

## **DRAFT STATEMENT OF BASIS**

For a  
Preferred Groundwater Remedy

Pacific Gas and Electric Company, Topock Compressor Station  
Needles, California  
EPA ID NO. CAT080011729

April 28, 2010

**GROUNDWATER PROPOSED PLAN**  
**Pacific Gas and Electric Company**  
**Topock Compressor Station**  
**Needles, California**  
**June 4, 2010**



U.S. Department of the Interior

# DRAFT STATEMENT OF BASIS FOR A PREFERRED REMEDIAL ALTERNATIVE AT PACIFIC GAS AND ELECTRIC COMPANY, TOPOCK COMPRESSOR STATION

## INTRODUCTION

The Department of Toxic Substances Control (DTSC) is issuing this draft Statement of Basis for a preferred groundwater remedy (Preferred Alternative) at the Pacific Gas and Electric Company ("PG&E"), Topock Compressor Station and its surrounding area affected by the groundwater contamination ("the Site") located near Needles, California. This draft Statement of Basis identifies the Preferred Alternative among the remedial action alternatives evaluated for cleaning up groundwater contaminated by past waste disposal practices at the Site.

This draft Statement of Basis is being issued by DTSC as the lead agency responsible for Corrective Action activities conducted at the Site pursuant to an agreement signed between DTSC and PG&E in 1996 under the authority of the California Health and Safety Code section 25187 and the Resource Conservation and Recovery Act (RCRA) addressing areas contaminated by the historical release of hazardous constituents at the Site. DTSC is coordinating the selection of the Preferred Alternative with the United States Department of the Interior (DOI). As a Federal agency with land ownership interests surrounding the Site area, DOI has a similar, but separate authority under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). DOI is concurrently proposing a Preferred Alternative under a Proposed Plan in accordance with CERCLA requirements.

DTSC is issuing this Draft Statement of Basis for a Preferred Alternative as part of its public participation responsibilities.

DTSC, in consultation with DOI, may modify the Preferred Alternative or select another response action presented in this draft Statement of Basis after

receipt of new information and/or review of public comments. Therefore, the public is encouraged to review and comment on all alternatives presented in this draft Statement of Basis.

### PUBLIC COMMENT PERIOD:

**JUNE 4, 2010 - JULY 19, 2010**

DTSC will accept written comments on the draft Statement of Basis during the public comment period ending July 19, 2010. You may submit your comments to:

Mr. Aaron Yue  
Project Manager  
Department of Toxic Substances Control  
5796 Corporate Avenue,  
Cypress, California 90630  
E-mail: [ayue@dtsc.ca.gov](mailto:ayue@dtsc.ca.gov)

You are invited to attend one of the open house/public hearing sessions to learn about the draft Statement of Basis for cleaning up groundwater at the PG&E Topock Site. Written and oral comments will also be accepted during the public hearing portion immediately following the open house. These sessions will be held at the following locations:

### OPEN HOUSES / PUBLIC HEARINGS

|                      |  |
|----------------------|--|
| <b>June 22, 2010</b> | <b>Parker Community/Senior Center,<br/>Parker, AZ</b><br><b>Open House</b> 5:00 – 6:30 p.m.<br><b>Public Hearing</b> 6:30 – 8:00 p.m.            |
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This draft Statement of Basis, draft EIR, project reports, fact sheets, and other project related documents are located in the information repositories listed on the last page and at the Topock Website at: <http://www.dtsc-topock.com>, under "Document Library"

Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 3:01:12 PM

**T**hese statements are not true and correct. The statements are also misleading. The action being proposed is not for cleaning up groundwater contaminated by past waste disposal practices at the Site as stated. This groundwater remedy being proposed is limited and restricted and does not address all the groundwater contamination. This groundwater remedy only addresses one (1) chemical in the groundwater plume of contamination in a very limited area since the entire extent of groundwater contamination is not known at this time. Further remediation of the other chemicals in groundwater in addition to any potential new chemicals are proposed to be addressed in an unspecified future unspecified time when PG&E may decide to do so. This Statement of Basis is defective and is segmenting and piece-meal of a complete groundwater remedy without an adequate scientific basis or rationale justification. Further DTSC/DOI is allowing PG&E to minimize groundwater remedial actions by NOT requiring PG&E to completely remediate the entire groundwater plume of contamination that was caused by PG&E dumping hazardous materials and hazardous substances onto the ground surface. Rather than PG&E dealing with the contamination in an environmentally sound and appropriate manner PG&E chose to dump this waste onto the ground and allow it to impact the groundwater. DTSC/DOI should not acquiesce to PG&E corporate desires, political pressures, and the desires of a few upstream non-impacted Tribal members in order to limit and restrict the complete removal and remediation of all contamination caused by PG&E is not protective of human health and the environment, and is not protective of current and future generations of the people of the State of California and the People of the State of Arizona. DTSC/DOI should be requiring the highest possible protection for the Colorado River and PG&E should be required to remove all contamination that they caused as a direct result of their activities.

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 3:10:58 PM

**T** Prior to the scheduled meetings in Parker Arizona and Lake Havasu City Arizona, a written request was provided to DTSC requesting a Mohave interpreter be present at the meetings because a number of Mohave speaking elders who have been previously excluded from the process wanted to attend and to understand what was occurring, participate in the meeting, and desired to speak at the meetings, provide comments for the administrative record and make their views heard. DTSC was not responsive and did not address our request and did have any Mohave speaking person available at either of the meetings. Therefore, Mohave elders were excluded from participating and did not want to attend as they desired. The group of Mohave elders believes that this is evidence of a continued pattern to exclude comments and input from a group of Tribal members and/or the public who do not directly support the predetermine remedy desired by PG&E and DTSC who have chosen to acquiesce to political pressures, and support unsubstantiated and unverified cultural concerns from a very small minority of Mohave people, rather than representing the people of the State of California and Arizona, and seeking to protect human health and the environment and the drinking water supply to millions of people in California and Arizona. Public participation is an essential part of the CEQA process. A paramount consideration is the right of the public to be informed in such a way that it can intelligently weigh the environmental consequences of the contemplated action and have an appropriate voice in the formulation of any decision. DTSC failure to provide requested interpreters is not consistent with the intent of public participation.

Were any EIR notices mailed to interested parties? What was the criteria in mailing these notices? We understand that some individuals as well as environmental consultants that provided comments on the NOP and had previously participated and expressed an interest throughout the project who provided comments that were critical may have been excluded from receiving direct mail notices. Was this exclusion at the request of PG&E in an attempt to limit critical comments on negative input that was not consistent with the desired pre-determined remedy decision?

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 3:17:44 PM

**T**It is stated that DTSC is the lead regulatory agency. Can you please explain the detailed process for DTSC and DOI responding to stakeholder comments on the Statement of Basis and the EIR that will be provided? Does DTSC/DOI staff actually review and prepare responses to comments received? Or does DTSC/DOI provide the comments to PG&E who then prepares the desired PG&E response to comments in order to frame the response that best meets PG&E desire and needs? Will DTSC/DOI ensure that each and every comment is provided a detailed and complete response? Does DTSC/DOI have an obligation to ensure that each and every comment is provided a detailed and thorough response? In the past rather than responding to comments DTSC/DOI has attempted to confuse persons making comments by limiting the response or by directing the author of the comment to some previous document rather than providing a direct and detailed response to the comments. Will DTSC/DOI provide responses that are intended to embarrass, minimize, and/or reduce the concern or importance of the comments made?

Does DTSC/DOI have any obligation to provide the initial comments and/or the draft response to comments to PG&E or any

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<http://www.dtsc-topock.com>, under "Document Library"

specific Tribal group or legal firm for review prior to DTSC/DOI finalizing the comments? If so who are they? and what are the terms of providing the comments?

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Detailed information concerning groundwater contamination at the Site can be found in the 2009 Volume 2 RCRA Facility Investigation/Remedial Investigation (“RFI/RI”) Report and 2009 Volume 2 Addendum. The Detailed comparative evaluation of remedial alternatives can be found in the 2009 Corrective Measures Study/Feasibility Study (“CMS/FS”). These and other documents are contained in the Administrative Record file in the public repositories for the Site (see last page for locations). DTSC and DOI encourage the public to review these documents to gain a more comprehensive understanding of the Site and the activities that have been conducted to date.

## **PG&E TOPOCK COMPRESSOR STATION HISTORY**

The PG&E Topock Compressor Station (“Station”) is located adjacent to the Colorado River in eastern San Bernardino County, California, approximately 15 miles southeast of Needles, California, south of Interstate 40, in the north end of the Chemehuevi Mountains. The Station occupies approximately 15 acres of a 65-acre parcel of PG&E-owned land. The PG&E property is surrounded by the Havasu National Wildlife Refuge (“the Refuge”) and lies directly south of land under the jurisdiction of the Bureau of Land Management (BLM) and Bureau of Reclamation (BOR).

PG&E began operations at the Station in December 1951 to compress natural gas supplied from the southwestern United States for transport through pipelines to PG&E’s service territory in central and northern California. Historic records indicate that PG&E held rights to operate a gas pipeline and compressor station dating back to the Federal Act of 2/25/20 (41 Stat. 449, as amended). <sup>4</sup>Based on available title records, PG&E gained full ownership of the land in 1965.

Operations at the Station have been fairly consistent since the facility began operations in 1951. The operations consist of six major activities: compression of natural gas, cooling of the

compressed natural gas and compressor lubricating oil, water conditioning, wastewater treatment, facility and equipment maintenance, and miscellaneous operations. The greatest use of chemical products involves treatment of cooling water, and the greatest volume of waste produced consists of “blowdown” from the cooling towers. <sup>1</sup>blowdown consists of used cooling water that is periodically removed from the operating circuit because it contains too much salt generated from repeated evaporation of the cooling water.

