

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION**

**MEETING OF APRIL 9-10, 2008**

Barstow

**ITEM: 3**

**SUBJECT: PACIFIC GAS AND ELECTRIC COMPANY – GENERAL  
SITE-WIDE GROUNDWATER REMEDIATION PROJECT  
AND PUBLIC HEARING TO CONSIDER A RESOLUTION  
CERTIFYING A MITIGATED NEGATIVE DECLARATION,  
SAN BERNARDINO COUNTY**

**CHRONOLOGY:** This is a new item before the Water Board

December 1987	Cleanup and Abatement Order (CAO) 6-91-917 directed the discharger to investigate and propose clean up actions for hexavalent chromium in groundwater.
August 12, 1993	Amendment to Board Order 6-91-917 adopted.
June 2001	CAO 6-01-50 directed the discharger to eliminate the threatened nuisance condition created at the East and Ranch LTUs due to spray irrigation of chromium-polluted groundwater to crops.
Jan. 22, 2008	Staff circulated through the State Clearinghouse a proposed Resolution for a Mitigated Negative Declaration for this project.
Jan. 22, 2008	Staff circulated tentative WDRs for this project.
Feb. 26, 2008	Staff hosted an information meeting for Hinkley residents to discuss this project and other items.

03-0001

**ISSUES:**

1. Should the Board adopt a Mitigated Negative Declaration and Mitigation Monitoring and Reporting Plan for this project in compliance with the California Environmental Quality Act?
2. The project described in this WDR is consistent with the Mitigated Negative Declaration and no new significant impacts are expected from the discharge. Should the Board adopt a general WDR for the project?

**DISCUSSION:**

The Pacific Gas and Electric Company (PG&E) is requesting general waste discharge requirements (GWDRs) to implement various remediation projects for reducing hexavalent chromium in groundwater for achieving water quality standards and containing plume migration. The proposed remediation projects will consist of 1) extraction and management of groundwater, including by re-injection and 2) in-situ (below ground) treatment.

Discharges of hexavalent chromium resulted from operations at the PG&E Compressor Station in Hinkley where waste water was stored in unlined ponds. Groundwater below the PG&E Compressor Station contains total chromium in concentrations up to 3370 micrograms per liter, well above the drinking water standard of 50 micrograms per liter. Project implementation will take place in the groundwaters of the Middle Mojave River Valley Ground Water Basin.

The Project site consists of approximately 1,997 acres (2.8 miles long x 1.6 miles wide) of land of varying size located near the town of Hinkley in San Bernardino County, California. The Project site is located north of the Mojave River and southwest of Mt. General along Highway 58. Of the 143 parcels located within the project area, 36 are owned by PG&E and 107 are owned by other parties.

The GWDRs would allow for the following:

- 1) Extraction and management of groundwater, including by re-injection. The groundwater may be treated and/or dosed with chemical or biological reductants prior to discharge within the plume. Groundwater may also be extracted from outside the chromium plume and re-injected near the plume boundaries to contain migration; and
- 2) In-situ activities consisting of the injection of chemical or biological reductants directly to groundwater.
- 3) Associated activities, including well rehabilitation and groundwater flow tracing.

The checklist for the Mitigated Negative Declaration (Enclosure 2) identifies potential environmental concerns associated with the project. Discharges of chemical reduction compounds will temporarily alter pH and cause an increase in iron and total organic carbon concentration in groundwater. Discharges of biological reduction compounds and nutrients will temporarily cause an oily degradation, an alcohol taste and odor, and an increase in total organic carbon concentration in groundwater. Injections of tracer dyes will temporarily cause coloration to groundwater. Injections of well rehabilitation compounds and process chemicals will temporarily alter pH and cause an increase in total organic carbon concentration in groundwater. And, lastly, re-injection of groundwater extracted from outside the chromium plume boundaries may affect water quality with respect to total dissolved solids, nitrate, and sulfate.

All compounds being discharged will either be consumed by microbes or attenuate with distance from the injection points. Groundwater extraction from outside the plume boundaries and re-injection within the plume or near the boundaries will not result in water quality standards being exceeded or increasing more than 25 percent above current concentrations for total dissolved solids, nitrates, and sulfates. Therefore, any degradation to water quality from the project will be temporary, should improve over time, and will be localized to the project area. The Mitigation Monitoring and Reporting Plan will verify reduced total and hexavalent chromium concentrations and that discharges and byproducts do not migrate beyond the project boundaries or adversely affect receptors with the project boundaries.

The Water Board received a letter dated February 25, 2008 from the State Clearinghouse (Enclosure 3) stating that the comment period produced no response from state agencies. In addition, the Water Board received no comments from the public.

