



## HARGIS + ASSOCIATES, INC.

HYDROGEOLOGY • ENGINEERING

1820 East River Road, Suite 220

Tucson, AZ 85718

Phone: 520.881.7300

Fax: 520.529.2141

August 1, 2011

VIA ELECTRONIC MAIL

Mr. Aaron Yue  
California Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, CA 90630

Ms. Pamela Innis  
U.S. Department of the Interior  
Office of Environmental Policy and Compliance  
P.O. Box 25007 (D-108)  
Denver Federal Facility Building 56  
Denver, CO 80225-0007

Re: FMIT comments on May 2011 PG&E draft report titled *Soil RCRA Facility Investigation/ Remedial Investigation Work Plan*

Dear Mr. Yue and Ms. Innis:

Hargis + Associates, Inc. (H+A), on behalf of its client, the Fort Mojave Indian Tribe (the Tribe), has completed a review of the above-referenced draft work plan (the Work Plan), and hereby is transmitting the following comments. These comments also incorporate substantial input provided by Dr. Michael Sullivan on behalf of the Tribe. The Tribe would also like to express its appreciation for arranging the May 28, 2011, meeting at the Topock Compressor Station to discuss the Work Plan, although the meeting notification was on rather short notice and thereby prevented participation by the Tribe's technical consultants due to prior commitments. In the future, the Tribe would appreciate an opportunity to coordinate schedules for such an important meeting. A July 21, 2011, meeting was also arranged by the Bureau of Land Management. This meeting was helpful in reviewing details of the Work Plan. In view of the late timing of this meeting, the U.S. Department of the Interior (DOI) and the California Department of Toxic Substances Control (DTSC) arranged for a week extension of the comment period, and, at the request of the Tribe, an additional extension until today's date was allowed.

This letter has been reviewed by the Tribe's Topock Project personnel as well as legal counsel.

Other Offices:  
Mesa, AZ  
San Diego, CA

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 2

## GENERAL COMMENT

The Work Plan is quite voluminous with its many maps and appendices. As such it was difficult to review in its entirety and to efficiently coordinate the various sections and appendices. Some of the appendices had their own appendices, which were identified the same as the major appendices. For example, Appendix A has its own appendices A through F. It would have been helpful to have a better, more complete presentation of the contents.

The series of Technical Working Group (TWG) meetings held during the Work Plan's preparation, which focused on the implementation of the plan components based on Data Quality Objectives (DQOs), was helpful in understanding the general rationale underlying the sampling strategy. As stated in the Tribe's prior comment letters on these earlier work plan components, the Tribe notes that PG&E and the agencies believe there may be a tradeoff between sampling details (*i.e.*, numbers, locations, methods, *etc.*) and the eventual extent of remedy implementation. Nevertheless, the Tribe remains concerned over various assumptions that have been made in this process that will result in unnecessary intrusion and damage to its sacred grounds.

In particular, the Tribe disagrees with assuming future risk scenarios based on residential use. This is inconsistent with the Bureau of Land Management's (BLM) Lake Havasu Field Office's (LHFO) May 2007 document titled, *ROD/Approved Resource Management Plan, Cultural Resource Management* (see p. 26-30). This document assigns this area's land use as "Traditional Land Use." Under Cultural Resource Management the BLM LHFO must adhere to the specifications defined by the categories within the Land Use Allocation, Desired Future Condition and Management Actions.<sup>1</sup> The assumption of future residential risk will potentially affect the level of information required to support decisions on the Corrective Measures Study/ Feasibility Study report.

Embankment modifications, trenches, potholes, and drilling are all considered to be significant intrusions in addition to the incursions necessary to perform these activities. These concerns are further discussed in comments that follow.

---

<sup>1</sup> See also Map 12, "Special Cultural Resource Management Areas," CL-11 reference Topock Needles, 1,127 acres (Conservation for Future Use and Traditional Use, Appendix E Cultural Resources E-1 – E-8), which incorporates the study area.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 3

## SECTIONAL COMMENTS

### TEXT

1. p. 1-2, para. 3 (History of the Soil Investigation Program) – As stated in the middle of this paragraph, the Tribe supports the concept of “... minimize[ing] the number of samples and disturbances to sensitive resources.” At the same time, it is pointed out that there have been prior phases to this soils investigation as evidenced by the great amount of data that has been presented in this current Work Plan. Thus, the claim of a two-phase approach without further context or qualification is rather confusing and misleading. What assurance is there that further sampling "phases" will not be deemed a requirement? How can the Tribe be assured that the environmental impacts will be collectively, and timely, considered? The document, including Appendix E, does not reference the California Environmental Quality Act (CEQA). What CEQA documents have been prepared for the soils studies to date and what CEQA documents are anticipated in the future for soils?
2. p. 1-3, bullets (Soil Part A Investigation History and Appendix C8) – The mention of the sampling at the Undesignated Area (UA) UA-1 (Potential Pipe Disposal Area) does not disclose the profound objections issued by the Tribe in letters dated October 31, 2008, November 22, 2010, and December 15, 2010. As you are aware, the Tribe reluctantly consented to exploration of this area via selected geophysical methods (GP) in the December 15, 2010 letter. While the Pacific Gas and Electric Company (PG&E) refers to these methods as “non-intrusive,” the Tribe does not regard them as such because GP still creates a physical disturbance to the sacred grounds, albeit of a somewhat different nature.