From 1951 to 1985, hexavalent chromium-based corrosion inhibitors and biocides were added to the cooling water circuit to protect the piping and equipment in the cooling towers. After 1964, the cooling tower blowdown was treated to remove hexavalent chromium prior to discharge. Until approximately 1970, cooling tower blowdown was discharged directly into Bat Cave Wash, an unlined arroyo immediately west of the Station and either percolated into the ground or evaporated at the surface. Around 1970, PG&E discontinued blowdown discharge to the wash and <sup>2</sup>began discharging treated blowdown into four single-lined evaporation ponds located west of Bat Cave Wash. From 1970 to 1973, <sup>3</sup>PG&E injected treated blowdown into bedrock beneath the site using an injection well (well PGE-08), but that process proved impractical and was discontinued.

In 1985, PG&E replaced the hexavalent chromium-based cooling water treatment products with non-hazardous phosphate-based products, at which time PG&E discontinued operation of the blowdown treatment system. Use of the four, single-lined evaporation ponds continued until 1989, when they were replaced with four new double-lined ponds that are still in use under permits by the California Colorado River Basin Regional Water Quality Control Board. <sup>5</sup>The cooling tower blowdown treatment system and the single-lined ponds were physically removed and clean-closed by 1993.

## Page: 4

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 3:23:06 PM

**T** Is the salt that PG&E dumped on the ground considered a contaminant or contamination? Has the salt impacted groundwater or does it have the potential to impact groundwater? What is the background level for salt in soil, groundwater and surface water?

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 3:21:58 PM

**T** What was the concentration level that PG&E treated this blowdown? Was it greater than the 32 micrograms per liter that was stated as being upland groundwater background levels? What was the total amount of treated water that was injected?

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 3:22:17 PM

**T** What happened from 1973 when PG&E stopped injecting blowdown to the bedrock until 1985 when PG&E reported to replaced the hexavalent chromium?

Is this the same chemical that was the serious problem at the PG&E Hinkley facility that contaminated the drinking water wells in the Hinkley community? Is this the same chemical that the Hollywood movie was based on about PG&E?

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Sequence number: 4

Author:

Subject: Comment on Text

Date: 7/7/2010 3:22:59 PM

**T** There seems to be an omission or gap in the stated land ownership from 1951 to 1965 that does not seem to be discussed or is being omitted. Why? Was the State of California ever a land owner when PG&E operated the facility? Did the State of California ever leased the land to PG&E for their operations? Was the State of California ever an owner of the land during a time when contamination was dumped on the ground? Can the State of California be considered, in any way, a potential responsible party for the cleanup?

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Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 3:20:50 PM

**T** I do not understand what "clean closed" actually means please explain? Was PG&E allowed by DTSC to leave any residual contamination in the soil above residential standards or background levels? If so what were these levels that DTSC allowed to be left in the soil? Were these concentrations above regional soil background levels? Do any of these contaminants have the potential to migrate and impact groundwater? Have any of these contaminants migrated to groundwater?

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## SITE BACKGROUND

Investigation activities at the Site by PG&E and DTSC date to the late 1980s with the <sup>1</sup>identification of solid waste management units and areas of concern through a RCRA Facility Assessment. In 1996, PG&E and DTSC entered into a Corrective Action Consent Agreement in which PG&E agreed to perform a RCRA Facility Investigation/Corrective Measures Study subject to the oversight and approval of DTSC. In 2005, PG&E and DOI entered into an Administrative Consent Agreement in which PG&E agreed to perform a CERCLA Remedial Investigation/ Feasibility Study to characterize the nature and extent of contamination and develop and evaluate cleanup alternatives subject to the oversight and approval of DOI.

Since 2005, DTSC and DOI have coordinated in their oversight of PG&E's work under these agreements. Investigative and remedial activities have been performed pursuant to both RCRA corrective action and CERCLA remedial action requirements. The RCRA Facility Investigation has been combined with a CERCLA Remedial Investigation (the "RFI/RI Report") and the RCRA Corrective Measures Study has been combined with the CERCLA Feasibility Study (the "CMS/FS Report").

<sup>4</sup>To efficiently manage the large volume of information generated by the investigation of the Site and accelerate cleanup of groundwater, the investigation of the Site has been separated into two components: the first is an investigation of groundwater contamination and the second will focus on contaminants in surface and subsurface soil. As a result, the RFI/RI Report has been separated into three volumes. PG&E has completed the 2007 Volume 1 (Site Background and History), 2009 Volume 2 (Hydrogeologic Characterization and Results of Groundwater and Surface Water Investigations), and a 2009 Volume 2 Addendum. Volume 3 is pending and will include final characterization data of soil contamination and evaluation of the potential for soil contamination to leach into groundwater at the Site.

While the RFI/RI was underway, beginning in 2004, DTSC and DOI directed PG&E to undertake certain measures, known as "Interim Measures" or "Time Critical Removal Actions", to ensure that hexavalent chromium and other contaminants in the groundwater did not reach the Colorado River. Interim Measures 1, 2, and 3, collectively, involved the construction of treatment facilities and installation of four extraction wells to pump contaminated water out of the aquifer for treatment and disposal. More importantly, these Interim Measures were designed to pull contaminated groundwater away from the Colorado River until a permanent remedy could be selected. DTSC originally envisioned a single remedy decision for soil and groundwater. <sup>2</sup>However, due to the potential threat to the water resource at the site and the Colorado River, selection of a remedy for the groundwater contamination became priority while the soils investigation was delayed. DTSC anticipates a separate soil remediation decision, if necessary, in the future.

## SITE CHARACTERISTICS

### Cultural and Environmental Resources

<sup>3</sup>The Site is located within an area considered to be of traditional cultural importance and spiritual significance to federally-recognized Native American tribes with ancestral ties to the region. <sup>5</sup>Nine federally recognized Native American tribes have ancestral ties to the area and have expressed interest in the project: the Chemehuevi Indian Tribe, Cocopah Tribe of Arizona, Colorado River Indian Tribes, Fort Mojave Indian Tribe, Havasupai Indian Tribe, Hualapai Indian Tribe, Quechan Tribe of the Fort Yuma Indian Reservation, Twenty-Nine Palms Band of Mission Indians, and Yavapai-Prescott Tribe. <sup>6</sup>Many of these tribes expressed strong beliefs that the selection of remedial action at the Site must fully consider the significance of cultural resources potentially affected and that adverse effects must be mitigated to the fullest extent possible. Tribal views regarding the significance of the cultural resources potentially affected and the importance of mitigating adverse

## Page: 5

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 3:25:42 PM

**T** So that I understand the magnitude of the issues, how many PG&E solid waste management units were identified that may potentially be sources of contamination? How many areas of concern were identified?

Are any of these solid waste management units or areas of concern a potential threat to groundwater? Is it possible that contamination from these units may have impacted groundwater?

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 3:32:35 PM

**T** Please explain what is the current and immediate threat to the water resource and the Colorado River at the site? Is there a current real and direct threat to the Colorado River? Is the Colorado River being impact right now? Is the Interim Measures No.3 keeping the contamination from the Colorado River?

Who requested that the soils investigation be delayed? Was it PG&E?

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 3:30:48 PM

**T** What is the three (3) dimensional define limits of the "area" considered to be of traditional cultural importance and spiritually significance for each specific federally recognized Tribe that you have referenced? What is the exact specific spiritual significance that you are referencing. Spiritual significance can take many forms in religious beliefs. Some religions worship "good" or the "bright side". Others worship "evil" or the "dark side". Since it appears that DTSC/DOI is making decisions based on spiritual beliefs, we would like to know in more specific detail what the beliefs that you reference actually are. Please describe for each Tribe and indicate the corresponding area on a map the area that they consider traditional cultural importance and spiritually significant. Please describe and present the documents and maps that each Tribal Government has provide to DTSC/DOI in order for DTSC/DOI to make this statement and conclusion. Does the area have any spiritual significance to to anyone else (non-tribal) in the area? What other non-tribal spiritually significant activities exist within the same boundaries that is considered having spiritual significance to the Tribes. What other non-tribal spiritual landmarks (i.e. crosses, gatherings, churches, places or worship) have existed or exist within the same defined area area considered spiritually significant to the Tribes. Does any portion of the PG&E or DTSC settlement agreement provide for a shut down of the Interim Measures No.3 treatment facility in the event of any recognized spiritual tribal activities in the area? If so, please provide a detailed summary table of the shut down, requesting party, dates, times, and activity conducted. What is DTSC/DOI definition of "spiritual significant" ?

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Sequence number: 4

Author:

Subject: Comment on Text

Date: 7/7/2010 3:28:18 PM

**T** What was the basis for this decision? Who made it? Was this a decision by only DTSC? Did DOI also approve and agree to this approach? This states that the decision was to "accelerate cleanup of groundwater" It does not state that the decision was to only cleanup one chemical in the groundwater and it does not state to only cleanup a portion of the contaminated groundwater plume. The decision does not match the actions that are being proposed. Therefore, the Statement of basis is defective.

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Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 3:35:15 PM

**T** So that I can have an appreciation of the proximity of each Tribe to the contamination and the potential impacts, please indicate how far each Tribe is from the contamination? So that I understand the number of Tribal people this may impact what is the enrolled member population currently living on this land? What Tribes are upstream and not potentially impacted from the contamination and what tribes are downstream and potentially impacted. What are the concerns of the upstream non-impacted tribes related to the concerns of the downstream impacted tribes?

Has any Tribe received a gift of land from PG&E related to this project? If so please identify the Tribe, the land, location and when the gift of land was received by that Tribe.

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Sequence number: 6

Comments from page 5 continued on next page

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Author:

Subject: Comment on Text

Date: 7/7/2010 3:24:49 PM

**T** Was this an individual Tribal member comment our a written formal position of the Tribal government that represented the majority of the Tribal members beliefs? You say "many" who and which ones? Did any of these Tribal members state that the significance of cultural resources should take precedence over the removal of the contamination or the protection of the Colorado River? or allow the living people or future generations to be affected by this contamination? What Tribes stated that it was more important to protect cultural resources rather than e protecting of the Colorado River?

