impose conditions on the approval of the proposed project activities, project implementation must conform to all conditions provided by the HNWR in their March 14, 2007 approval letter as anticipated in the Initial Study. Based on the results of the CEQA Initial Study and all comments received during the project notification and comment period, DTSC finds that no additional mitigation measures would need to be imposed beyond controls that would be required as a condition of project approval. Therefore, the Initial Study properly drew the conclusion that project-related impacts of the proposed project would be less than significant and mitigation measures are not necessary to mitigate any adverse impact identified by the Initial Study. Subsequently, DTSC finds the proposed Negative Declaration would be appropriate and consistent with the requirements of CEQA and the implementing Guidelines.

#### **Upland In-Situ Hexavalent Chromium Reduction Pilot Test Work Plan, sent by Hargis + Associates, Inc., December 15, 2006**

1. *Monitoring Well Design: The Tribe notes that one difference between the draft work plan reviewed and commented on in May 2006 specifies a different design for monitoring wells than the one described in the September 2006 draft. Specifically, rather than using a single, multilevel monitor well design, the latter draft involves construction of two monitor wells at each of three locations as PTR-7, PTR-8 and PTR-9, effectively doubling the number of monitor wells at the pilot test site.*

*The Tribe understands from discussions with PG&E that this design modification resulted from direction from DTSC to PG&E between the draft and final work plans. From subsequent discussions, the Tribe learned that the rationale for this direction stemmed from DTSC's concerns that induced vertical hydraulic gradients from the testing would be significant. Accordingly,*

*there was concern that it might not be possible to construct a trilevel monitoring configuration. Specially, the design called for installation of screens across three aquifer horizons designated as shallow (S), middle (M), and deep (D). But because the specified thicknesses of the bentonite seals between each screened interval was considered to be 10 feet. Thus, stacking a 10-foot thick seal over a 12-foot thick gravel-packed interval for a three-level configuration would total a minimum of 56 feet, which was compared to the saturated thickness of the aquifer at the borehole location. Additionally, there was concern that it may not be possible to emplace grout seals over intervals shorter than 10 feet and still assure against bridging or some other factor that could lead to hydraulic short-circuiting after construction. Accordingly, it was decided that the S and D be completed within one borehole and the M interval in a separate boring.*

*While the Tribe understands that there may indeed be field conditions that could preclude certain design logistics, it is emphasized that the multilevel monitor well design was suggested for consideration in previous comments by the Tribe. When PG&E utilized a multilevel design in subsequent monitoring well installations, insofar as the Tribe's concerns, it became a welcome best practice because it helped to limit the number of subsurface intrusions at the site. In addition, in light of DTSC's letter of July 18, 2006, response to General Comment 1 and Specific Comment 3, which pledged that the "DTSC [would] work closely with all participants of the Project to ensure that only the minimal footprint necessary [will be] utilized," there was further reason to expect that the multilevel monitor well design had become an accepted practice.*

*It is therefore disappointing that the Tribe and its technical representative did not have the opportunity to participate in the discussions that led up to this design change. In particular, it would have been appropriate to solicit possible alternatives to DTSC's design instructions or at least to provide the Tribe with an opportunity to pose questions of debate DTSC's rationale and discuss the feasibility of other alternatives. Therefore, the Tribe is concerned that DTSC's action on this matter potentially establishes a precedent for overriding what the Tribe's preferences without the benefit of reasonable technical discussion.*

The DTSC project management team was unaware that the well design had been pre-negotiated between PG&E and the FMIT. Such discussion was not disclosed to the current geologist reviewing the August 2006 draft Upland In-situ Pilot Study Work Plan. DTSC staff became aware of the Tribe's concern through discussions with Hargis + Associates, Inc. and these December 15, 2006 comments. As a result of the comments and discussion, DTSC provided flexibility regarding well design by identifying one or two boreholes for the three monitoring wells (see the Pilot Test - Construction section on page 2 of the Initial Study). As noted in your comment, DTSC remains concerned with the viability of constructing a tri-level well within one bore hole. DTSC recommends the use of nested wells for shallow and deep zone monitoring

and separate bore holes to monitor the middle zone. DTSC remains open to evaluating alternative well designs provided PG&E can present an appropriate design that meets applicable standards. DTSC welcomes further tribal input on this matter.

- 2. Investigation –Derived Waste Management: The Tribe previously commented on the disposition of investigation-derived wastes (IDW), indication that it may have a preference that wastes characterized as non-hazardous remain onsite. At the December 4, 2006 DTSC meeting, this was discussed and the Tribe is of the understanding that DTSC will be instructing PG&E to consider and report on various options for such handling of IDW for this proposal as well as the proposed slant drilling.*

Similar to the approval for the California Slant Drilling Project, DTSC will request PG&E to work with Fort Mojave and the land owner on the disposition of non-hazardous investigation derived soil. DTSC, however, does not have the authority to govern the placement of non-contaminated excavated soil. The final disposition of non-contaminated excavation soil is the responsibility of the project proponent and in consultation with the appropriate land owner.