Nevertheless, in light of the DTSC’s insistence of the need for further characterization as stated in its December 23, 2010, response letter to the Tribe, the Tribe acceded to the use of GP methods. At that time the Tribe also agreed with DTSC’s plan to re-interview the former PG&E employee, who initially reported pipe disposal in the vicinity, and the review of historic aerial photographs of this area.

The review of this follow-up work as presented in Appendix C8 of the Work Plan appears to have done little to resolve the “mystery of the buried pipes,” except once again to expand the search into another area (UA-1B). The aerial photographs are inconclusive in regard to a disposal area within the vicinity, and the 2011 follow-up interview with the former employee exposed a great deal of uncertainty as the location

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 4

and the timing of the alleged pipe burial, leading to PG&E's conclusion that it would be necessary to yet again expand the proposed area of exploration.

Ultimately, this poses concern as to how the DTSC will decide to act on information resulting from these next GP surveys. What if the survey indicates the presence of an anomaly at one of these new sites? Will PG&E then be directed to perform intrusive investigations? In the event that pipe disposal is confirmed, will the area be dug up so that the pipes can be removed only to be buried elsewhere? On the other hand, what if the GP survey does not register a finding? Will the investigation then be expanded indefinitely until something is found? We do not seem to be converging on a reasonable resolution to this perceived "problem." Again, how can the Tribe be assured that the environmental impacts will be collectively, and timely, considered?

Finally, PG&E is reminded that conditions of the Tribes agreeing to the conduct of the GP surveys included the full-time involvement of a Tribal monitor(s) and Tribal cultural expert(s) and the authority of the monitor(s) to call for a work stoppage in the event of a determination that the level of disturbance is unacceptable.

But ultimately, the Tribe is opposed to any intrusions beyond the performance of the GP survey, regardless of the outcome. The Tribe maintains that if there is an indication of the likelihood of buried, asbestos-wrapped pipes, they should be noted, but left in place.

3. p. 1-4 through 1-9 including Table 1-1 – At this point, the overall explanation of how and why the soils RCRA Facility Investigation/ Remedial Investigation is organized the way it is and will be implemented is unnecessarily confusing. It is understood that, originally, PG&E had petitioned to defer the Part B investigation arguing that there are ongoing Compressor Station operations in that area and it would be a more appropriate topic for eventual site closure, this petition was denied by DTSC. The artificial division of what is or was done inside the Compressor Station fence line vs. the area outside the fence line seems rather arbitrary to the question of the remedial investigation anyway. However, the Work Plan now has devised a new distinction as to what was done in areas peripherally outside the fence line ("Perimeter Area Investigation") and what originated within the fence line, but was discharged from point sources (pipes) into the area outside the fence line (i.e., "Storm Drain System Investigation").

This was not a distinction that was made clear during the series of TWG meetings. What is the distinction between the so-called "perimeter area" and such areas as Area of Concern (AOC) AOC-1 and AOC-9? Why has a new area, not a Solid Waste Management Unit (SWMU), AOC, or UA been defined? Does this imply that the

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 5

investigation is ever-expanding? Further justification of the need for these new investigations as well as the rationale as to why they are different from the previous area designations should be provided. Most certainly, it appears that there is now some redundancy in proposed sample locations. The Tribe needs assurances that the environmental impacts will be collectively, and timely, considered.

4. p. 2-1 (2.1.2 Surveys) – The Tribe has repeatedly insisted that participation of a Tribal Monitor(s)/Tribal Cultural Expert(s) is required during the conduct of any archaeological or cultural surveys. This is necessary because the focus of an archaeological surveyor is quite different from the Tribal Monitor/Tribal Cultural Expert, who is additionally concerned with the spiritual integrity of the land.

The Tribal Monitors/Tribal Cultural Experts also have an interest in the conduct and results of the vegetation survey as presented. It is noted that these surveys will be performed post-clearing of the land. What has been done to document what is present prior to clearing?

5. p. 2.2 (2.1.3 Site Access and Demarcation) – This paragraph references Appendices A and B for further information on site access, and indicates that the access routes are shown on the sampling figures. This is not easily seen on these figures. A separate figure should be included in this section.
6. p. 2-2 (2.1.4 Staging Areas and Figure 2-1) – The pattern shown in the legend for staging and waste management areas is ambiguous within the fence line. Is the entire Compressor Station intended as both a staging area and waste management area?
7. p. 2-3 to 2-5 (Installation of Boreholes and Soil Sample Collection) – This section discusses various methods for the intrusion into the soil horizon. The methods described range from shallow and surficial samples collected with hand tools to sonic coring to potholing/trenching and HydroVac potholing. Procedures for the performance of these field methods are presented in Appendix G. There are several concerns with the proposed assemblage of field methods.