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Sequence number: 7

Author:

Subject: Comment on Text

Date: 7/7/2010 3:28:10 PM

**T** If this pending document will evaluate the potential for soil contamination to leach into groundwater, then how can DTSC/DOI proceed with any groundwater remedy at this time? Until DTSC/DOI knows the complete and full potential for contamination to leach from the soil into the groundwater DTSC/DOI will not know what the appropriate and complete groundwater remedy or project will be. Or has some pre-determined decision been reached with PG&E that they will not have to do any additional work or remediation? What is the complete list of contaminants that were found in soil so that I can know what possible contaminants may potentially leach from soil into the groundwater in the future?  
Did PG&E at any time request that DTSC/DOI delay or defer this investigation or work? If so, please explain and describes PG&E's request and the response provided by DTSC/DOI. Therefore, this Statement of Basis is defective.

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Sequence number: 8

Author:

Subject: Comment on Text

Date: 7/7/2010 4:21:12 PM

**T**

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<sup>2</sup> Effects on those resources have been and will continue to be solicited and incorporated into the decision-making process as the remedy is selected, designed, and implemented.

The project Site area contains sensitive cultural resources that are of religious and cultural significance to some of these tribes, as well as other identified historic areas, such as portions of Route 66. These cultural resources are subject to the protections provided by numerous federal statutes, regulations, and Executive Orders.

Protection of historic properties and cultural resources, in particular those that are listed, or eligible for listing, on the National Register of Historic Places, requires that DOI, in consultation with State Historic Preservation Offices, the Advisory Council on Historic Preservation, the tribes, and other consulting parties, identify adverse effects associated with remedial action at the Site and seek ways to avoid, minimize, or mitigate such effects. The BLM, on behalf of itself, DOI, Fish and Wildlife Services (FWS), and BOR, is the lead federal agency for historic and cultural issues at the Site. Substantive mitigation measures adopted by the BLM as a result of federal consultation will be satisfied during the design and implementation of the remedy at the site.

DTSC, as the California state lead agency on this project, solicited input from interested tribes, and evaluated the potential impacts of the remedial action and identified proposed mitigation measures within a draft Environmental Impact Report (dEIR) in accordance with requirements of the California Environmental Quality Act (CEQA). The dEIR is also available in the public repository for review and comment at the same time as this draft Statement of Basis.

The Site is also located within an environmentally sensitive area that includes the Havasu National Wildlife Refuge, endangered species and migratory bird habitat, and public land formally designated as an Area of Critical Environmental Concern by the BLM. Moreover, much of the Site lies within the

<sup>1</sup> floodplain of the Colorado River, a source of drinking water and irrigation for millions of people downstream. Remedial action within this area must comply with the applicable land management requirements established and implemented by BLM, FWS, and BOR. <sup>3</sup> In addition, the contaminated groundwater is located within a groundwater basin that has been designated for beneficial uses under the Colorado River Basin Regional Water Quality Control Board.

#### Hexavalent Chromium Groundwater Plume

The RFI/RI Volume 2 Report for groundwater, completed in February 2009, characterized groundwater and surface water for contamination associated with past PG&E blowdown discharges from the Compressor Station. Groundwater occurs beneath the ground surface in alluvial geologic deposits consisting primarily of sands and gravels, with some silts and clays.

The groundwater data indicate that a plume of groundwater contaminated with mainly hexavalent chromium extends from the location of the former area where blowdown was discharged in Bat Cave Wash to the floodplain area adjacent to the Colorado River, north of the railroad tracks. <sup>4</sup> Current data indicate that hexavalent chromium is not discharging to the Colorado River. Within the plume, hexavalent chromium is typically present at all depth intervals of the upland portion of the aquifer, but is generally limited to deep wells in portions of the floodplain aquifer near the river. Organic-rich and low-oxygen conditions exist in the aquifer and sediments near and underlying the river that convert hexavalent chromium to a less mobile, less toxic form known as trivalent chromium. <sup>5</sup> This trivalent chromium will drop out of the groundwater under normal subsurface conditions as it will bind to the geologic deposits at the Site.

## Page: 6

---

Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 3:40:42 PM

**T** Only one (1) sentence addresses the significance of the Colorado River as a critical water supply and major importance to millions of people of Arizona and Southern California. Why?

Why is so much discussion given regarding Tribal Cultural resources and the most significant concern of the Colorado River and water supply minimized?

In fact the Colorado River represents a greater significant feature to the Mohave culture and not the Topock Maze. The name Mohave is composed of two Indian words "aha" which means water and "Maca" meaning alongside. The historic Mohave were know as Pipa Aha Macav, the people by the water. For DTSC to suggest that other features such a Topock Maze somehow has a greater or any significance in the Mohave Culture is incorrectly supporting and enabling the invention of Tribal Cultural Traditions. This is also, allowing PG&E to limit their remedial efforts and conducting a complete groundwater remedy by supporting limited, unverified, undocumented facts and comments from a few Tribal individuals that do not represent the documented views of the Tribal Government and their Tribal members. This is not a justification to limit complete and full removal and remediation of each and every chemical illegally dumped onto the soil and allowed to enter and contaminate the groundwater that has now moved under the Colorado River.

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 3:44:03 PM

**T** In relation to the protection of human health and the environment and preventing the any possibility of contaminated groundwater entering the Colorado River and potentially impacting the lives of millions of people in Southern California, how has and will DTSC/DOI rank the protection of human health and environment related to impacting unverified and undocumented religious cultural significance when evaluating and selecting a remedy? What is more important? Will DTSC/DOI weight the protection of cultural resources greater than the protection of the drinking water supply for millions of people in Arizona and Southern California? Is DTSC or PG&E required to make any specific statements, propose or present any specific actions, based on any previous legal settlement agreements, judgements, or pre-determined side agreements? If so what are they? Does the existent of any settlement agreement limit, in any way, DTSC's ability to fully and completely act as an independent regulatory agency? Or is DTSC bound by any terms in the settlement agreement that may cause DTSC to be impartial in the decision making process?

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 3:44:01 PM

**T** Why is considerable text and discussion given to Tribal Cultural Resources and little to minimal discussion provided relative to the importance of the Colorado River as the single most important source of drinking, agricultural and recreational water supply to Arizona and Southern California? There appears to be a purposeful decision to downplay the importance of the Colorado River as a water supply in favor of discussions related to Tribal Cultural resources. Why is this the case?

---

Sequence number: 4

Author:

Subject: Comment on Text

Date: 7/7/2010 4:18:11 PM

**T** Is it possible that hexavalent chromium is actually discharging to the Colorado River? However, due to laboratory detection limits and the fact that sampling techniques in the Colorado River allow for a mixing zone and potential dilution with with the fast moving Colorado River water before a sample is collected? Is DTSC/DOI able to state that the existing bedrock groundwater contamination in East Ravine is NOT in direct contact with the Colorado River? Is this contamination discharging into the Colorado River? Has the full and complete extent of the groundwater contamination been defined? Is their a greater potential direct threat to the Colorado River from the groundwater contamination at East Ravine since the bedrock is in direct contact with the Colorado River and no continuous reducing conditions exist in this area?

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Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 3:45:58 PM

**T** This is the conversion of one type of contamination to another type of contamination and does not actually remove the contamination. This is still contamination that is being left in the ground. This gives the appearance and/or illusion of actually doing

Comments from page 6 continued on next page

effects on those resources have been and will continue to be solicited and incorporated into the decision-making process as the remedy is selected, designed, and implemented.

The project Site area contains sensitive cultural resources that are of religious and cultural significance to some of these tribes, as well as other identified historic areas, such as portions of Route 66. These cultural resources are subject to the protections provided by numerous federal statutes, regulations, and Executive Orders.

Protection of historic properties and cultural resources, in particular those that are listed, or eligible for listing, on the National Register of Historic Places, requires that DOI, in consultation with State Historic Preservation Offices, the Advisory Council on Historic Preservation, the tribes, and other consulting parties, identify adverse effects associated with remedial action at the Site and seek ways to avoid, minimize, or mitigate such effects. The BLM, on behalf of itself, DOI, Fish and Wildlife Services (FWS), and BOR, is the lead federal agency for historic and cultural issues at the Site. Substantive mitigation measures adopted by the BLM as a result of federal consultation will be satisfied during the design and implementation of the remedy at the site.

DTSC, as the California state lead agency on this project, solicited input from interested tribes, and evaluated the potential impacts of the remedial action and identified proposed mitigation measures within a draft Environmental Impact Report (dEIR) in accordance with requirements of the California Environmental Quality Act (CEQA). The dEIR is also available in the public repository for review and comment at the same time as this draft Statement of Basis.

The Site is also located within an environmentally sensitive area that includes the Havasu National Wildlife Refuge, endangered species and migratory bird habitat, and public land formally designated as an Area of Critical Environmental Concern by the BLM. Moreover, much of the Site lies within the

floodplain of the Colorado River, a source of drinking water and irrigation for millions of people downstream. Remedial action within this area must comply with the applicable land management requirements established and implemented by BLM, FWS, and BOR. In addition, the contaminated groundwater is located within a groundwater basin that has been designated for beneficial uses under the Colorado River Basin Regional Water Quality Control Board.

#### Hexavalent Chromium Groundwater Plume

The RFI/RI Volume 2 Report for groundwater, completed in February 2009, characterized groundwater and surface water for contamination associated with past PG&E blowdown discharges from the Compressor Station. Groundwater occurs beneath the ground surface in alluvial geologic deposits consisting primarily of sands and gravels, with some silts and clays.