Water Board staff's finds that there is no substantive evidence that the project will have a significant effect on the environment.

On January 22, 2008, Water Board staff mailed out Tentative Waste Discharge Requirements to interested agencies and the public. The only comments returned were from PG&E that: (1) suggested the project description be expanded to include pumping water from outside the chromium plume to be re-injected with or without treatment within the plume or near the

boundary for plume migration control, (2) requested that the term "oily degradation" be removed from the section describing water quality degradation from waste discharges, (3) clarify language under Discharge Specification to allow for the injection of fresh water for plume boundary control, and (4) requested that language under Discharge Specification cite the item numbers where the discharge shall not cause a violation of water quality objectives outside the project boundaries . A copy of PG&E's letter and Board staff's response are attached to this agenda item as Enclosures 4 and 5. The Proposed Board Order allowing for General Waste Discharge Requirements are attached as Enclosure 6.

**RECOMMEN-  
DATION:**

1. Certification of the Resolution as proposed.
2. Adopt the Order as proposed.

**Enclosure:**

1. Proposed Resolution
2. Initial Study/Environmental Checklist
3. Letter dated February 25, 2008 from the State Clearinghouse
4. Comments from PG&E, dated February 25, 2008
5. Regional Board staff's response to PG&E's comments, dated March 17, 2008
6. Proposed Board Order

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**FACT SHEET**

**ITEM NO.:** 3

**DISCHARGER NAME:** Pacific Gas and Electric Company (PG&E)

**FACILITY TYPE:** A land treatment unit used for reducing hexavalent chromium to trivalent chromium and injecting clean water. The proposed discharges will either be injected directly to groundwater or will be added to extracted groundwater before being re-injected to groundwater. The overall effect will reduce total chromium concentrations in groundwater and contain the chromium plume from further migration.

**PROJECT NAME:** General Site-wide Groundwater Remediation Project

**WDID NO.:** 6B369107001

**LOCATION:** From 35863 Fairview Road, Hinkley, in the south, to Alcludia Road in the north. From Somerset Road in the east to Mountain View Road to the west.

**TYPE OF WASTE:** Solid and liquid wastes, including chemical reduction compounds, biological reduction compounds, tracer compounds, well rehabilitation compounds, nutrients, and process chemicals.

**PROGRAM:** Chapter 15/Title 27

**DISPOSAL FACILITY:** Class II Land Treatment Unit; 1,997 acres (2.8 miles long x 1.6 miles wide) of land.

**DISCHARGE PERIOD:** Do not expire.

**RECEIVING WATERS:** Groundwaters of the Harper Valley Hydrologic Area of the Mojave Hydrologic Unit

03-0005

**BENEFICIAL USES:** Groundwaters –  
1. MUN – municipal and domestic supply;  
2. AGR – agricultural supply;  
3. IND – industrial supply;  
4. FRSH – freshwater replenishment; and  
5. AQUA – aquaculture.

**CEQA COMPLIANCE:** Mitigated Negative Declaration – Section  
15301 Title 14 CCR

**LANDOWNER:** PG&E and others

**LAND CONTROLLED BY:** PG&E and others

**NEARBY DEVELOPMENT:** PG&E Compressor Station, Hinkley  
Elementary School, Hinkley Senior Center,  
rural residences and farms

**NATURE OF AREA:** High Desert

# ENCLOSURE 1

03-0007

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

**RESOLUTION NO. R6V-2008-(PROPOSED)**

**APPROVING THE INITIAL STUDY/CHECKLIST  
AND ADOPTING A MITIGATED NEGATIVE DECLARATION  
FOR THE GENERAL SITE-WIDE GROUNDWATER  
REMEDIATION PROJECT**

FOR

PACIFIC GAS & ELECTRIC COMPANY  
COMPRESSOR STATION  
35863 Fairview Road  
Hinkley, California

\_\_\_\_\_ San Bernardino County \_\_\_\_\_

WHEREAS, the California Regional Water Quality Control Board, Lahontan Region (hereinafter the Water Board) finds that:

1. California Water Code (CWC) Section 13260(a)(1) requires that any person discharging wastes, or proposing to discharge wastes other than into a community wastewater collection system, that could affect the quality of waters of the State shall file a report of waste discharge (ROWD) with the Regional Water Quality Control Board exercising jurisdiction in the area, and that Water Board shall then prescribe requirements for the discharge or proposed discharge of wastes.
2. Pacific Gas & Electric Company (hereinafter Discharger) has filed a ROWD and applied for General Waste Discharge Requirements to implement various remediation projects to reduce contamination in the groundwater and contain plume migration. The proposed remediation projects will consist of 1) extraction and management of groundwater and 2) in-situ (below ground) treatment.
3. The Discharger owns the Compressor Station located at 35863 Fairview Road in Hinkley, California (site). The facility is used to transport natural gas along pipelines to further destinations. The Discharger also owns land north of the compressor station to Alcurdia Road and overlying the groundwater plume containing chromium. The project will take place between these two locations and from west of Mountain View Road to Somerset Road, a distance of 1.6 miles. Of the 143 parcels located within the project area, 36 are owned by PG&E and 107 are owned by other parties.