First, these are all intrusions and it would appear that PG&E is suggesting that considerable discretion would be permitted in the performance of these activities in terms of depths, methods, and extent of the intrusion. Accordingly, specifics must be made available prior to initiating of work and/or the Tribal Monitor/Tribal Cultural Experts must participate in these field activities in order to assure that field personnel are exercising every effort to minimize the level of disturbance.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 6

Second, this activity will result in volumes of investigation-derived wastes (IDW) that must be properly handled. In the past, such materials, if tested as non-hazardous, were stored for possible future repatriation at the Site, and, as indicated in Section 2.2.7.2, PG&E intends to make “every effort” to repatriate these materials. On January 12, 2011, the DTSC held a meeting with the Tribes to discuss alternative methods for well decommissioning. One option discussed involved the use of such IDW materials. Unfortunately, this was not discussed in the context of soil boring abandonment within Appendix G (SOP-B4). Instead, the procedure calls for grouting with bentonite-cement grout to the surface. Would it be possible to revise or obtain a variance to this procedure to allow for backfilling with native materials? The Tribe notes that this is exactly the method proposed for abandonment of potholes.

Third, the method for soil handling with the intent of repatriation needs to be proceduralized and documented for review by the Tribe. This is not addressed in Appendix A, SOP-B7. A recent visit to the location where drill cuttings are presently being stored indicated that there is considerable commingling of materials taken from different locations on the Site. This may not be an optimal way of handling such materials. The Tribe offers to assist PG&E in writing an acceptable procedure.

Fourth, how will the sample cores be stored? Do these eventually become IDW? These, like drill cuttings, may be considered for repatriation.

Finally, in general, the Tribe would favor a borehole to a pothole because it seems that there would be less intrusion and disturbance, however, if the above-described method of abandonment is necessary for boreholes, the permanent damage from such potholes may be less.

8. p. 2-5 (2.2.2 X-Ray Fluorescence Field Sampling) – The Tribe agrees that X-ray fluorescence can be a useful tool for screening samples as suggested in its February 9, 2007, comment letter on PG&E’s 2006 soils work plan.
9. p. 2-6 (2.2.4 Geophysical Surveying) – Refer to earlier comments concerning the use of GP methods at UA-1 (Comment #2). Will any of the methods described require land clearing or leave a “footprint?”
10. p. 2-7 (2.2.6 Vegetation Removal) – The Tribal monitor(s)/Tribal Cultural Expert(s) must participate in the decision as to which vegetation is acceptable for removal as provided for in the last sentence and the most appropriate methods for such removals.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 7

11. p. 2-8 (2.2.7.2 Investigation-Derived Waste Management) – Refer to earlier comments concerning the handling of IDW and repatriation (Comment #7).
12. p. 2-9 (2.3 Post-Construction Activities) – This section seems to apply the concept of the acceptability of new disturbances in “previously disturbed” areas. The Tribe, in response to PG&E’s draft map for Mitigation Measure Cultural 1a-9 (*Aerial Map of Disturbed Areas*),<sup>2</sup> cautioned that:

*“While as a general rule it may be worse to disturb undisturbed land than land that is already disturbed, it must be understood that tribal spiritual practitioners understand “disturbance” in ways that are different from an archaeologist’s or a field technician’s understanding. For example, to an archaeologist, the land is “disturbed” if it has been turned over in such a way as to break up the spatial relationships among artifacts and other things that archaeologists study. To a tribal practitioner, this kind of “disturbance” is not necessarily relevant. What matters instead is the degree to which the spiritual integrity of the land has been compromised.*

*Bulldozing, drilling, and pipe laying (among other things) can compromise the land’s spiritual integrity, and are distressing activities to the Tribe, but it does not follow that any location that has been ‘disturbed’ has thereby fully lost its spiritual integrity. As a result, the Tribe is uncomfortable with a blanket assumption that priority should always or necessarily be assigned to ‘previously disturbed areas.’ At the very least, the Tribe insists that it be consulted about activities proposed on any lands within the Tribe’s valued landscape, whether they have been “disturbed” or not.*

*Most times, with reluctance, the Tribe will probably agree that further disturbing a previously ‘disturbed’ parcel is the lesser of two (or more) evils, but there may be times when the Tribe must and will object strongly to further desecration of a ‘disturbed area’ because in the Tribe’s eyes it still has spiritual integrity and importance. Thus a requirement merely to focus new disturbance on previously ‘disturbed’ areas as they are understood by archaeologists, engineers, and other non-Native American technicians does not by itself mitigate impacts on cultural resources.”*

---

<sup>2</sup> Letter from Dr. Leo S. Leonhart, Hargis + Associates, Inc. to Dr. Yvonne Meeks, PG&E, dated July 5, 2011.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 8

This concept needs to be explained to and understood by all parties involved in field investigations and planning.

Additionally, the conclusion that no post-sampling restoration is required for the two acres where vegetation removal is proposed requires further explanation.

13. p. 4-2 (Table 4-1) – The Tribe believes that a strategy involving the use of confirmation sampling to address data gaps should be considered and discussed in the Work Plan.

The table does not present information on the extent of sampling (*i.e.*, numbers, depths, types, *etc.*) in each area.

In regard to Decision 3 (Potential Impacts to Groundwater) – The Tribe has previously commented about the simplicity/conservativeness of the modeling performed on soil concentrations and the need to perform additional sampling to further understand these potential impacts. The Tribe's position is that this additional sampling should only be based on both: 1) more advanced/less conservative modeling, and 2) evaluation of site data where soil contamination exists but groundwater contamination has not been detected. It seems that this Data Quality Objective (DQO) criterion is based on the same modeling that was presented in the prior draft/proposed sampling.