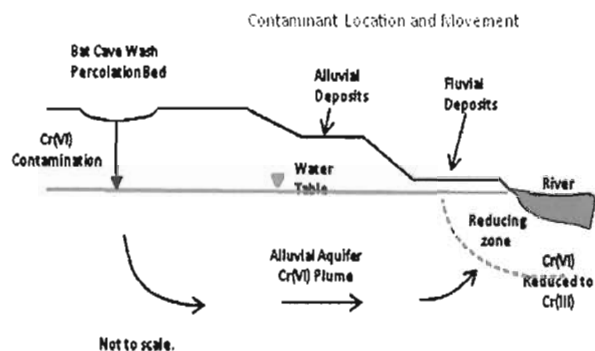
The groundwater data indicate that a plume of groundwater contaminated with mainly hexavalent chromium extends from the location of the former area where blowdown was discharged in Bat Cave Wash to the floodplain area adjacent to the Colorado River, north of the railroad tracks. Current data indicate that hexavalent chromium is not discharging to the Colorado River. Within the plume, hexavalent chromium is typically present at all depth intervals of the upland portion of the aquifer, but is generally limited to deep wells in portions of the floodplain aquifer near the river. Organic-rich and low-oxygen conditions exist in the aquifer and sediments near and underlying the river that convert hexavalent chromium to a less mobile, less toxic form known as trivalent chromium. This trivalent chromium will drop out of the groundwater under normal subsurface conditions as it will bind to the geologic deposits at the Site.



something that we are to trust may take place somehow below the ground surface that we are not able to see in the hopes that subsurface conditions are continuous, homogenous, without variation and as expected in the laboratory. Frankly that is a risk that should not be taken or allowed by DTSC and DOI, considering the potential impact to millions of people in Arizona and Southern California if something goes wrong.

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As hexavalent chromium migrates in groundwater from the upland area deposits to the organic rich conditions near and beneath the river, it undergoes a chemical change to trivalent chromium.

Besides hexavalent chromium as the main groundwater contaminant, the February 2009 RFI/RI Volume 2 Addendum also indicated possible additional chemicals of potential concern within localized areas of the groundwater plume that may have originated from PG&E operations. These substances include molybdenum, selenium and nitrate.

#### East Ravine Bedrock Plume

During the 2009 East Ravine Groundwater Investigation, hexavalent chromium was also found in groundwater within the bedrock formations east and southeast of the Compressor Station. The contamination occurs in discrete fractures in the bedrock which limits the flow and overall quantity of groundwater in the bedrock. G&E has estimated that the mass of the hexavalent chromium in bedrock likely represents less than one percent of the total hexavalent chromium plume mass.

The lateral extent of East Ravine groundwater contamination appears to extend approximately 1,500 feet east southeast of the Compressor Station. However, the investigation of East Ravine groundwater is ongoing and the source and full extent

If the bedrock contamination has not been determined. Studies of the East Ravine area are expected to continue during the remedy design phase of the project.

#### **SUMMARY OF SITE RISKS**

As part of the Site investigation, a baseline risk assessment was conducted to determine the current and future risks posed by contaminants in groundwater to humans and ecological receptors. The primary contaminants of potential concern resulting from the evaluation in the risk assessment include hexavalent chromium, selenium, nitrate, and molybdenum.

Based on the results of the risk assessment, there are no unacceptable risks to human health or the environment from groundwater contamination under current conditions. Currently, there is no direct exposure to groundwater and no significant contaminant transport pathway from groundwater to surface water.

Hexavalent chromium is present at concentrations that could pose an unacceptable risk to a future hypothetical groundwater user, if the contaminated groundwater were to be used as a source of drinking water. Based on the results of the site investigation and risk assessment, hexavalent chromium was the contaminant addressed in the detailed alternative analysis in the 2009 Corrective Measures Study/ Feasibility Study and was carried forward into remedy selection.

Three additional contaminants of potential concern, (selenium, nitrate, and molybdenum), were evaluated in the RFI/RI and groundwater risk assessment. Although the risk assessment concluded that these constituents are not a source of significant risk in comparison to hexavalent chromium, these substances do contribute to a total non-cancer risk at localized areas within the plume boundary in excess of risk assessment guidelines. The presence and extent of these substances will be evaluated further during the soil investigation at the Site. The CMS/FS

## Page: 7

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Sequence number: 1  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 4:17:57 PM

**T** If the extent of groundwater contamination is not know, an appropriate groundwater remedy can not be determined. Therefore, the Statement of Basis is deficient.

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Sequence number: 2  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:47:30 PM

**T** Does organic rich conditions exists at all locations under the river? Are they continuous? Will these organic rich conditions remain stable over 100 years? Do organic rich conditions exist downstream in the area of bedrock contamination where the bedrock is in direct contact with the Colorado River?

This statement is misleading and attempts to assure the reader that there is a continuous blanket of organic rich conditions beneath the river, Which is not the case. As DTSC states later in this document in "3" Long Term effectiveness" " while the reducing conditions have been shown to be robust, there is no way to prove that these conditions exist everywhere or would persist into the future hundreds to thousands of years from now"

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Sequence number: 3  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:51:03 PM

**T** This statement is not accurate and should not be made since the complete extent bedrock contamination is not known. Further groundwater contamination in bedrock is in direct contact with the Colorado River.

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Sequence number: 4  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:49:59 PM

**T** How will these chemicals be remediated under the current proposed process? What will they be remediated too? Please explain how these chemicals will undergo chemical change when contacting the organic rich conditions and what will the change to?

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Sequence number: 5  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:48:44 PM

**T** How did this groundwater contamination get here? What was the source of this contamination? This investigation was done in 2009. Was PG&E proactive and did they voluntarily want to do this investigation? Did PG&E resist and state at any time that they were not in support of doing this investigation? Are there any other areas that have not been investigated that may have potential groundwater contamination?

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Sequence number: 6  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:50:00 PM

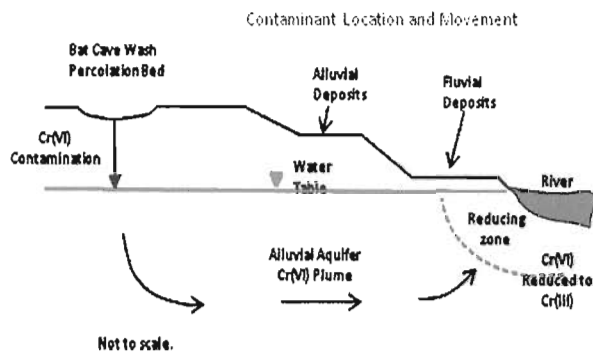
**T** The desire to downplay this contamination by PG&E when the full extent is not know in addition to the location of this contamination related to immediate direct and substantial potential endagerment to impacting the Colorado River is serious cause for concern. Additional interim measures should have been taken by DTSC to protect the Colorado River. Why is DTSC/DOI using PG&E's estimate? What is DTSC/DOI estimate? With the BP oil spill in the Gulf of Mexico we can see how Corporate management will downplay and the extent of contamination. Further as evidence by PG&E's previous activities at Hinkley, we should be very cautious when evaluating any statements or information provided by PG&E.

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Sequence number: 7  
Author:  
Subject: Comment on Text  
Date: 7/7/2010 3:53:43 PM

**T** These 3 additional chemical contamination exists in the groundwater. However, you are now saying that you are not going to deal with them and you will further evaluate them during the soil investigation. Why? So in fact you are saying that the proposed

Comments from page 7 continued on next page



As hexavalent chromium migrates in groundwater from the upland area deposits to the organic rich conditions near and beneath the river, it undergoes a chemical change to trivalent chromium.

Besides hexavalent chromium as the main groundwater contaminant, the February 2009 RFI/RI Volume 2 Addendum also indicated possible additional chemicals of potential concern within localized areas of the groundwater plume that may have originated from PG&E operations. These substances include molybdenum, selenium and nitrate.

#### East Ravine Bedrock Plume

During the 2009 East Ravine Groundwater Investigation, hexavalent chromium was also found in groundwater within the bedrock formations east and southeast of the Compressor Station. The contamination occurs in discrete fractures in the bedrock which limits the flow and overall quantity of groundwater in the bedrock. PG&E has estimated that the mass of the hexavalent chromium in bedrock likely represents less than one percent of the total hexavalent chromium plume mass.

The lateral extent of East Ravine groundwater contamination appears to extend approximately 1,500 feet east southeast of the Compressor Station. However, the investigation of East Ravine groundwater is ongoing and the source and full extent

of the bedrock contamination has not been determined. Studies of the East Ravine area are expected to continue during the remedy design phase of the project.

#### **SUMMARY OF SITE RISKS**

As part of the Site investigation, a baseline risk assessment was conducted to determine the current and future risks posed by contaminants in groundwater to humans and ecological receptors. The primary contaminants of potential concern resulting from the evaluation in the risk assessment include hexavalent chromium, selenium, nitrate, and molybdenum.

Based on the results of the risk assessment, there are no unacceptable risks to human health or the environment from groundwater contamination under current conditions. Currently, there is no direct exposure to groundwater and no significant contaminant transport pathway from groundwater to surface water.

Hexavalent chromium is present at concentrations that could pose an unacceptable risk to a future hypothetical groundwater user, if the contaminated groundwater were to be used as a source of drinking water. Based on the results of the site investigation and risk assessment, hexavalent chromium was the contaminant addressed in the detailed alternative analysis in the 2009 Corrective Measures Study/ Feasibility Study and was carried forward into remedy selection.

Three additional contaminants of potential concern, (selenium, nitrate, and molybdenum), were evaluated in the RFI/RI and groundwater risk assessment. Although the risk assessment concluded that these constituents are not a source of significant risk in comparison to hexavalent chromium, these substances do contribute to a total non-cancer risk at localized areas within the plume boundary in excess of risk assessment guidelines. The presence and extent of these substances will be evaluated further during the soil investigation at the Site. The CMS/FS

groundwater remedy is only for one (1) chemical hexavalent chromium that will be converted to another contamination chromium and left in the ground? This is completely misleading to the public since it is presented as a "groundwater remedy" when in fact it is not a complete groundwater remedy. This supports our claim that this process is being piece-mealed, segmented, and bifurcated in order to benefit the interests of some stakeholders and furthers desires to significantly limit the full and complete extent of any real required remediation. There is not a valid reason to be proceeding in this manner. A complete groundwater remedy should be considered. Not a piecemeal approach. In addition, since a complete groundwater remedy is not known, the IM3 facility should be expanded and more pumping and treating of contaminated groundwater should occur if there is a concern that contamination is entering the Colorado River. Also as stated in this section if DTSC/DOI needs to evaluate the presence of additional chemicals during the soil investigation then the potential impacts to groundwater from this soil contamination is NOT known and therefore, a complete groundwater remedy can not be determined at this time.