03-0008

4. Soil and groundwater beneath the site is contaminated with hexavalent chromium from untreated cooling tower water discharged to unlined ponds from 1952 to 1964. This contamination has created a plume of chromium in groundwater extending about two miles to the north of the compressor station and about 1.3 miles wide. Detectable chromium concentrations in the plume exceed the California Maximum Contaminant Level for drinking water of 50 micrograms per liter.
5. The site is subject to various Lahontan Regional Water Quality Control Board orders, including the Cleanup and Abatement Order (CAO) No. 6-01-50. The Discharger is required to conduct cleanup of chromium in groundwater in a manner that does not threaten to create nuisance conditions.
6. Under the ROWD described in finding number 2 above and in order to partially comply with the orders described in finding number 5 above, the Discharger proposes to implement various remediation projects to reduce contamination in the groundwater and contain plume migration. The remedial actions are: 1) extraction and management of groundwater and 2) in-situ (below ground) treatment.
7. Groundwater quality within the project area will be monitored through a Monitoring and Reporting Program to be issued by the Lahontan Water Board Executive Officer for each specific remedial action. In addition, groundwater quality across the site and off-site areas will continue to be monitored by a comprehensive groundwater monitoring well network on a bi-monthly, quarterly, and semi-annual basis depending on well locations.
8. The direction of groundwater flow is to the north-northwest in the project area. The Discharger shall monitor the presence and concentration of chemical and biological reduction compounds, tracers, nutrients, well rehabilitation compounds, process chemicals, potential byproducts, evaluate flow conditions, and any potential for movement of contaminants outside the remediation area. As specified in the Waste Discharge Requirements and the Mitigated Negative Declaration, the Discharger will initiate mitigation measures and a contingency plan, if necessary, if contaminants or injected solutions or byproducts migrate outside the project boundaries or migrate in concentrations adversely affecting beneficial uses of receptors within the project area.
9. The injection of chemical and biological reduction compounds, tracers, nutrients, well rehabilitation compounds, and process chemicals in the soil and groundwater is a discharge of waste subject to Section 13260 of the CWC. However, the discharges are intended to enhance remediation of hexavalent chromium-contaminated groundwater and contain plume migration. This approach is anticipated to reduce cleanup time and costs compared to traditional cleanup remedies without affecting public health and safety.

10. The Water Quality Control Plan (Basin Plan) for the Lahontan Region designates the beneficial uses of the groundwater of the Middle Mojave River Valley Groundwater Basin as municipal and domestic supply, industrial service supply, agricultural supply, freshwater replenishment, and aquaculture.
11. The permitted discharges are consistent with the anti-degradation provisions of State Water Resources Control Board Resolution No. 68-16 (Anti-degradation Policy). The discharges may result in some localized mobilization of reduced metals that will be monitored to verify natural attenuation within the project area. Re-injection of extracted groundwater may result in increased concentrations of total dissolved solids, nitrates, and sulfates. All discharges and potential byproducts will dilute and degrade with distance and time and should have no long-term affect upon beneficial uses. The discharges are intended, and are anticipated, to produce an improvement to groundwater quality by reducing hexavalent chromium and, thereby, total chromium concentrations.
12. The Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for these discharges and has provided them with an opportunity to submit their written views and recommendations. The Water Board, in a public meeting on April 9, 2008, heard and considered all comments pertaining to the discharges and to the proposed requirements.
13. The Water Board has assumed lead agency role for this project under the California Environmental Quality Act (Public Resources Code Section 21000 et seq.) and has prepared an Initial Study/Checklist in accordance with Title 14, California Code of Regulations, Section 15063, titled Guidelines for Implementation of the California Environmental Quality Act. Based on the Initial Study/Checklist, Water Board staff prepared a Mitigated Negative Declaration indicating that the project will not have a significant adverse effect on the environment.
14. Copies of the Initial Study/Checklist and proposed Mitigated Negative Declaration were transmitted to the State Clearinghouse, all agencies and interested parties. A February 25, 2008 letter from the State Clearinghouse states that no state agencies provided comments concerning the project during the comment period.
15. The Water Board has reviewed the Initial Study/Checklist and Mitigated Negative Declaration concerning this Resolution prepared by staff, in compliance with the California Environmental Quality Act (Public Resources Code Section 21000 et seq.). The Water Board concurs with the staff findings that a Mitigated Negative Declaration should be adopted. The Initial Study/Checklist and Negative Declaration were circulated for public review

and comment. No public comments concerning the project were received by the Water Board.