14. p. 4.4 (Decision 3) – This Decision Rule is titled Soil SSL but really is an evaluation of potential impacts to groundwater. See above comment (Comment # 13) in regard to potential impacts to groundwater.
15. p. 4.4 (Decision 5) – The criteria for sufficient information to plan the CMS/FS should be specified in general so the reader (without having to read the entire appendices) can understand the level of certainty needed for this criterion. For example, is an estimate of soil volume within 10-fold (an order of magnitude) sufficient? More detail is needed here.
16. p. 4-5 – Will the same criteria/requirements be applied to samples collected the perimeter and storm drain areas as Part A?
17. p. 5-2 (Environmental Impact Report Mitigation Measures) – PG&E's reference to the Final Environmental Impact Report (FEIR) for the groundwater remedy in terms of its relevance to the soils investigation is inappropriate as the FEIR was



Mr. Yue and Ms. Innis  
August 1, 2011  
Page 9

for groundwater final remedy actions only. Separate impact analysis and mitigation measures will be required for soils impacts. When will DTSC perform this required analysis? This determination must be made by DTSC as indicated on p. 5-2 in paragraph 2.

18. p. 5-5 (5.4 Archaeological Surveys and Reviews) – The Tribe has previously commented on the limitations of archaeological surveys in regard to Tribal cultural interests. Additionally, there have been a number of archaeological surveys performed without Tribal participation. Based on the perennial omission of this consideration from PG&E work plans, it is evident that Tribal interests are either being ignored or are misunderstood. The position and basis for concern of the Tribe cannot be stated more clearly than in the citation presented in Comment #12. A section presenting this Tribal perspective must be included in all Work Plans involving intrusions and disturbance to the sacred grounds.
19. The concluding paragraph on p. 5-6 does not capture the distinction between physical vs. spiritual impacts. The need for awareness and sensitivity extends beyond orientation of field workers and conduct of work in a “respectful manner” also requires deference to the Tribal monitor(s)/Tribal Cultural Experts overseeing the work.

#### **APPENDIX A – PART A DATA GAPS INVESTIGATION PROGRAM**

20. p. 1-1, para. 3 (Introduction) – The report gives the purpose of the 2-phase approach to soil sampling as “to minimize the number of samples and disturbance.” This is an interesting claim as the original November 2006 Part A Work Plan does not claim such a goal and neither does the implementation of the sampling suggest adherence to such a goal. The Tribes have, since the beginning, requested that minimal sampling be performed and only that which is necessary to characterize the Site for the remedial investigation.
21. p. 1-2, para. 3 (Introduction) – Please state the number of samples removed as a result of input received from the tribe(s).
22. p. 2-2, 3<sup>rd</sup> bullet (Overview of Data Gaps Evaluation Process) – The DQO regarding potential impact to groundwater has to date been based on a conservative methodology (*i.e.*, one that over predicts impacts). This results in additional and unneeded samples and site disturbance. Less conservative

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 10

modeling, in addition to consideration of current groundwater quality conditions at the location under consideration should be the criteria for additional samples to address this DQO issue.

23. p. 3-2 (Comparison Values) – This section lists multiple comparison criteria that are used to determine if additional sampling is needed. With the exception of ecologically-based screening criteria, none of the other risk-based criteria are relevant to the areas of this project. Many areas of the site are drainages and will not be developed into residential areas (the underlying basis for these criteria). In addition, upland areas are sacred Tribal land and should be left undeveloped and available for Tribal use. Therefore, the only appropriate human health-based comparison criteria are related to Tribal land uses. A preferred approach would be to calculate these values and use them as comparison criteria. This would reduce the number of needed samples. An alternative approach would be to acknowledge that these Tribal-based land use criteria are more relevant than the listed comparison values and consider this when deciding on the need to collect additional samples.
24. p. 4-2, para. 4 (Data Sufficiency to Estimate Representative Exposure Point Concentrations Evaluation) – The ability to calculate an Exposure Point Concentration (EPC) for use in risk assessment is an important consideration in the chain of DQO questions. If the answer to this question is yes, and assuming that source areas (*i.e.*, highest residual concentrations) have been sampled, then calculated EPCs could be compared to the respective comparison criteria to determine if additional sampling is needed. Additional step-out concentrations, while giving information on extent, will not likely substantially change EPCs. If these EPCs are already near or below comparison criteria, then the area poses little risk. Additional sampling will not change this conclusion, however additional sampling will cause further land disturbance.
25. p. 5-1 (Threat to Groundwater from Residual Soil Concentrations Evaluation) – The evaluation of the threat to groundwater is overly conservative and results in additional unneeded samples. As discussed earlier, a less conservative model coupled with site observations should be used.
26. p. 6-1 & 6-2 (Data Sufficiency to Support Corrective Measures/ Feasibility Study Evaluation) – This section lists 12 remedial alternatives under consideration for evaluation in the CMS/FS for soils. Following this list, the conduct of treatability studies is mentioned. Will pilot testing also be required for certain

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 11

technologies? If so, which technologies will require pilot testing and what level of impact might be expected from such testing?