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2. Concluded that institutional controls should be enforced to restrict development of contaminated groundwater as a drinking water supply and monitoring of these constituents should continue as part of the Site-wide groundwater monitoring activities throughout future actions taken at the Site.

4. Because there is no significant ecological exposure pathway for contact with impacted site groundwater, there are no ecological receptors currently at risk of adverse effects due to the presence of contaminants of potential concern in the groundwater.

Based on the results of the risk assessment, it is DTSC's current judgment that the Preferred Alternative identified in this draft Statement of Basis, or one of the other alternatives considered in this document, is necessary to protect public health or welfare or the environment from releases of hazardous substances to the environment.

## REMEDIAL ACTION OBJECTIVES

5. The remedial action objectives ("RAOs") are based on the conclusions of the risk assessment and the requirement that the selected remedy attain applicable or relevant and appropriate requirements (ARARs) identified for the Site. The RAOs for groundwater are to:

- 6. Prevent ingestion of groundwater as a drinking water source having hexavalent chromium in excess of the regional background concentration of 32 micrograms per liter.
- 7. Prevent or minimize migration of total chromium and hexavalent chromium in groundwater to ensure concentrations in surface water do not exceed water quality standards that support the designated beneficial uses of the Colorado River (11 micrograms per liter).
- 8. Reduce the mass of total chromium and hexavalent chromium in groundwater at the Site to achieve compliance with ARARs in groundwater.

1. This RAO will be achieved through attainment of a cleanup goal of 32 micrograms per liter of hexavalent chromium.

- 3. Ensure that the current geographic plume boundaries are not permanently expanded following completion of the remedial action.

## SUMMARY OF REMEDIAL ALTERNATIVES

The remedial alternatives to address contaminated groundwater at the Site that were evaluated in the 2009 CMS/FS are presented below. The alternatives are identified with letters to correspond with the description of the alternatives within the CMS/FS report.

Generally speaking, Alternatives A and B would not include any active treatment or other measures to remove hexavalent chromium from groundwater. Alternatives C, D, and E would rely primarily on treating the hexavalent chromium underground (also known as "in-situ" treatment) by injecting a carbon food source into the aquifer to "feed" the naturally-occurring bacteria thereby accelerating the change of hexavalent chromium to trivalent chromium by enhancing the naturally occurring biological conditions that degrade hexavalent chromium. Alternative F would extract contaminated groundwater and treat it above-ground using a water treatment plant. Alternatives G and H would combine in-situ treatment with above-ground treatment. Alternative I would continue the existing Interim Measure currently in place by which limited volumes of water are extracted and treated using an existing above-ground treatment facility. Except for Alternatives A and I, all other alternatives evaluated include the decommissioning of the existing Interim Measure treatment system. Decommissioning would occur after remedy construction and start up, and DTSC deems the remedy to be operating properly and successfully.

Provided below is a more specific description of each alternative. Because of the collaboration between

## Page: 8

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 3:53:09 PM

**T**Thats it? A RAO of 32 micrograms per liter for hexavalent chromium only? What about all the rest of the contamination?

---

Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 3:56:05 PM

**T**How will DTSC enforce this in Arizona? How will DTSC enforce this on private land? Will DTSC be placing deed restrictions on public and private property? Will development at Topock Marina, Park Moabi or other areas be limited or reduced as a result of institutional controls?

---

Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 3:54:12 PM

**T**You indicated that the extent of groundwater contamination has not been completely defined. Therefore, how can you do this?

---

Sequence number: 4

Author:

Subject: Comment on Text

Date: 7/7/2010 3:57:11 PM

**T**Is the East Ravine groundwater contamination in direct contact with ecological receptors? Has this been evaluated? How can the human and ecological risk assessments make these evaluations if the extent of groundwater contamination has not been defined? or the potential discharge to the surface waters or uptake form plants?

---

Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 3:57:10 PM

**T**If the extent of soil contamination is not know how can the risk assessment evaluate the potential pathway or potential risk from soil contamination leaching into groundwater? or the surface water to groundwater interaction?

---

Sequence number: 6

Author:

Subject: Comment on Text

Date: 7/7/2010 3:59:37 PM

**T**What is the background level of hexavalent chromium currently in the Colorado River? Does this mean that DTSC and DOI will allow PG&E to discharge hexavalent chromium contamination in and allow it to enter the Colorado River as long as the level in the Colorado River is less less than 32 micrograms per liter? Does this mean that if I have a groundwater well that currently has non-detectable levels of hexavalent chromium in it, that PG&E will be allowed to increase the level of hexavalent chromium in my groundwater well to 32 micrograms per liter? What about the other chemicals that DTSC will be allowing PG&E to dump into the Colorado River? Has any Dioxin compounds been reported in soil samples onsite?

What is the current background groundwater level of chromium in the floodplain adjacent to the Colorado River?

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Sequence number: 7

Author:

Subject: Comment on Text

Date: 7/7/2010 4:00:48 PM

**T**What is the current background level of chromium and hexavalent chromium in the Colorado River? and how does that compare to what you will be allowing PG&E to dump into the river? What about a non-degradation protection policy? Does one exist? What is the 11 micrograms per liter you reference related to? Chromium? or hexavalent Chromium? if it only relates to one of them, then what is the amount that PG&E will be allowed to discharge for the other? Does a limit exist? What will be the level that PG&E will be allowed to increase the amount of Chromium or Hexavalent Chromium in the Colorado River?

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Sequence number: 8

Author:

Comments from page 8 continued on next page

concluded that institutional controls should be enforced to restrict development of contaminated groundwater as a drinking water supply and monitoring of these constituents should continue as part of the Site-wide groundwater monitoring activities throughout future actions taken at the Site.

Because there is no significant ecological exposure pathway for contact with impacted site groundwater, there are no ecological receptors currently at risk of adverse effects due to the presence of contaminants of potential concern in the groundwater.

Based on the results of the risk assessment, it is DTSC's current judgment that the Preferred Alternative identified in this draft Statement of Basis, or one of the other alternatives considered in this document, is necessary to protect public health or welfare or the environment from releases of hazardous substances to the environment.

## REMEDIAL ACTION OBJECTIVES

The remedial action objectives ("RAOs") are based on the conclusions of the risk assessment and the requirement that the selected remedy attain applicable or relevant and appropriate requirements (ARARs) identified for the Site. The RAOs for groundwater are to:

- Prevent ingestion of groundwater as a drinking water source having hexavalent chromium in excess of the regional background concentration of 32 micrograms per liter.
- Prevent or minimize migration of total chromium and hexavalent chromium in groundwater to ensure concentrations in surface water do not exceed water quality standards that support the designated beneficial uses of the Colorado River (11 micrograms per liter).
- Reduce the mass of total chromium and hexavalent chromium in groundwater at the Site to achieve compliance with ARARs in groundwater.

This RAO will be achieved through attainment of a cleanup goal of 32 micrograms per liter of hexavalent chromium.

- Ensure that the current geographic plume boundaries are not permanently expanded following completion of the remedial action.

## SUMMARY OF REMEDIAL ALTERNATIVES

The remedial alternatives to address contaminated groundwater at the Site that were evaluated in the 2009 CMS/FS are presented below. The alternatives are identified with letters to correspond with the description of the alternatives within the CMS/FS report.

Generally speaking, Alternatives A and B would not include any active treatment or other measures to remove hexavalent chromium from groundwater. Alternatives C, D, and E would rely primarily on treating the hexavalent chromium underground (also known as "in-situ" treatment) by injecting a carbon food source into the aquifer to "feed" the naturally-occurring bacteria thereby accelerating the change of hexavalent chromium to trivalent chromium by enhancing the naturally occurring biological conditions that degrade hexavalent chromium. Alternative F would extract contaminated groundwater and treat it above-ground using a water treatment plant. Alternatives G and H would combine in-situ treatment with above-ground treatment. Alternative I would continue the existing Interim Measure currently in place by which limited volumes of water are extracted and treated using an existing above-ground treatment facility. Except for Alternatives A and I, all other alternatives evaluated include the decommissioning of the existing Interim Measure treatment system. Decommissioning would occur after remedy construction and start up, and DTSC deems the remedy to be operating properly and successfully.

Provided below is a more specific description of each alternative. Because of the collaboration between

Subject: Underline  
Date: 7/7/2010 4:20:57 PM



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Sequence number: 9

Author:

Subject: Comment on Text

Date: 7/7/2010 4:00:31 PM



Conversion of one form of contamination (hexavalent chromium) to another form of contamination (chromium) would therefore not be a reduction in mass of the contamination. Is that correct? This is just turning one form of contamination into another.

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### *Alternative E – In-situ Treatment with Fresh Water Flushing*

Alternative E involves flushing to push the plume through an In-situ Reduction Zone (“IRZ”) located along National Trails Highway. Flushing would be accomplished through a combination of fresh water injection and injection of carbon amended groundwater in wells to the west of the plume. This alternative would also include using extraction wells near the Colorado River shoreline to capture the plume, accelerate cleanup of the floodplain, and flush the groundwater with elevated hexavalent chromium through the treatment zone. Additional extraction wells are located in an area northeast of the Compressor Station where the flushing efficiency from injection wells alone is relatively poor. Groundwater extracted from the near-river wells and wells northeast of the Compressor Station would be treated with the carbon food source and the water would be reinjected west of and/or within the hexavalent chromium plume.

Estimated Net Present Value: \$92,000,000 - \$198,000,000

Estimated Time to Achieve RAOs: 10 to 110 years

### *Alternative F – Pump and Treat*

This alternative would involve pumping groundwater, above-ground treatment to remove chromium from the extracted groundwater, and reinjection of the treated water back to the aquifer.