- 3. Test Evaluation Criteria: In our May 1, 2006 letter, the Tribe posed questions as to the criteria for evaluating the success/failure/acceptability of the pilot test. This is an important consideration because it establishes at what point the testing can be terminated of if thereby may be a need to modify the design or to consider a different alternative. This question was not answered in the final work plan to the Tribe's satisfaction. The relevance of this question is further demonstrated by PG&E's recent proposal to scale up it testing at the floodplain pilot location.*

The Work Plan states "Groundwater chemistry monitoring will be conducted to evaluate the effectiveness of the reagent introduction to the aquifer. It is anticipated that this monitoring information will yield useful information whether or not complete chromium VI [Cr(VI)] removal is achieved. The suitability of injecting reagents into the groundwater using circulation wells, the effects of the remediation process on secondary water chemistry characteristics, and additional aquifer characterization in this area are examples of information that this pilot test will yield in addition to the Cr(VI) precipitation. All data will be used to evaluate the pilot test, which will be informative to selecting the overall site remedy options at the Topock site."

DTSC understands the Fort Mojave Indian Tribe desires a more definitive criterion regarding the completion of the pilot study. However, according to PG&E, due to the variation of test parameters, chemistry and techniques associated with an in-situ technology, it is impractical to establish specific performance criteria as an end point to the study. Currently, based on the work plan schedule, DTSC and PG&E estimate that the pilot study will be

operated for approximately one to two years. DTSC welcomes the Fort Mojave's continued involvement in the review of the pilot study results and are open to suggestions on performance criteria as pilot study end point indicators.

4. *Other Remaining Issues: Other issues discussed in our previous comment letter require follow-up discussions with the Tribe. These include:*
  - *Continued liaison and consultation with the Tribe regarding impact minimization and substantive changes as work on the pilot test progresses.*
  - *Use of reagents injected during pilot testing*
  - *Consultation with regard to site restoration.*

Discussions of these issues are provided as responses to the November 8, 2006 comments below.

**Fort Mojave Indian Tribe Comments on In-Situ Hexavalent Chromium Reduction Pilot Test Work Plan, Upland Plume Treatment, sent by Luce, Forward, Hamilton and Scripps LLP, November 8, 2006.**

1. *The DTSC comment letter referred to a DTSC requirement for PG&E to work closely with the Tribe to establish a construction protocol to minimize impacts including ground disturbance, travel pathways, staging areas, vehicle management, fluid management, noise control and protection of biological and cultural resources. The Tribe would like to see this requirement referenced in and required by the workplan and its conditions. This would include the requirement to consult with the Tribe if any project adjustments are made, such as new roads and infrastructure, etc.*

DTSC understands that PG&E has been in contact with representatives of the Fort Mojave Tribe during the planning of the Upland In-Situ Pilot Study for the past couple of years and has revised the draft work plan with Fort Mojave Indian Tribe inputs. PG&E has committed to continue working with Fort Mojave Indian Tribe and other tribes on each significant aspect of the Topock project. DTSC will, as part of the approval condition, require PG&E to continue working with Fort Mojave and other tribes to minimize disturbances to the site, including but not limited to establishing a cultural monitor during site clearance and disturbance work. DTSC and PG&E will continue to communicate with interested parties including Native American Indian tribes if any adjustments to the project are made, such as new roads and infrastructure.

2. *The Tribe may have a preference as to the type of reagents used. PG&E should discuss this issue with Linda Otero.*

DTSC appreciates the willingness of the Fort Mojave Indian Tribe to share their views on the technical aspects of this project. Although DTSC understands that

the currently proposed reagent has been discussed with Fort Mojave Indian Tribe, DTSC will request PG&E to continue to work with and communicate with the Fort Mojave Indian Tribe and other interested tribes as the project progresses or if changes are proposed.

3. *Page 15 should state "avoid and minimize" impacts to heritage resources. Pursuant to CEQA, avoidance is always the preferred form of mitigation.*

DTSC agrees that avoidance of impacts is preferred to mitigation. As concluded by the Initial Study conducted for the project under CEQA and the determination by BLM and SHPO as a result of the NHPA Section 106 process that the implementation of the proposed activities would result in no adverse effects to cultural resources. However, as stated above, DTSC will require PG&E to continue working with Fort Mojave and other tribes to minimize disturbances to the site, including but not limited to establishing a cultural monitor during site clearance and disturbance work.