27. p. 6-3, 1<sup>st</sup> bullet (Data Sufficiency to Support Corrective Measures/ Feasibility Study Evaluation) – No criteria are given for the level of accuracy required for soil volume estimation in support of the CMS/FS planning. There is likely a factor (5X? 10X?) that could be applied to determine whether additional data collection would change the currently-estimated soil volume more than the factor. If not, then remedial planning can move forward with sufficient certainty and additional samples to calculate soil volume are not needed.
28. p. 6-3 (general) – Many of the listed information needs in this section could be determined from either a single sample at this time in the project or be determined during the remediation activities (if required). It is possible that some samples are collected to get CMS/FS information from areas that ultimately will not require remedial action. Therefore, these additional samples would not be needed. Limit the proposed sampling for CMS/FS data to areas where remediation is most likely to be required. For other areas that may not be subject to remediation wait to collect the additional CMS/FS information until such time that it is clear that the data is needed.
29. App. B (Investigation Procedures, Field Methodology and White Powder/Debris Mapping Results (on CD only)) – Are any parts of these procedures intended for the performance of the activities proposed for this Work Plan?
30. App. B (Investigation Procedures and Field Methodology) p. B.1 (Embankment Modification) – Further precautions about how these field activities will be performed need to be included in the text. Activities other than sampling (e.g., embankment modification) need to be performed with the same consideration of minimizing site disturbance. Areas to be graded should be reviewed with Tribal representatives prior to earth moving. During grading, Tribal representatives must also be present in the event that artifacts are unearthed or particularly spiritual areas or phenomenon encountered. If this happens, grading should stop until further evaluation of the area is performed. (See comment on “Standards of Performance”)
31. App. B (Investigation Procedures and Field Methodology) p. B-5, Section B.2.5.2 (Management of Investigation-Derived Waste) – The discussion of IDW

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 12

must include the provisions for storing soils found acceptable for repatriation and the procedures to be followed for repatriation.

32. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-2 and Section C.2 – The paragraph suggests that all detected Tentatively Identified Chemicals (TICs) will be evaluated in the risk assessment. In Section C.2, the reference to a table cites a statistical evaluation. The purpose of Table C-1 is unclear when in addition to the listing of detections; there are comparisons to various criteria.
33. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-3 – The text here, which describes the procedure for the inclusion of TICs in this project, is contrary to the text on page C-2, which states that simply the detection of a chemical is sufficient for inclusion. These passages of text need to be consistent.
34. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-5, para. 2 – This paragraph recommends that the detected inorganic chemicals discussed on the previous page not be selected as chemicals of potential concern/ chemicals of potential environmental concern (COPCs/COPECs). The Work Plan indicates that the COPC/COPEC selection will be performed again in the risk assessment. What is the purpose of this evaluation when it will be performed again?

The recommendation that all these inorganics be eliminated from further evaluation results in both no further characterization and no evaluation in the risk assessments. For some of the essential nutrients (e.g., sodium, potassium, and calcium) the recommendation is appropriate as these chemicals likely do not have sufficient toxicological criteria for evaluation/inclusion in the risk assessment. However, some of the heavy metals can contribute to total non-cancer hazards and should be carried through the characterization and risk assessment.

35. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-6 – The evaluation of semi-volatile organic compounds (SVOCs) detected in various soil samples uses a process that is neither fully explained nor tested using sample results from other areas at the site. Specifically, if a negative test shows no correlation and supports rejection, it would be expected that the test would have positive results in samples where known releases have occurred.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 13

Because there can be different patterns of contaminants in different solid waste management units/ areas of concern (SWMUs/AOCs), then the data from these SWMUs/AOCs should each be independently considered.

36. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-7, Sect C.2.3 – See earlier comment for VOCs as presented for SVOCs.
37. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Section C.3.2.4 – The Tribe agrees with the inclusion of polychlorinated biphenyl compounds (PCBs) in the characterization and risk assessment for both Part A and Part B.
38. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Section C.3.2.5 – The same comment applies to pesticides as presented above for SVOCs. Pesticides were likely used at the facility and should be included in both characterization and risk assessment for both Part A and Part B.
39. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) p. C-11, para. 5 – The conclusions on lead and polyaromatic hydrocarbons (PAHs) are to include these “where data gaps have been identified”. This is a vague statement and is inconsistent with the other evaluations in this section. The Tribe either recommends the inclusion of lead and PAHs or their elimination. Characterization only where data gaps exist is likely an incomplete characterization.
40. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Section C-4 – Have the results of the “less conservative” modeling of migration to groundwater been 1) applied to the data gaps evaluated in this appendix and 2) compared to the previous results to confirm that this new evaluation is less conservative?

#### **Part A Phase 1 Soil Investigation Data Gaps Evaluation Results App. C-1 to C-12**

Note that the following comments focus on the tables of proposed additional samples. However, both text and maps have been reviewed in the preparation of these comments.

41. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C1-14 – Seven sampling locations have been proposed for SWMU-1. Of these,

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 14

sample locations 20 and 21 are at previous sample locations. Number 19 is between two previous samples and the Tribe questions whether this level of resolution is needed. Are three sample locations (22, 23, 24) all needed to provide a needed level of resolution? It seems that 22 and 24 would be sufficient.

42. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C2-19 – A total of 39 samples (some contingency) have been proposed for AOC-1. The 22 BCW sample locations are focused on the mouth of BCW where it enters the Colorado River. These 21 samples (BCW7 being further upstream) are too many samples and will each require the removal of vegetation for access. For an area this small and with an expected pattern of deposition of contaminants to be random across the area, a random sample size of less than 10 samples would likely provide sufficient number for both statistical evaluation and extent. Some of the other AOC-1 samples could be eliminated because of the presence of physical site characteristics that provide contamination boundaries. For example, sample T5d is just downstream from 3 samples and adjacent to a culvert, which provides a divide in the deposited sediment. Also, sample groups 1, 2, 3, 4 and T1e-f seem sufficiently close that the question of whether this level of resolution is needed.
43. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C3-16 – Six sample locations are proposed for AOC-9. Several of the samples are very close to existing samples and the question is whether this level of resolution is necessary for CMS/FS planning. For example, samples 17 and 19 could be eliminated. The justification for sample 15 (across the road and down-slope) is unclear.
44. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C4-18 – Twelve sample locations are proposed for AOC-10. Some locations (11, 12, 13, 14, 15, 16, and 17) are characterized by either debris fields or white powder. It seems likely that both debris fields and white powder areas will be removed as part of the cleanup however the collection of samples within these areas will require equipment access. This causes additional disturbance to surrounding land.
45. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C5-19 – Thirteen sample locations, and two contingent locations, are proposed for AOC-11. Sample 11c-3 is proposed for sampling to groundwater at

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 15

approximately 70+ feet below ground surface (bgs) but the previous sample is 2 parts per million (ppm) at 10 feet bgs. With this large distance to groundwater, does the new modeling predict a potential issue at this location? Why not take samples at depth at 11c-4 where a step-out is needed? Same comment for 11e-5 if 11e-4 is needed upstream, why not take samples at depth there instead? Sample location 11e-6 is in a white powder area. See previous comment for AOC-10.

46. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C7-15 – Twelve proposed and eighteen contingent sample locations have been proposed for AOC-14. Locations 18, 19, 20 have been placed to characterize visibly-stained soil. Since this is a feature with defined size (visible staining) a single sample for characterization purposes could determine chemicals present. The eighteen contingent samples are proposed on grid intersections (pending potential findings of geophysical survey). Is this potential debris connected to that found where samples 21-25 are proposed? If you have a known debris area where these 4 sample locations are proposed, why not first step out using geophysical methods from this location, then use an appropriate number of samples to characterize the fully-identified debris area?
47. App. C (Part A Phase 1 Soil Investigation Data Gaps Evaluation Results) Tables C10-15 – Six sample locations are proposed for BCW and other twelve locations for AOC-4. The six locations in BCW are in a narrow portion of this drainage and one upstream (BCW6), one at confluence (BCW4) and one more downstream (BCW1) with one contingent (BCW2) along centerline is sufficient for characterization. Existing samples along the road where the proposed samples AOC4-17 to 28 are located are either non-detect (ND) or below screening levels for dioxin, 2 samples with PCBs and PAHs above screening....which suggest that limiting additional samples to AOC4-25 and 26 and AOC4-19-28 areas would be sufficient to complete characterization.

## **APPENDIX B – PART B WORK PLAN**

48. Appendix B (General) – The Work Plan identifies that, at many locations, the ability to collect subsurface samples is restricted due to the facility structures. This means that even after the implementation of this Work Plan, characterization will be incomplete. The work plan does not discuss how the within-facility RFI/RI will be completed with the operating facility present.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 16

49. p. 2-15 (Data Sufficiency to Support Corrective Measures Study/ Feasibility Study Evaluation) – The discussion of potential CMS/FS technologies does not include a discussion of the level of certainty in cleanup areas or soil volume estimates. For many of these technologies, estimates ranging within an order of magnitude are sufficient to scope these technologies in the CMS/FS. Therefore, the amount of sampling employed should reflect this needed level of certainty.
50. Table B11-10 – Twenty two samples are proposed for AOC 13. The justification and placement of some of the samples is not clear. Some are near previous samples. For example, the reasons for AOC13-26, 27, 30, 31, 32 are not clear, especially since the overall characterization will not be completed until some future date due to the inability to collect deep samples.
51. Table B15-4 – Proposed samples for AOC 18 overlap areas that are being proposed for sampling at AOC 13. Therefore, seek opportunities to co-locate samples which characterize both of these AOCs to reduce the number of sample locations.
52. Table B17-2 – AOC 20 address storm drains across the facility. However, these drains are located in or near other SWMUs/AOCs which had processes and releases that would define what ended up in these drains. Recommend to eliminate AOC20 and put the storm drains within their appropriate and respective AOC. This will simplify reporting and data evaluation with the drains characterized and results reported with other AOC data.

#### **APPENDIX C – Perimeter Area Investigation Program**

53. Appendix C-Perimeter General – The perimeter areas, being outside the facility fence line, should be part of the Part A sampling plan. They could be lumped together as a new AOC.
54. Figure C-1 – It is not clear on the figure which drainage feature each of the proposed perimeter samples is intended to characterize. Some of the proposed perimeter samples are near proposed sample locations for other SWMUs/AOCs and therefore, when possible, sample locations can be combined to address characterization for multiple SWMUs/AOCs if the same feature/drainage is being characterized. For example, the area of PA-9 and 10 have other samples



Mr. Yue and Ms. Innis  
August 1, 2011  
Page 17

nearby. If a drainage has already been, or will be, sampled then those data should first be considered before collecting additional samples as part of the PA program.