Estimated Net Present Value: \$187,000,000 - \$401,000,000

Estimated Time to Achieve RAOs: 15 to 150 +years

### *Alternative G – Combined Floodplain In-situ / Pump and Treat*

This alternative would combine floodplain cleanup by in-situ treatment, with treatment of the uplands portion of the plume by pumping groundwater, above-ground treatment to remove chromium from the extracted groundwater, and reinjection of the

treated water back to the aquifer. The floodplain cleanup would involve construction of in-situ treatment zones at National Trails Highway and between National Trails Highway and the Colorado River. This alternative differs from Alternative H in that pump and treat is the dominant feature of the cleanup rather than in-situ treatment.

Estimated Net Present Value: \$177,000,000 - \$380,000,000

Estimated Time to Achieve RAOs: 10 to 90 years

### *Alternative H – Combined Upland In-situ / Pump and Treat*

This alternative would combine in-situ treatment in the upland portions of the plume, with pump-and-treat technology in the floodplain (consisting of pumping groundwater, above-ground treatment to remove chromium from the extracted groundwater, and reinjection of the treated water back to the aquifer). This alternative differs from Alternative G by relying on an in-situ treatment zone as the dominant feature of the cleanup rather than pump and treat.

Estimated Net Present Value: \$127,000,000 - \$273,000,000

Estimated Time to Achieve RAOs: 10 to 70 years

### *Alternative I – Continued Operation of Interim Measure Groundwater Treatment*

This alternative would involve continued operation of the current Interim Measure Groundwater Treatment Plant as the final remedial action at the site. The plant includes a pump and treat system that removes groundwater and utilizes chemical reduction, precipitation and filtration to remove hexavalent chromium. The Interim Measure system would operate with the existing equipment with existing procedures using the existing process at the existing flow rate until RAOs are attained.

Estimated Net Present Value: \$186,000,000 - \$398,000,000

Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:01:38 PM

**T**he estimated time of up to 110 years to achieve RAOs is much too long. The length of time can be significantly reduced by adding pump and treat to the alternative. What would the time period be to complete the remediation if upland in-situ, flood-plain in-situ and pump and treat was used? If this alternative was used would the groundwater gradient and movement of groundwater contamination be away from the Colorado River?

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**Cost** includes estimated capital and annual operations and maintenance costs, as well as present worth cost. Present worth cost is the total cost of an alternative over time in terms of today's dollar value. Cost estimates are expected to be accurate within a range of +50 to -30 percent.

**State/Support Agency Acceptance** considers whether the State agrees with the analyses and recommendations, as described in the Proposed Plan.

**Community Acceptance** considers whether the local community agrees with DTSC's analyses and preferred alternative. Comments received on the draft Statement of Basis are an important indicator of community acceptance.

As described below, two of these combined criteria, "Protect Human Health and The Environment, Attain Media Cleanup Goals, and Control Sources Of Releases" and "Compliance with ARARs," are considered Corrective Action Standards or Threshold Criteria. All remedial alternatives must satisfy these standards and criteria in order to be considered for selection. The next five criteria are known as "balancing criteria" or "remedy selection decision factors" which are factors that are used for relative comparison of the remedial alternatives under consideration. Finally, the last two criteria, State/Support Agency Acceptance and Community Acceptance are known as "modifying criteria."

## 1. Protect Human Health and The Environment, Attain Media Cleanup Goals, and Control Sources Of Releases

Alternative A does not meet the selection criteria for protecting human health and the environment because there would be no institutional controls imposed to restrict use of groundwater in locations where hexavalent chromium concentrations exceed the cleanup goals, and there would be no monitoring to evaluate whether geochemical conditions near the river required to reach the cleanup goals remained in place over the long time period necessary to achieve these goals. The remaining Alternatives (B through I), were all found to meet the standard and threshold criteria of protecting human health and the environment. Alternatives C, D, E, F, G, and H were ranked high for this criterion while Alternatives B and I ranked medium for this criterion primarily

because of the long time required to attain cleanup goals, as well as the uncertainty about the robustness of the natural geochemical conditions near the river and the high level of operation and maintenance.

## 2. Compliance with ARARs

Applicable or Relevant and Appropriate Requirements (ARARs) are those cleanup standards, standards of control, and other substantive federal or more stringent State requirements that have been determined to be legally applicable to, or well suited to ("relevant and appropriate"), addressing hazardous substances, remedial actions, or other circumstances presented at a site. ARARs generally are classified as chemical-specific, location-specific, or action-specific. The ARARs for the Topock Site are identified in Appendix B of the CMS/FS.

Based on the specific circumstances presented at the Topock Site and as described in the CMS/FS, Alternatives A, B and I do not satisfy the requirement established by the California State Water Resources Control Board Resolution 92-49 that cleanup goals be achieved within a "reasonable time frame." For this reason, Alternatives A, B, and I have been eliminated from further consideration.

Because of the importance of the area to certain Native American tribes with ancestral ties to the region, and the presence of cultural resources of religious and cultural significance, as well as other sensitive cultural resources, several cultural resource protection statutes, regulations, and Executives Orders have been identified as ARARs for the Topock Site. As described in the CMS/FS, none of the alternatives under consideration were eliminated from further consideration based on its failure to satisfy cultural resource ARARs. In order to ensure that the remedy selected attains the substantive requirements established by these ARARs, however, as a remedy is selected, designed, and implemented, the federal agencies will continue to engage in consultation with tribes, State Historic Preservation Officers, and others to identify potential effects on

## Page: 12

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:01:51 PM

**T** How is this ranking of "high level of operation and maintenance" related to the specific remedy selection criteria of protect human health and the environment, attain media cleanup goals and control sources of releases. This is evidence of incorrect analysis of screening criteria.

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 4:02:18 PM

**T** If Alternative "B" Monitored Natural Attenuation" do not satisfy the requirements established by the California State Water Resources Control Board Resolution 92-49, then it is not appropriate for DTSC to include monitored natural attenuation as part of the remedy as DTSC has done. As stated in the "Summary of the preferred alternative" states that "Additionally, DTSC preferred alternative includes monitored natural attenuation as a long term component to address residual hexavalent chromium" This is a fatal flaw in DTSC's analysis and is in conflict with Resolution 92-49. If DTSC includes pump and treat as a component of the remediation, monitored natural attenuation would not be needed and the time to complete the remediation would be significantly quicker.

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 4:03:15 PM

**T** What is the definition of "high" and "Medium"

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cultural resources and to seek ways to avoid, minimize, or mitigate any adverse effects.

With respect to any remedial action to be undertaken within the Havasu National Wildlife Refuge, the National Wildlife System Administration Act has been identified as an ARAR. As described in the CMS/FS, none of the alternatives under consideration were eliminated from further consideration based on its failure to satisfy this ARAR. After a remedy is selected, the Fish and Wildlife Service will identify, during remedial design and implementation, those measures necessary to ensure that the selected remedy satisfies this ARAR.

### **3. Long-term Effectiveness, Permanence, and Reliability**

Alternative A (No Action) ranked the lowest of all alternatives because this alternative does not include monitoring to verify the effectiveness of natural recovery processes and to determine when the RAOs have been achieved.

**1** Alternative B ranked medium because it would include monitoring and institutional controls; however, this alternative relies on natural attenuation to convert hexavalent chromium to trivalent chromium, and while the reducing conditions have been shown to be robust, there is no way to prove that these conditions exist everywhere or would persist into the future hundreds to thousands of years from now.

Alternatives F, G, H, and I all ranked medium for long-term effectiveness, permanence, and reliability. These alternatives include ex-situ treatment; the resulting waste generation requiring land disposal of treatment residuals at an offsite, permitted landfill requires long-term containment, management, and monitoring that are not required by the alternatives that include in-situ treatment.

Alternatives C, D, and E ranked medium-high for this criterion. While there is uncertainty regarding the ability to distribute the carbon food source across the

targeted area, and Alternative E relies on flushing to remove contaminants from the upland portion of the aquifer, comparatively few long-term controls are expected for these alternatives following attainment of cleanup goals.

### **4. Reduction of Toxicity, Mobility, or Volume of Contaminants through Treatment**

Alternatives F, G, and I are ranked high because the toxicity, mobility, and volume of hexavalent chromium is lessened throughout the plume because the majority of the chromium mass after treatment would be removed and managed in a permitted disposal facility.

C, D, E, and H are ranked medium high because the converted chromium will remain within the subsurface formation. Additionally, byproducts are anticipated from in-situ treatment, but they are expected to be localized and could remain temporarily elevated above baseline and background concentrations in some portions of the aquifer.

Alternatives A and B ranked medium because the amount of plume destroyed or treated is less certain due to the passive nature of treatment and the extent and average capacity of the floodplain area to naturally reduce hexavalent chromium over time.

### **5. Short-term Effectiveness**

Alternative B was ranked medium because of the minimal footprint, but relatively long time to cleanup.

Alternatives C and E were ranked medium-low because of the comparatively shorter remediation period and relatively limited construction and operational activities that would occur primarily in previously disturbed areas. Alternatives A, D, F, G, H, and I received a low ranking for short-term effectiveness. Alternative A was ranked low primarily because of the extensive time to cleanup with no controls during the remedial period. Alternatives F, G, H, and I were ranked low as a result of construction and operation of an

Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:03:29 PM

**T** What is the definition of medium?

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aboveground treatment plant and the greater amount of construction, aboveground visual impact, worker/operator presence onsite, electrical power requirements, and trucking requirements for chemical delivery and waste transportation and disposal. Alternative D ranked low primarily because the location of remedial facilities would not be limited to previously disturbed areas and because of the need for subsequent additional disturbance from grading, road construction, facility construction, and operation and maintenance.

## 6. Implementability

Alternatives A and B are ranked high for implementability because Alternative A involves no remedial action, and the only remedial activities associated with Alternative B are monitoring well construction and maintenance and administration of an institutional control. <sup>2</sup> Alternative I also ranked high because the system has been shown to be technically implementable over the years it has operated. Alternatives D, E, F, G, and H were ranked medium because while these alternatives are administratively implementable, there will be technical challenges associated with the active treatment processes. Alternative E requires additional approvals from landowners and associated water agencies for the water supply well and pipeline. Alternative C was ranked low for this criterion because of the relatively more complex technical challenges associated with balancing carbon delivery and hydraulic containment of the plume.