4. *IDW management: If the drill cuttings are not characterized as hazardous waste, where will they be disposed? PG&E should contact Linda Otero, as the Tribe may have a preference for soil from this area to stay within this area whenever possible.*

IDW, including drill cuttings, generated during the Upland In-situ Pilot Study activities will be stored in appropriate double contained storage containers (bins, tanks) at the staging area until analyzed for elevated levels of hazardous constituents. If the drill cutting is hazardous, it will be disposed in a permitted offsite facility. As stated earlier, DTSC will request PG&E to work with Fort Mojave and the land owner on the disposition of non-hazardous IDW. DTSC, however, does not have the authority to govern the placement of non-contaminated excavated soil. The final disposition of non-contaminated material is the responsibility of the project proponent and in consultation with the appropriate land owner.

5. *Schedule: References to site restoration should include a reference to the need to consult with the Tribe in the planning and implementation of restoration.*

DTSC will require PG&E to consult with applicable land owner, agencies, and interested Native American Indian tribes, including the Fort Mojave Indian Tribe in the planning and implementation of site restoration.

**Fort Mojave Indian Tribe's Comments on Hydraulic Workplan, sent by Luce, Forward, Hamilton and Scripps LLP, December 22, 2006.**

1. *Section 1.0 and BLM Cover Letter -- As was mentioned at the December 13, 2006 CWG meeting, the same terminology should be used to describe a workplan to*

*avoid confusion. Is it correct to assume that what DTSC calls the Work Plan for Hydraulic Testing is the same as what BLM calls the Aquifer Testing at Existing Wells?*

DTSC understands that the “Aquifer Testing at Existing Wells” as used by BLM is the same as DTSC’s “Work Plan for Hydraulic Testing.” The title of the actual work plan is “Work Plan for Hydraulic Testing in Bedrock Wells.”

2. *(a) Section 2.0 -- What methods will be used to differentiate between the Miocene conglomerate and pre-Tertiary metadiorite bedrock? Are there criteria for making this differentiation using video logs?*

Unfortunately, there is only a generalized lithologic description for the bedrock interval in PGE-8 and no drilling log available for the deepened PGE-7 boring. Therefore, the video log of the uncased portion of the PGE-7 boring and the new geophysical logging of PGE-7 and PGE-8, evaluated in conjunction with other lines of evidence (see response below), will be the methods used to differentiate between the Miocene Conglomerate and pre-Tertiary metadiorite bedrock. The recently collected video log for the PGE-8 cased well does not provide information on bedrock lithology at this well.

*(b) Is the lithologic change apparent or obvious, or will a “lines of evidence” approach be used?*

The lithologic change will be determined using a “lines of evidence” approach. Results from geophysical logging of wells PGE-7 and PGE-8 will be compared to each other and to geophysics and lithologic logging from other site borings (TW-1, MW-24BR) to determine the estimated bedrock lithology present at the test well locations. The results of flow logging at PGE-7 and hydraulic testing at both PGE-7 and PGE-8 may provide additional data to distinguish bedrock lithology at each location.

*(c) How many people, type of equipment, utilities, etc. will be required for how long for this work?*

PG&E estimates that the hydraulic testing activities will take approximately 3 weeks in the field, with work occurring intermittently over a 4- to 6-week period. Additional details of the expected time, personnel, and equipment that these tasks will require are as follows:

- Well development at PGE-7 is estimated to take up to two days in the field, as the pumps currently in both wells PGE-6 and PGE-7 will be removed when the well development rig is onsite for PGE-7 work. As described in the addendum to the workplan, well development at PGE-8 will not be possible. One development truck will be at well PGE-7 during development. Personnel for this activity will include the rig operator and one technician for oversight.