#### **APPENDIX D – STORM DRAIN INVESTIGATION PROGRAM**

55. General – The Tribe was informed by PG&E during a field inspection that the Topock Compressor Station is categorically exempt from permitting under the Storm Water Pollution Prevention Permit (SWPPP) Program under the Clean Water Act. If the facility is being required to gather equivalent information pursuant to Resource Conservation and Recovery Act/ Comprehensive Environmental Response, Compensation, and Liability Act (RCRA/CERCLA) investigations, then the exemption, for all intents and purposes, seems inappropriate. The one difference seems to be that under the SWPPP Program, non-point as well as point sources would be considered. But then the approach taken here in regard to perimeter areas seems to address the non-point mechanisms. The Tribe has many concerns about stormwater management, as expressed in its January 2011, letter objecting to the FEIR.<sup>3</sup>
56. p. D-1-2, para. 2 (Storm Drain System Data Needs) – It is unclear why storm drain sampling will only occur outside the fence line. The collection points for the storm drains, often within or on the fence line, can provide an initial understanding of the potential contaminants that may have entered the storm drain. Storm drain sampling should begin at within the storm water collection area and then proceed downstream as warranted by either the data or records of release/repair.
57. p. D-1-5, para. 4 (Flow Testing) – The use of dyes to test the flow of water in storm drains introduces another potentially unacceptable impact to the environment. Just water should be used in the proposed alignment testing prior to invasive testing.
58. p. D-1-7 (Storm Drain Soil Investigation) – Proposed sampling after the alignment phase includes potential sample locations both at the storm drain outfall as well as along the storm drain path. The outfall area is the most likely

---

<sup>3</sup> See letter from Ms. Courtney Ann Coyle, Esq. (FMIT Counsel) to Ms. Karen Baker, DTSC, dated January 29, 2011, re: "Objections of Fort Mojave Indian Tribe to Final Environmental Impact Report for the Topock Compressor Station Groundwater Remediation Project- SCH#2008051003."

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 18

to have received contamination and therefore should be sampled first. On the other hand, there may be evidence of ponding or sedimentation that would indicate a more likely location of accumulation of contaminants.

59. Table D2 – Opportunities for collecting fewer, more strategically-located samples. For example, by focusing on sources and outfalls, eliminate SD9 and collect SD10; eliminate SD8 and collect SD7; eliminate SD14 and 16 and collect SD 15; eliminate SD 17 and 19 and collect SD 18. Perhaps other storm drains can be sampled at the ends-of-pipes prior to determining if additional samples are needed or in areas of obvious ponding or sedimentation as discussed above.

Also, how will the results of SD12 be interpreted when that sample is proposed for collection in an area already investigated and known to be contaminated. If the alignment study shows that the drainage is intact, and drains into an already contaminated area, then no samples of the drain pathway are needed. This is the same issue for SD13.

## **STANDARD OPERATING PROCEDURES**

60. A standard operating procedure (SOP) is needed to address the interface between PG&E field personnel and Tribal Monitors and Tribal Cultural Experts. Attached is a proposed draft of such an SOP for consideration. Obviously, this draft may benefit from further review by members of other affected tribes.

Additionally, further consideration is needed to proceduralize the stockpiling of excavated soils, drill cuttings, and cores for potential future repatriation at the site as well as further discussion on abandonment of boreholes, wells, and excavations. The Tribe offers to assist PG&E in preparing such SOP drafts.

Thank you for the opportunity to review and comment on this document and for the various briefings and time allowances to prepare comments. The Tribe looks forward to further discussion of these comments at the meeting of the Technical Working Group (TWG) scheduled for September 1-2, 2011, at the Topock Compressor Station.

Mr. Yue and Ms. Innis  
August 1, 2011  
Page 19

Sincerely,  
HARGIS + ASSOCIATES, INC.



Leo S. Leonhart, PhD, PG, CHG  
Principal Hydrogeologist

Attachment: Draft SOP-CUL1

cc: D. Bonamici, CRIT  
C. Coyle  
R. Escobar, Chemehuevi  
G. Glassco, Yavapai  
M. Henderson, BLM  
D. Hubbs, Hualapai  
L. Jackson, Hualapai  
A. Lara, BLM  
S. McDonald  
N. McDowell-Antone, FMIT  
J. Marcos, DTSC  
J. McCormick, Cocopah  
Y. Meeks, PG&E  
L. Otero, FMIT  
G. Ray, CRIT  
T. Williams, FMIT

## **SOP-CUL1**

### **Respect for Native American Cultural and Religious Landscape and Coordination with Tribal Monitors during Field Operations Standard Operating Procedures for PG&E Topock Program**

---

This standard operating procedure (SOP) outlines guidance on coordination and protocol between all PG&E personnel, contractors, and subcontractors engaged in the performance of PG&E Topock Program field activities and Tribal Monitors and Tribal Cultural Experts representing the respective cultural and religious interests of Native American Tribes and Nations affected by the Topock Program.