## 7. Cost

The costs for Alternatives A and B are the lowest; therefore, these alternatives are ranked high in cost-effectiveness. Alternatives C, D, E, and H are the next most costly; therefore, these alternatives are ranked medium in cost-effectiveness. Alternatives F, G, and I are the most expensive of the alternatives and are therefore ranked low in cost effectiveness.

## 8. State/Support Agency Acceptance

DTSC and DOI have worked together in closely coordinating each agency's respective authorities and overseeing PG&E's performance of work under the federal CERCLA Consent Agreement and the State Corrective Action Consent Agreement by which the CMS/FS has been prepared. Through this coordination, both DOI and DTSC approved the CMS/FS in December, 2009. Furthermore, DTSC and DOI worked in partnership to ensure that this draft Statement of Basis and the DOI Proposed Plan for the Preferred Alternative are closely coordinated in scope and in content. <sup>1</sup> Based on this coordinated approach, DTSC and DOI, while considering the action independently, reached a similar conclusion on the Preferred Alternative to submit for public review and comment.

## 9. Community Acceptance

Community acceptance of the Preferred Alternative will be evaluated after the close of the public comment period with consideration of the comments received. Community acceptance will be described in the Final Statement of Basis for the Site.

## SUMMARY OF THE PREFERRED ALTERNATIVE

<sup>3</sup> DTSC's recommendation for the Preferred Alternative, based on the analysis and conclusions presented in the CMS/FS, and in conjunction with the findings of potential impacts evaluated in the draft EIR, is Alternative E – In-situ Treatment with Fresh Water Flushing. Alternative E is recommended because it will achieve the RAOs <sup>4</sup> while substantially reducing, through treatment, the amount of hexavalent chromium in the groundwater [which is the principal threat at the site], <sup>5</sup> and will do so in a reasonable time frame, <sup>6</sup> and with fewer adverse effects to cultural resources and biological resources than other alternatives considered. Alternative E will also allow the decommissioning of the existing Interim Measure treatment plant after PG&E demonstrates, with DTSC's concurrence, that the remedy is successfully treating and controlling the

## Page: 14

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:06:12 PM

**T** You state that DOI has reached a similar conclusion on the preferred alternative. When was that conclusion made by DOI and by whom?

What is the DOI public review that you referenced?

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Sequence number: 2

Author:

Subject: Highlight

Date: 7/7/2010 4:07:18 PM

**T** Pump and treat is ranked high for implementability since it has been proven to work. Therefore, pump and treat should be a continued component of any proposed remedial activity.

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 4:04:38 PM

**T** We disagree with the selection of this alternative. Alternative G and H combined would provide 1. A higher safety factor for the protection for the Colorado River since it will maintain a landward groundwater gradient away from the Colorado River. 2. Actually reduce the mass of the contamination and not just convert one form of contamination to another. 3. Completed remediation in a shorter period. 4. Not allow any by-product contamination or other groundwater contamination to enter the Colorado River. 5. Provide more than just an illusion of a remedy that is magically to work beneath the ground surface and as we are to trust PG&E that it will actually occur.

What alternative provides the greatest protection for the Colorado River? drinking water, agricultural and recreational activities, and provides to greatest protection and safety for the current living people and the future generations?

Did the previous DTSC settlement agreement have any impact on the decision to pre select this remedy?

With the proposed DTSC alternative E remedy. Will any groundwater contamination migrate or allowed to move any closer to the Colorado River?

What will happen to the current groundwater contamination that exists under the Colorado River that is beyond the proposed zone of in-situ treatment near the Colorado River? Will this contamination be treated? or will it be ignored and allowed to potentially migrate and enter the Colorado River?

For this alternative what is the direction of flow for the contamination? Is it toward the Colorado River? or will it be away from the Colorado River?

This alternative will ignore and fail to treat other additional chemicals in groundwater (molybdenum, selenium and nitrate and will allow and push this contamination closer to the Colorado River will allow these chemicals to enter and impact the Colorado River.

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Sequence number: 4

Author:

Subject: Comment on Text

Date: 7/7/2010 4:06:40 PM

**T** What does substantially reducing mean? Are you saying that this alternative will not completely treat all the contamination?

This alternative fails to address by-products and ignores the presence of does not treat

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Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 4:06:58 PM

**T** What is DTSC perception of a "reasonable time frame"

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Sequence number: 6

Author:

Comments from page 14 continued on next page



aboveground treatment plant and the greater amount of construction, aboveground visual impact, worker/operator presence onsite, electrical power requirements, and trucking requirements for chemical delivery and waste transportation and disposal. Alternative D ranked low primarily because the location of remedial facilities would not be limited to previously disturbed areas and because of the need for subsequent additional disturbance from grading, road construction, facility construction, and operation and maintenance.

## 6. Implementability

Alternatives A and B are ranked high for implementability because Alternative A involves no remedial action, and the only remedial activities associated with Alternative B are monitoring well construction and maintenance and administration of an institutional control. Alternative I also ranked high because the system has been shown to be technically implementable over the years it has operated. Alternatives D, E, F, G, and H were ranked medium because while these alternatives are administratively implementable, there will be technical challenges associated with the active treatment processes. Alternative E requires additional approvals from landowners and associated water agencies for the water supply well and pipeline. Alternative C was ranked low for this criterion because of the relatively more complex technical challenges associated with balancing carbon delivery and hydraulic containment of the plume.

## 7. Cost

The costs for Alternatives A and B are the lowest; therefore, these alternatives are ranked high in cost-effectiveness. Alternatives C, D, E, and H are the next most costly; therefore, these alternatives are ranked medium in cost-effectiveness. Alternatives F, G, and I are the most expensive of the alternatives and are therefore ranked low in cost effectiveness.

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DTSC's recommendation for the Preferred Alternative, based on the analysis and conclusions presented in the CMS/FS, and in conjunction with the findings of potential impacts evaluated in the draft EIR, is Alternative E – In-situ Treatment with Fresh Water Flushing. Alternative E is recommended because it will achieve the RAOs while substantially reducing, through treatment, the amount of hexavalent chromium in the groundwater [which is the principal threat at the site], and will do so in a reasonable time frame, and with fewer adverse effects to cultural resources and biological resources than other alternatives considered. Alternative E will also allow the decommissioning of the existing Interim Measure treatment plant after PG&E demonstrates, with DTSC's concurrence, that the remedy is successfully treating and controlling the

Subject: Comment on Text

Date: 7/7/2010 4:06:32 PM

 was a scoring matrix used to determine this?

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Sequence number: 7

Author:

Subject: Comment on Text

Date: 7/7/2010 4:40:44 PM



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<sup>1</sup> Movement of contaminated groundwater and its secondary byproducts at the Site.

Because DTSC recognizes that the variable nature of the geologic materials beneath the site may result in some localized areas being resistant to in-situ treatment and flushing, these areas may require optimized remedial efforts including focused injection/extraction. <sup>2</sup> Additionally, DTSC's preferred alternative includes monitored natural attenuation as a long term component to address residual hexavalent chromium that may remain in portions of the aquifer formation after the majority has been treated by the in-situ treatment with fresh water flushing technology. <sup>3</sup> Monitored natural attenuation relies on the naturally occurring degradation and dilution properties of the groundwater system to convert hexavalent chromium to trivalent chromium in groundwater.

<sup>5</sup> **Land Use Restrictions** – Due to the incomplete evaluation of soil contamination at the Site and the potential unacceptable risk to a future hypothetical groundwater user, the proposed remedy requires that certain restrictions be imposed on future land use activities. The proposed restrictions are necessary to protect human health and the environment, and to maintain the short and long term protectiveness of the remedy. The restrictions may be imposed through a "Covenant to Restrict Use of Property" ("Covenant") which is an enforceable institutional control mechanism. The Covenant restrictions "run with the land" and apply no matter who owns the property. The land use restrictions may, with regulatory agency approval, be revised if site conditions should change in the future (e.g., new land use). The specific language for the Covenant with PG&E, and other land owners will be developed after DTSC selects the final remedy. <sup>6</sup> However, restrictions to be considered may include, but not limited to the following:

- Growing food crops or any agricultural products
- Drilling for drinking water, oil or gas
- Extraction of ground water for purposes other than ground water monitoring, site remediation or construction dewatering

- Any activity that may disturb or adversely affect the operation and maintenance of the groundwater monitoring network and site remediation system that is not part of a DOI or DTSC approved corrective action work plan or facility closure plan for the property without prior written agency approval.
- Any redevelopment of the property until a Risk Management Plan (RMP) is prepared for the specific project and is approved in writing by DTSC. A RMP identifies, at a minimum, the specific project proposed for construction, the previous site history, the nature and extent of contamination from all media, the potential pathways of receptor exposure and health impacts from existing site contamination, and practical ways to mitigate the impacts for the specific project. The Covenant and the RMP work together to ensure that potential impacts from exposure to contaminated soils, ground water or other media are managed in a manner that is protective of human health and the environment. The RMP may be revised or amended.

**Risk Management Activities.** The following activities will require risk management at the Site:

- Any activities that will disturb the soil or ground water, such as excavation, grading, removal, trenching, filling, earth moving or mining, shall only be permitted on the property pursuant to a corrective action work plan approved in writing by DTSC, or an RMP approved in writing by DTSC.
- Any contaminated media brought to the surface as a result of remediation related activities including, but not limited to, pumping, grading, excavation, trenching, or backfilling shall be managed in accordance with all applicable provisions of state and federal laws.

#### **Five Year Remedy Performance Evaluation Reports**

The purpose of these reports is to provide an evaluation of the long-term effectiveness and reliability of the selected remedy including in-situ treatment and

## Page: 15

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Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:07:12 PM

**T** What is the exact measure of this test? What does controlling the movement of contaminated groundwater mean?

What are the secondary by-products that will be created and have not been discussed in this document?