- Well bore video (PGE-6, PGE-7, and PGE-8) and geophysical logging (PGE-7, MW-48) are estimated to be completed in two to three days. At wells PGE-6 and PGE-7, where it may be necessary to have a four-wheel drive, a portable logging unit will be transported to the wellheads with an all-terrain vehicle (ATV) if road access is limited. One cargo-sized van will be driven to the MW-48 wellhead for geophysical logging, which will last about a half a day. Two to three staff will be onsite for these activities, including the contractor performing video and geophysics, as well as one staff member from CH2M HILL or Northstar for assistance and oversight.
- Flow logging and retrofitting at PGE-7 is estimated to take two days in the field. One day will be needed for flow logging plus an additional day for retrofitting the well for hydraulic testing. The flow logging contractor will drive a four-wheel drive truck with a 20-foot trailer to the well for each event. Three staff will be onsite for each event, including two from the contractor, plus an additional CH2M HILL staff member to provide oversight. Flow logging and depth sampling may also be performed at well PGE-8 depending on the outcome of the well bore video.
- Hydraulic testing activities at PGE-8 will be performed in one to two phases. A constant rate pumping test will run for approximately three to four days. If necessary, the second phase of testing will involve injection of the water pumped during testing at PGE-8. The injection testing will follow the pumping test and run for an additional three to four days. Equipment for aquifer testing at PGE-8 will include a well development truck (for pump installation and removal), six to eight water storage tanks (stored at the Topock Compressor Station), and a manifold to transfer water from the wellhead to the tanks over secondary containment. It is estimated that two staff will be overseeing this testing, in addition to the well development truck operator who will be present for portions of the testing.
- Hydraulic testing at PGE-7 is expected to run for three to four days if the well produces enough water to warrant conducting a constant rate pumping test. Equipment for testing will include a well development truck, a small water tank (placed close to the wellhead), and a generator (if City of Needles Power is unavailable) to power the pump. Water will be transported up the hill through double-walled piping (approximately 200 feet) to large storage tanks on PG&E property. All tanks and connections that have the potential to leak will be placed over secondary containment and watched closely during testing. It is estimated that two staff will oversee this testing, in addition to the well development truck operator who will be present for portions of the testing.
- Hydraulic testing at MW-48 will be coordinated with a Groundwater Monitoring Program (GMP) sampling event at this well and is anticipated to take less than a half a day. No additional equipment other than the typical GMP sampling pickup truck for water storage will be needed at this location. Two to three staff

will be at MW-48 to conduct the short pump test, and two staff will return to the well to collect water level data a few days after pumping at this location.

3. *Section 4.1 Well PGE-7 -- This section mentions that other testing methods will be considered if PGE-7 does not produce enough water for constant rate pumping. This comment appears to be another example of the decision on-the-fly approach. What alternative methods might be considered under such circumstances and will the Technical Work Group be consulted if this contingency needs to be exercised?*

If PGE-7 does not produce enough water for constant rate testing, the testing period will be of a shorter duration than was proposed in the workplan. If PGE-7 is a poor producer of water, the only kind of testing that may be possible at this well will be some type of slug test as is proposed at well MW-48. A slug test will include drawing water in the well down to the top of the screen, turning the pump off, and monitoring the recovery rate. In this scenario, it would probably take up to a few hours to draw the water level down to the top of the screen, at which point the pump would be turned off. Two staff will monitor water level recovery with high frequency for the first few hours, then intermittently over a two- to three-day period or until the water levels recovered.

DTSC welcomes input from the Technical Work Group on other testing methods if PGE-7 does not produce enough water for constant rate pumping. DTSC may confer with the Technical Work Group through a conference call.

4. *(a) Section 6.1 Management of Generated Water -- The Workplan should outline, or at the least refer to, methods (e.g., BMPs) to control and manage spills.*

DTSC will require PG&E to implement management controls during hydraulic testing activities, consistent with standard practices at the Topock site, including the following:

- Incidental trash will be collected at the end of each shift, and hauled off the work site to an appropriate disposal facility.
- All piping will be either double-walled or run over secondary containment berms to prevent spills and to contain leaks.
- Water generated during development and testing activities will be contained in small temporary storage tanks at well PGE-7, or in larger tanks placed on top of the hill to the southwest of PGE-7 on PG&E property. All storage tanks will be provided with secondary containment berms to contain any leaks or spills. All connections that have the potential to leak will be placed over secondary containment.

- Water generated during development and testing activities at well PGE-8 will be transferred into tanks over secondary containment on PG&E property close to the wellhead.
- Water from pumping tests will be characterized in the tanks where it was collected, and then will be transferred by truck and treated at the Interim Measures No. 3 facility.

*(b) Also, the Workplan should discuss the sensitivity of the Site; there is no mention of the context of the area being a sacred place to the Mojave and other Tribal peoples. The Tribe reiterates the need to include such “boilerplate” in every field proposal to remind everyone of the importance of avoiding or minimizing impacts in both planning and execution; if the consultants aren’t doing it, the agencies should require it.*

DTSC appreciates your reminder of the need to include such “boiler plate” language in the work plans. According to PG&E, any future work plans and proposals will include language that reiterates this consideration. DTSC and PG&E continue to recognize that the Topock site and adjacent lands are contained within a larger geographic area that is considered sacred by the Fort Mojave Indian Tribe and by other Native American tribes. In recognition of this, aquifer testing activities have been planned in such a way as to minimize impact to this area. DTSC and PG&E will ensure that all employees working at the site be trained and reminded of the sacred nature of the landscape and be made aware of and be respectful of the spiritual value of the landscape. PG&E will, at a minimum, instruct and refresh workers at the site through work orientations and kick-off meetings to remind everyone of this consideration.