#### **PURPOSE**

The Topock site and adjacent lands are part of a larger geographical area referred to as a Traditional Cultural Landscape (TCL). The TCL is the ancestral home of the Fort Mojave Indian Tribe and other Native American Tribes including the Hualapai Nation, Colorado River Indian Tribes, Quechan Nation, Cocopah Tribe, and Yavapai-Prescott Nation. This entire TCL is of tribal religious significance. In some areas and at certain times, tribal members carry out various cultural activities and religious ceremonies. PG&E has committed to assuring that the ongoing operations of the Topock Program do not interfere with and moreover will respect these important cultural and religious activities as well as the sacredness of the landscape. Accordingly, this SOP shall serve as the guidance for all personnel performing field activities at the Site.

#### **GENERAL PERFORMANCE STANDARD**

The underlying standard of performance in regard to the field presence of non-Native American personnel at the site is respect for Native American culture and religion. This respect is manifested in the general appropriate decorum of field personnel in terms of language; housekeeping; and impact avoidance, minimization and/or mitigation. Additionally, field personnel should be aware that the tribes engage Tribal Monitors and Tribal Cultural Experts, whose mission is described below. Field personnel shall always act in deference to the Tribal Monitors and Tribal Cultural Experts whenever a matter of cultural significance is in question.

#### **INVESTIGATION-DERIVED WASTE**

During the implementation of various field investigations, various types of waste materials (sometimes classified as “investigation-derived waste” or “IDW”) are generated. All of these materials comprise soils derived from the TCL. These materials are regarded as integral sacred components of the TCL. The tribes have requested that these soils not be disposed, but rather, to the extent practical, stockpiled for eventual repatriation. Arrangements for handling these soils must be made through the PG&E Project Manager, who will determine the disposition in consultation with the affected tribal representative(s).

#### **COORDINATION AND CONSULTATION WITH TRIBAL MONITORS**

Through past involvement, each affected tribe has had the opportunity to assign a Tribal Monitor to oversee field activities and provide recourse for the field personnel in regard to decisions

involving impacts on cultural or religious matters. The following sections describe the type of coordination and protocol expected between field personnel and the Tribal Monitors.

### **Definition of Tribal Monitor**

Tribal Monitors (or Tribal Cultural Experts) are Native Americans assigned by the respective tribes for the purpose of overseeing not only field activities at the Topock Site but impacts to the sacred area which include avoiding additional impacts not necessarily defined within the work plans. Tribal Monitors are experts in their respective Tribal culture and religion.

### **Responsibilities of Tribal Monitors**

During field operations at the Topock Site, the Tribal Monitors oversee activities to ascertain the nature and level of impact to the Traditional Cultural Property at and surrounding the Site. During any particular phase of field activity, multiple Tribal Monitors may be present to represent and assure protection and proper respect for the particular cultural and religious interests of their respective tribes.

### **Focus of Tribal Monitor Oversight**

Primarily, Tribal Monitors are concerned with the manner in which the work is conducted and the type of disturbance created by the work. Such disturbances are subject to various laws that protect cultural heritage such as the Archeological Resource Protection Act (ARPA) and the Native American Graves Protection and Repatriation Act (NAGPRA). This concern focuses on the permanence, location on the landscape, duration and intensity, and timing of the work, as it relates to tribal cultural resources, values and religious aspects. Tribal Monitors are alert to the findings of Native American artifacts and other remnants or indications of tribal history and/or culture.

### **Working with Tribal Monitors**

In order to assure proper coordination with Tribal monitors present during field operations, the following requirements must be maintained by all field personnel:

- All field personnel shall be required to read, acknowledge, and comply with the provisions of this SOP-CUL1.
- Any findings of artifacts during sampling, drilling, excavation, earth moving, exploring, surveying, monitoring or other field activities require immediate notification of the Tribal Monitor.
- Monitors shall be made aware in advance of the purposes and context for any request to monitor and shall be provided any appropriate background materials or reports prior to the field activity. Generally, the initial point of contact will be the Tribal Project Manager to whom the Tribal Monitor(s) report(s).
- If a Tribal Monitor is not present when a find is made, the field leader is still required to notify the Tribe prior to proceeding.

- Items found shall not be disturbed or removed without the approval of the Tribal Monitor(s).
- Tribal Monitors shall have the authority to ask for work stoppage if a determination is made that there is an unacceptable, unplanned, or unforeseen level of disturbance to a spiritual resource or a significant cultural finding.
- Tribal Monitors will comply with all appropriate worker safety provisions as presented in the Site Health and Safety Plan.
- Tribal Monitors shall be notified in advance of field schedules, pre-field briefings, and other meetings of relevance to the field operations.
- Tribal Monitor(s) shall be invited to participate in all field meetings.
- Upon request of the Tribal Monitor(s), the field manager shall provide an explanation of ongoing field activities in the context of information necessary to understand the type and progression of the impact.
- Participation of the Tribal Monitor(s) in any particular field activity on any particular day is optional. Nevertheless, PG&E is responsible for assuring that the Tribal Monitor(s) are aware of the planned activity(ies) and have been given sufficient notice to participate.

### **ACKNOWLEDGEMENT AND ACCEPTANCE OF SOP-CUL1**

All personnel engaged in field work in support of the PG&E Topock Program are required to read SOP-CUL1 and acknowledge understanding and acceptance. The Project Manager of each Contractor and Subcontract shall assure this requirement and provide a signed and dated certification by each employee or contractor entering the field. This record shall be maintained by PG&E and available for inspection by the Tribal Monitors.