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 4:07:26 PM

**T** Previously DTSC stated that they would require all the contamination to be treated to 32 micrograms per liter. Now it is stated that residual contamination may remain above this amount because complete information is not known about subsurface conditions.

Why? This supports our previous comment that aggressive pump and treat needs to be a key component of any remedy selection.

Protection of the Colorado River is primary.

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Sequence number: 3

Author:

Subject: Comment on Text

Date: 7/7/2010 4:07:59 PM

**T** This is not an effective alternative when areas of the site do not have adequate and continuous subsurface conditions that can allow this to happen. Further with the passage of time, subsurface conditions may change altering ability of naturally occurring degradation. As stated above, DTSC recognizes the variable nature of subsurface geological. Therefore, this is not a reasonable alternative.

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Sequence number: 4

Author:

Subject: Underline

Date: 7/7/2010 4:20:42 PM

**T**

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Sequence number: 5

Author:

Subject: Comment on Text

Date: 7/7/2010 4:20:29 PM

**T** Where will this land use restriction extend to? Will restrictions be placed on wells in Arizona that may wish to pump a higher levels or rates directly adjacent to the Colorado River and deep in the aquifer? Will restrictions be placed on pumping rates? Will I be able to pump 1,000 gallons per minute at Topock Marina? or at a house someone builds adjacent to the Colorado River? Will Park Moabi be limited in the amount of water that they can pump?

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Sequence number: 6

Author:

Subject: Comment on Text

Date: 7/7/2010 4:08:07 PM

**T** Will dredging of all portions of the Colorado River be allowed? the Topock Marina ?

Will fishing be restricted in the Colorado River adjacent to the site? Will recreational activities be limited in the Colorado River?

Will native plants be allowed to be collected by Tribal members in the area of the contamination?

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monitored natural attenuation with recommendations for improvement. The report examines such questions as: Are the media cleanup objectives and remedy performance standards being achieved? How well are things working? Are contaminant concentrations levels trending downward? What improvements are necessary and how will they be implemented?

#### **Financial Assurance for The Remedy**

<sup>1</sup>Financial Assurance is required for monitoring, construction, operation and maintenance of any selected remedy. PG&E will be required to comply with the financial responsibility requirements pursuant to California Health and Safety Code Section 25245 to assure that the required remediation work will be completed now and into the future. PG&E must satisfy the financial responsibility requirement within a reasonable period of time as determined by DTSC after selection of the Preferred Alternative. The initial funding level shall be based on the conceptual cost estimate for the alternative as set forth in the CMS/FS. The funding level for financial assurance mechanism will be adjusted to reflect the costs estimate to be revised as part of the final remedy design and updated annually.

Based on the information currently available, DTSC believes the Preferred Alternative (Alternative E with the addition of monitored natural attenuation) meets the threshold criteria and best addresses the balancing criteria/ remedy selection decision factors. DTSC has also identified several mitigation measures during the preparation of the draft EIR pursuant to CEQA requirements. These mitigation measures are considered a part of the action required for the implementation of the Preferred Alternative (see the draft EIR for the listing of the mitigation measures). DTSC expects the groundwater Preferred Alternative as defined above to satisfy all requirements of a final groundwater remedy as required under the RCRA Corrective Action program and will satisfy the requirements in accordance with the 1996 Corrective Action Consent Agreement with PG&E.

## **COMMUNITY PARTICIPATION**

DTSC, in conjunction with DOI, is providing information regarding the cleanup of the PG&E Topock Site to the public through open house/public hearings sessions, the Administrative Record file in the public information repositories for the Site, and announcements published in several local community area newspapers prior to the start of the Public Comment Period. (*Listed on page 17*) DTSC and DOI encourage the public to gain a more comprehensive understanding of the Site and the investigation and cleanup activities that have been and will be conducted at the Site. DTSC, in consultation with DOI, may modify the Preferred Alternative or select another remedial alternative presented in this draft Statement of Basis upon evaluation of new information and/or comments received during the public comment period. Therefore, the public is encouraged to review and comment on all alternatives presented in this draft Statement of Basis and its associated draft EIR.

The dates for the public comment period and the location, dates and time of the open houses and hearing sessions are provided on the front page of this draft Statement of Basis. The locations of the public repositories for the Administrative Record file can be found on the last page of this document.

For further information on the PG&E Topock cleanup and to submit written comments during the public comment period, please contact:

Mr. Aaron Yue  
Project Manager  
Department of Toxic Substances Control  
5796 Corporate Avenue  
Cypress, California 90630  
Email: [ayue@dtsc.ca.gov](mailto:ayue@dtsc.ca.gov)  
<sup>2</sup>ax: 714.484.5439

Sequence number: 1

Author:

Subject: Comment on Text

Date: 7/7/2010 4:10:27 PM

**T** PG&E has demonstrated through previous filing for bankruptcy that they are not capable of providing a reliable and consistent mechanism of financial assurance for any remedy solution. When did PG&E previously file for bankruptcy? Further PG&E has more recently demonstrated that they can not be trusted to completely pay all outstanding invoices that were approved by the CRIT Tribal Counsel and sent to PG&E for payment for work that was both appropriate and reasonably conducted by CRIT environmental consultants (Envirometrix Corporation) working on behalf of CRIT. This is direct evidence how PG&E failed to honor their financial responsibilities when it is not convenient for PG&E as they would rather use what means are available to limit, reduce, and marginalize participation and actions in order to manipulate and control the process and outcome for their direct benefit. This documented evidence demonstrates PG&E lack of financial commitment, responsibility, honor, and fair play. Further PG&E has been responsible for extreme slow payments (delays of more that one year) and purposeful delays, disregard, and responsibility to pay all portions of invoices approved by CRIT Tribal council for appropriate work activities conducted by environmental consultants on behalf of the Tribes for this project. Therefore, in order to protect the people of the State of California and Arizona in addition to all Tribal entities, the full and complete amount of any remediation must be secured and required to be placed into a restricted escrow fund and an appropriate fund balance be maintained at all times. It is also request that DTSC create and appoint a citizen advisory oversight committee for oversight of these funds and to ensure that PG&E maintains an adequate fund balance for all proposed work activities. Based on historical practices PG&E can not be allowed to simply state through a written financial statement that they will have the funds to complete the work. In addition, prior to approving any remedy, DTSC and DOI must require that PG&E place these funds in an escrow account before any approval is provided.

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Sequence number: 2

Author:

Subject: Comment on Text

Date: 7/7/2010 4:08:46 PM

**T** This is a non working fax number. We have been attempting to fax requests to this number regarding request for interpreters to be present at the public meetings. However, attempts to do so were initially. Further the fax number for the public participation office obtained from the DTSC Web site is also a non-working fax when attempting to fax after hours. Due to these facts, DTSC has restricted and limited our ability submit requests and provide comments and feedback. Therefore, the public comment period must be re-noticed with the correct information that identifies the correct fax numbers to allow communication and allow the requested interpreters to be present at the requested meetings. This is a significant defect in the process and should be remedied as not to exclude participation at the meetings.

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## DOI ANNOUNCES PROPOSED PLAN

### INTRODUCTION

This Proposed Plan is being issued by the United States Department of the Interior (“DOI”) on behalf of itself and DOI’s Bureau of Land Management (“BLM”), U.S. Fish and Wildlife Service (“FWS”), and Bureau of Reclamation (“Reclamation”). This Proposed Plan identifies the Preferred Alternative among the remedial action alternatives evaluated for cleaning up groundwater contaminated by past waste disposal practices at the Pacific Gas and Electric Company (“PG&E”) Topock Compressor Station (“the Site”) located near Needles, California.

This Proposed Plan is being issued by DOI as the lead agency responsible for activities conducted under the Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”) addressing areas contaminated by the release of hazardous substances at the Site. DOI is coordinating the selection of a final remedial action alternative with the California Department of Toxic Substances Control (“DTSC”). DTSC will be selecting corrective action to address groundwater contamination pursuant to authority under State Hazardous Waste authorities and the Resource Conservation and Recovery Act (“RCRA”).

DOI is issuing this Proposed Plan as part of its public participation responsibilities under Section 117 of CERCLA and Section 300.430(f)(2) of the National Oil and Hazardous Substances Pollution Contingency Plan (“NCP”).

DOI, in consultation with DTSC, may modify the Preferred Alternative or select another remedial alternative presented in the Proposed Plan based on new information or public comments. Therefore, the public is encouraged

to review and comment on all alternatives presented in this Proposed Plan.

#### **PUBLIC COMMENT PERIOD:**

June 4, 2010 to July 19, 2010

DOI will accept written comments on the Proposed Plan during the public comment period. You may submit your comments to:

Pamela S. Innis  
Topock Project Manager  
U.S. Department of Interior - OEPC  
P.O. Box 25007 (D-108)  
Denver, CO 80225-0007  
E-mail: [Pamela\\_Innis@ios.doi.gov](mailto:Pamela_Innis@ios.doi.gov)

You are invited to meetings to hear about the Proposed Plan for cleaning up groundwater at the PG&E Topock Site. Written and oral comments will also be accepted at these meetings. The meetings will be held at:

#### **PUBLIC MEETINGS/PUBLIC HEARINGS**

|                      |                          |
|----------------------|--------------------------|
| <b>June 22, 2010</b> | <b>Parker, AZ</b>        |
| <b>June 23, 2010</b> | <b>Lake Havasu, CA</b>   |
| <b>June 29, 2010</b> | <b>Needles, CA</b>       |
| <b>June 30, 2010</b> | <b>Golden Shores, AZ</b> |

For more information, see the Administrative Record at the following location:

Bureau of Land Management  
Lake Havasu Field Office  
2610 Sweetwater Avenue  
Lake Havasu City, AZ  
(928) 505-1200  
Hours: Monday – Friday  
8 a.m. to 4:30 p.m.

Or you may access the DTSC Website at:  
<http://www.dtsc-topock.com>  
Look under “Document Library”.