5. *Section 6.1.1 Piping -- The Workplan should address the need to minimize surface disruptions; this is another recurrent theme that should appear in boilerplate for each field proposal.*

DTSC and PG&E acknowledge this important point. To the extent possible, work will be implemented in a manner that minimizes surface disruptions. For example, double-walled piping (to provide secondary containment) will be installed such that minimal disturbances to the land are made. DTSC will require PG&E to work with the Fort Mojave Indian Tribe and other interested tribes to establish a cultural monitor during site clearing and disturbance work. As stated earlier, DTSC will also require PG&E to work with the tribes, landowner and agencies on the development of a site restoration plan.

6. *Section 7.0 Staging Areas and Access -- Again, the Workplan should mention the sensitivity of the land. Also, what power supply will be coming from the City of Needles Power that is scheduled to be installed at the MW-24 bench in early 2007? Is this a new power pole, or some other disturbance? How will the City of*

*Needles work be planned and monitored to avoid unauthorized disturbances, as happened previously?*

According to PG&E, there is a City of Needles power pole already in place at the site. As part of the upcoming in situ pilot study, a power drop and disconnect will be installed on this pole. PG&E plans to use extension cords from this power drop and will not be installing any permanent power poles or other electrical fixtures for the Upland project. PG&E does not anticipate requiring assistance from the City of Needles for this work. However, PG&E indicated that if the City of Needles personnel are called to the site, they will be escorted and provided with training to ensure that they do not drive their vehicles off established roadways.

7. *Well PGE-6 Revised Decommissioning Work Plan...*

Comments are reproduced and responded to as part of the PGE-6 Well Decommissioning Work Plan comments below.

8. *November 3, 2006, Letter from DTSC to Yvonne Meeks. In recommendations regarding additional bedrock investigation, this letter mentions that observation wells should include wells in Arizona floodplain. Are these new or existing wells?*

The recommendation refers to both new and existing wells. The Work Plan for Hydraulic Testing in Bedrock Wells includes existing wells (i.e., PGE-9S, PGE-9N), but additional wells would assist in evaluation of aquifer hydraulics. New California wells MW-52 and MW-53 are planned to be included as observation wells. New wells proposed by PG&E for installation in Arizona would be included as observation wells, but will most likely not be installed before the aquifer tests are performed. DTSC recognizes that installation of additional wells is planned for Arizona under a separate project with the Arizona Department of Environmental Quality (ADEQ) as the lead agency. DTSC is recommending to PG&E and ADEQ to design and install wells that would compliment wells installed in California.

**Fort Mojave Indian Tribe Technical Comments on February 28, 2006, technical memorandum titled Well PGE-6 Decommissioning Evaluation, sent by Hargis + Associates, Inc., March 31, 2006 Comment Letter**

1. *In reviewing these documents, the Tribe notes that Condition 20 of DTSC's January 6, 2006, letter effectively required PG&E to recommend that production well PGE-6 be either (a) properly configured for incorporation into the site monitoring program or (b) appropriately decommissioned. PG&E's recommendation as presented in this report was essentially to decommission the well, but only after a determination could be made as to its usefulness for monitoring in conjunction with possible in situ testing in the vicinity of monitor well MW-24 Bench.*

*The Tribe regards this recommendation as overly vague. First, it is apparent that no decision has been reached as to the timing, scope, or even the need for conducting an in situ pilot test on the MW-24 Bench. In the event that the need to perform such testing is supported, it still remains uncertain as to the need to utilize PGE-6 or whether the PGE-6 design and integrity would be consistent with requirements of the pilot test. In order for the Tribe to make sense of PG&E's proposal, it would be necessary to understand the scope of the proposed pilot test. To date, the Tribe has not been provided with information regarding a proposed alternate upland in situ pilot test location.*

DTSC understands that PG&E has worked closely with the FMIT since the comments of March 21, 2006 to define the scope of the proposed Upland In-situ Pilot Test. As described in the In Situ Hexavalent Chromium Reduction Pilot Test Work Plan – Upland Plume Treatment, dated September 29, 2006, PGE-6 is not planned to be used during the pilot study. In accordance with the California Well Standards, wells which are no longer useful shall be destroyed (decommissioned) to eliminate possible future contamination of groundwater. PGE-6 is in poor condition and is screened across a large thickness of aquifer. Therefore, DTSC advises PG&E to proceed with well decommissioning as required by regulation. PG&E plans to perform the decommissioning activities concurrently with construction of the Upland In-situ Pilot Study wells to reduce disturbance of the area from multiple mobilizations.

2. *As described in the work plan, abandonment, and presumably other activity performed at PGE-6, would require grading and earth moving resulting in surface disturbances and the destruction of sparse vegetation. Is it also likely that additional disturbances may result from staging or other types of support required for this action (i.e., pallets, storage of excavated dirt, etc.). The Tribe requires further information and evaluation of such impacts to support its determination of the degree of impact to potentially culturally sensitive areas. As the Tribe has commented in the past, proper assessment of such individual actions as well as activities within adjacent areas, because the impact to culturally sensitive areas needs to be viewed within a greater framework than just the actual areas of disturbance associated within the present action.*

DTSC is aware of, and respects, the Tribe's concerns regarding potential impacts to a landscape considered sacred to the Fort Mojave Indian Tribes as well as other tribes. The U.S. Department of the Interior has the primary jurisdiction to address cultural resources under the National Historic Preservation Act. It is our understanding that a cultural resources review associated with the decommissioning of this well was completed by the Bureau of Land Management (BLM) in consultation with the Fort Mojave and other tribes. We further understand that the BLM evaluation covered potential cultural resources directly affected by the proposed activity, as well as the Topock Maze, a property listed on the National Register of Historic Places. Following the consultation, BLM determined that the proposed work would be an affect, but that the affect would

not be adverse. The California Office of Historic Preservation concurred in that determination.

With regard to land impacts PG&E has taken a number of steps to limit impacts associated with the decommissioning of this well. The decommissioning activities are only affecting a single, pre-existing well, and only established access routes will be used for transportation of personnel and equipment. In addition, the decommissioning of PGE-6 will be performed concurrently with construction of the proposed upland in situ pilot test facilities, located in proximity to PGE-6, in order to minimize the number of equipment mobilizations to the area.

- 3. As in the past, the Tribe has commented on the need for broad requirements with regard to performance by PG&E. While it is understood that imposition of such general requirements is difficult to place within the broad context of the diverse actions that are ongoing to support the Interim Measures requirements and the overlay of the RCRA/CERCLA process, the Tribe has not yet seen the initiation of discussions along these lines. Thus, we are again highlighting this appeal, and would be happy to work with DTSC in defining such a concept.*

DTSC appreciates the Fort Mojave Indian Tribe's willingness to provide input with respect to the PG&E Topock Compressor Station project. DTSC is committed to continue early communication with the Fort Mojave Indian Tribe regarding all aspects of the project.

- 4. Overall, if DTSC believes there is a strong likelihood that well PGE-6 is adversely impacting the implementation [of] Interim Measures or potential future remedial strategies, it would be the Tribe's preference that PGE-6 be properly decommissioned according to applicable rules and methods, and with proper care to minimize impact to the land and its resources. However, if DTSC truly believes it is prudent to retain the well for further and immediate field characterization and that the well meets the requisite design for such purposes, then a complete proposal should be prepared and presented by PG&E in the context of an overall plan. In this latter case, stakeholders should be given a further opportunity to consider and comment on the timeframe requested by PG&E for this purpose.*

DTSC agrees that PGE-6 should be decommissioned in accordance with the applicable standards specified in the California Water Code. DTSC understands that PGE-6 is in poor condition and is screened across a large thickness of aquifer. Therefore, DTSC and PG&E believe that PGE-6 has limited value as a future monitoring or observation well.

1. Section 1.0 Introduction -- Reference should be made to the sacred nature of the area and the Tribe's prior comment letter of March 31, 2006.

As stated above, DTSC agrees that such a reference is appropriate. PG&E will provide a discussion referencing Fort Mojave Indian Tribe's cultural heritage and beliefs regarding the sacred landscape at the Topock site and adjacent lands.

2. Section 2.0 Decommissioning -- How much road grading or filling will be undertaken?

DTSC understands that no additional road grading work is contemplated as part of the Upland project. According to PG&E, all necessary road maintenance has already occurred, consistent with approvals PG&E received from other appropriate agencies. DTSC, however, further understands that the road maintenance work was limited to elimination of ruts and that soil was not added to or removed from the road.

3. Section 3.0 Waste Management -- How will the sediment bailed from the well, which will be stored at the staging area as IDW, be ultimately handled? The Tribe prefers that, whenever possible, sacred soil not be removed from the area.

Sediment bailed from well PGE-6 during the decommissioning activities will be contained and transferred to the temporary staging area for characterization. If the sediment bailed from the well contains elevated concentrations of hexavalent chromium or other hazardous constituents, the sediment will be disposed off-site at a permitted facility. DTSC does not have the authority to govern the placement of non-hazardous sediments. The final disposition of non-contaminated material is the responsibility of the project proponent and in consultation with the appropriate land owner.

4. Will qualified Native American Monitors be included in the project?

DTSC will require PG&E to consult with interested tribes to identify and establish a qualified Tribal Monitor to oversee site clearance and ground disturbing activities under this project.

Response to Fort Mojave Indian Tribe Upland Project Comments  
Attachment 1

**“Havasu National Wildlife Refuge Approval Letter”**



# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

Havasu National Wildlife Refuge  
Post Office Box 3009  
Needles, California 92363  
760/326-3853 FAX 760/326-5745

14 March 2007

Ms. Yvonne Meeks  
Pacific Gas and Electric Company  
4325 South Higuera Street  
San Luis Obispo, CA 93401

Dear Ms. Meeks:

With this letter, I am authorizing, with special conditions, your request as outlined in the *In Situ Hexavalent Chromium Reduction Pilot Test Work Plan - Upland Plume Treatment*. The special conditions are attached.

If you have any questions or I may be of any assistance, please feel free to contact me.

Sincerely,

John Earle  
Refuge Manager

attachment

cc: Casey Padgett  
Joe Liebhauser  
Tim Smith

## ATTACHMENT

### ***In Situ Hexavalent Chromium Reduction Pilot Test Work Plan - Upland Plume Treatment***

#### HAVASU NATIONAL WILDLIFE REFUGE SPECIAL CONDITIONS

The authorization to perform the subject action is subject to Pacific Gas and Electric Company's (PG&E) agreement to comply with and be bound by the following Special Conditions.

1. All activities are subject to the laws, regulations, and policies of the U.S. Fish and Wildlife Service and Havasu National Wildlife Refuge (Refuge), except as allowed by this letter.
2. A copy of this letter will be in possession of the field crew while on Refuge property.
3. This letter authorizes activities and facilities for a period not to exceed two years. The authorized activity and related facilities/property must cease and be removed, respectively, within two years unless an extension is issued by the Refuge Manager at least 14 days prior to the expiration of this time.
4. PG&E agrees to indemnify and hold harmless the United States, including the Department of the Interior, the U.S. Fish and Wildlife Service (Service), and their agents and employees, from any and all claims or causes of action arising from or on account of acts or omissions of PG&E, its employees, successors, agents, contractors, subcontractors or other persons, in carrying out activities authorized by this letter. PG&E further agrees that the United States, and its agencies and employees, shall not be held as a party to any contract entered into by PG&E in carrying out activities under this letter.
5. All project activities will be conducted in a manner that avoids a take of any wildlife, particularly threatened and/or endangered (listed) species. Take is defined to include any harm or harassment, including significant habitat modification or degradation that could potentially kill or injure wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Should a listed species enter the project site or become harmed or killed by project activities, the project will be shut down and PG&E will consult immediately with the Service and the California Department of Fish and Game (CDFG). Negative effects to wildlife habitat will also be minimized to the maximum possible extent.
6. Mitigation and conservation measures identified in the biological assessment and cultural resource investigations developed for this project will be implemented fully. The Service recommends and encourages PG&E to have on site, during all construction activities, a cultural resources specialist/monitor identified by the Fort Mohave Tribe.
7. Wildlife of any kind will not be handled or harassed. Encounters with listed species will be reported to the CH2MHILL project and Refuge biologists. These biologists will maintain records of all listed species encountered during project activities. This information will include for each individual: the locations (narrative, vegetation type, and maps) and dates of observations, general conditions and health, any apparent injuries and state of healing, and diagnostic markings.

8. To the maximum extent possible, facilities (e.g., pipelines, wells, and access routes) will be sited within an existing right-of-way and previously disturbed or barren areas to limit new surface disturbance.
9. All PG&E employees and contractors involved with the proposed project will be required to attend PG&E's threatened and endangered species and cultural resources sensitivity education program prior to initiation of activities. New employees will receive formal, approved training prior to working on-site.
10. Trash and food items will be contained in closed containers and removed daily to reduce attractiveness to wildlife or feral animals.
11. Lights will be angled toward the ground, reduced in intensity to levels compatible with safety concerns, and limited in duration of usage. The hue of lighting will be that which is most compatible with and least disturbing to wildlife.
12. Employees will not bring pets to the project site.
13. Firearms will be prohibited from the proposed project site.
14. Employees will be required to check under their equipment or vehicle before it is moved. If a desert tortoise is encountered, the vehicle is not to be moved until the animal has voluntarily moved to a safe distance away from the parked vehicle.
15. Upon completion of well and piping installation, all unused material and equipment will be removed from the site.
16. Upon locating a dead or injured individual of a listed species, PG&E will make initial notification to the Refuge and the Service within three working days. The notification must be made in writing to the Service's Division of Law Enforcement in Torrance (370 Amapola Avenue, Suite 114, Torrance, California 90501; (310) 328-1516) and by telephone and writing to the Ventura Fish and Wildlife Office (2493 Portola Road, Suite B, Ventura, California 93003; (805) 644-1766). The report will include the date and time of the finding or incident (if known), location of the carcass, a photograph, probable cause of death (if known), and other pertinent information. Animals injured through PG&E activities will be transported to a qualified veterinarian for treatment at the expense of PG&E. If an injured animal recovers, the CDFG and the Refuge will be contacted for final disposition of the animal.
17. The CH2MHill project biologist will be responsible for assisting PG&E employees and contractors in compliance with the minimization measures, performing surveys in front of the crew as needed to locate and avoid listed species, and monitoring compliance. Preconstruction surveys by a biologist will be implemented for special-status wildlife species in areas of planned disturbance immediately prior to initiation of ground-disturbing activities. The inspection will provide 100 percent coverage of the area within the project limits. All desert tortoise burrows and pallets outside of, but near, the project footprint will be flagged at that time so that they may be avoided during work

activities. At the conclusion of work activities, all flagging will be removed.

18. Preconstruction surveys for avian nesting pairs, nests, and eggs will occur and active nesting areas flagged. If nesting birds are detected, vegetation removal will be avoided and Refuge and CH2MHill biologists will be notified.
19. All native vegetation (particularly Palo verde, ocotillo, mesquite, willow species, cottonwood, cat-claw, smoke tree, and cacti species) are considered sensitive by the Refuge. To the maximum extent practicable, PG&E will avoid negative effects to these species.
20. PG&E will designate a field contact representative (FCR) who will be responsible for overseeing compliance with the minimization measures. The FCR must be onsite during all construction activities. The FCR will have authority to halt all activities that are in violation of any Special Conditions. The FCR will have a copy of all special conditions when work is being conducted on the site. The FCR may be a project manager, PG&E representative, or a biologist.
21. The area of disturbance will be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, nesting sites or dens, public health and safety, and other limiting factors. As needed, work area boundaries will be delineated with flagging or other marking to minimize surface disturbance associated with vehicle or equipment straying.
22. All activities will be restricted to a pre-determined corridor. If unforeseen circumstances require project expansion, the potential expanded work areas will be surveyed for listed species prior to use of the area. All appropriate minimization measures will be implemented within the expanded work areas based on the judgment of the Refuge biologist. Work outside of the original Refuge-designated area will proceed only after receiving written approval from the Refuge, Service, and CDFG describing the exact location of the expansion.

23. All open holes and trenches will be inspected for trapped desert tortoises at the beginning, middle, and end of the work day, at a minimum. PG&E has the option of erecting desert tortoise fencing in lieu of inspection of open trenches. During excavation of trenches or holes, earthen ramps will be provided to facilitate the escape of any wildlife species that may inadvertently become entrapped. If a desert tortoise is trapped, the Refuge biologist will be notified immediately. The desert tortoise will be allowed to escape before work continues in that location. A final inspection of the open trench segment will also be made immediately before back filling. All open pipe segments will be covered when work activity is not occurring at the site. Trenches must meet the safety requirements of the Occupational Safety and Health Administration before personnel enter open trenches to remove wildlife.
24. All construction vehicles and equipment will be periodically checked to ensure proper working condition and to ensure that there is no potential for fugitive emissions of oil, hydraulic fluid or other hazardous products. The Refuge will be informed of any hazardous spills.
25. Prior to entry onto the Refuge, all construction equipment will be inspected for and cleaned of any vegetative material.
26. Workers will exercise caution when traveling to and from the project area. To minimize the likelihood for vehicle strikes of wildlife, the speed limit when traveling unpaved area roads will be 15 miles per hour.
27. Intentional killing or collection of plants, other than authorized by this letter is prohibited. PG&E will notify the Refuge of any such occurrences.
28. For emergency situations involving a pipeline leak or spill or any other immediate safety hazard, PG&E will notify the Refuge within 24 hours. As a part of this emergency response, the Refuge may require specific measures to protect wildlife. During cleanup and repair, the Refuge may also require measures to recover damaged habitats.
29. Once the well facility and access route are no longer needed, PG&E will be required, as directed by the Refuge, to restore disturbed areas in a manner that will assist in the re-establishment of biological values. Methods of such restoration will include the reduction of erosion, planting with appropriate native trees, and irrigation of reestablished vegetation for three years following planting.
30. Within 60 days of completion of construction activities, the FCR and PG&E biologist will prepare a brief report for the Refuge documenting the effectiveness of the minimization measures and making recommendations for modifying the measures to enhance species protection. The report will also provide information on survey and monitoring activities, observed listed species, and the actual acreage disturbed by the project.
31. All areas within the proposed action area and within the potential impact of the action will be monitored semiannually by PG&E during the active period for tortoise by a biologist knowledgeable of desert tortoise ecology. These surveys will be completed throughout the duration of the action to verify the presence or absence of desert tortoise and reports will be provided to the biologists at the Refuge office on an annual basis.