16. The Water Board considered all testimony and evidence at a public hearing held on April 9, 2008, at Barstow, California, and good cause was found to approve the Initial Study/Checklist and proposed Mitigated Negative Declaration. After consideration of oral comments and staff's professional review and advice, the Water Board finds that there is no evidence in the record to support a fair argument that there may be adverse environmental impacts resulting from the proposed discharge.

THEREFORE, BE IT RESOLVED that the Water Board:

1. Adopts the Initial Study/Checklist, and proposed Mitigated Negative Declaration and directs the Executive Officer to file a Notice of Determination with the State Clearinghouse and submit the required Department of Fish and Game filing fee.
2. Directs that a copy of this Resolution shall be forwarded to the State Water Resources Control Board and all interested parties.
3. Directs that discharges of chemical and biological reduction compounds, tracers, nutrients, well rehabilitation compounds, and process chemicals into soil and groundwater shall conform with all requirements, conditions, and provisions set forth in A. The Order No. R6V-2008-(PROPOSED).

#### Certification

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of a Resolution adopted by the California Regional Water Quality Control Board, Lahontan Region, on April 9, 2008.

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HAROLD J. SINGER  
EXECUTIVE OFFICER

## **ENCLOSURE 2**

03-0013

## INITIAL STUDY/ENVIRONMENTAL CHECKLIST AND MITIGATED NEGATIVE DECLARATION

This Initial Study/Environmental Checklist and Negative Declaration have been prepared in accordance with the California Public Resources Code, Section 21080(c) and California Code of Regulations (CCR), Title 14, Sections 15070 and 15071.

**Project Title:** General Permit for Site-wide Groundwater Remediation Project

**Project Location:** 35863 Fairview Road, Hinkley, California 92347

**Lead Agency:** California Regional Water Quality Control Board, Lahontan Region

**Decision Making Body:** California Regional Water Quality Control Board, Lahontan Region

**Project Applicant:** Pacific Gas and Electric Company (PG&E), 77 Beale Street, San Francisco, California 94105. Please send all correspondence to Robert Doss at the above address, and to Eric Johnson at 350 Salem Street, Chico, CA 95928.

**Project Description:** Pacific Gas and Electric Company (PG&E) has submitted a Report of Waste Discharge (ROWD) proposing the implementation of remedial activities for hexavalent chromium (Cr[VI]) in groundwater within the Project Area (Attachment A). The ROWD consists of transmittals dated August 27, 2007 and September 19, 2007. The purpose of the project is to implement various remediation projects for reducing hexavalent chromium in groundwater to trivalent chromium and containing the chromium plume from migration. The remedial actions to be included in the GWDRs are: 1) extraction and management of groundwater, including re-injection, and 2) in-situ treatment. The ROWD supports the preparation and adoption of General Waste Discharge Requirements (GWDRs) by the Lahontan Regional Water Quality Control Board (LRWQCB) for multiple remedial actions.

The Project site consists of approximately 1,997 acres (2.8 miles long x 1.6 miles wide) of land of varying size located near the town of Hinkley in San Bernardino County, California. The Project site is located north of the Mojave River and southwest of Mt. General along Highway 58. The area is zoned as AG-AP (Agricultural, Agricultural Preserve) and RL (Rural Living). The local setting is agricultural and rural residential.

The Project site is composed of 143 parcels. Of the total number of parcels, PG&E owns 36. The main active uses for the land within the Project Area are the Hinkley Compressor Station and Desert View Dairy, both owned by PG&E. Between the Compressor Station and the Desert View Dairy, PG&E-owned land is mostly vacant that can be characterized by disturbed desert saltbush scrub. Of the 107 parcels within the project area not owned by PG&E, surrounding land uses include farms, rural residences, the Burlington Northern Railroad, and State Highway 58. Water supply is mostly in the form of domestic and agricultural wells. A few municipal wells are used by small purveyors, such as mobile home parks.

This Initial Study/Environmental Checklist that follows has been prepared to consider a General Permit for conducting groundwater remediation activities that require action by the Lahontan Water Board through adoption of WDRs. Mitigation measures to address potential impacts associated with these changes are described herein.

**Mitigation Measures:** The mitigation measures are included in the attached Initial Study/Environmental Checklist. The project applicant has agreed to implement all of the mitigation measures.

**Environmental Finding:** The staff of the California Regional Water Quality Control Board, Lahontan Region has determined, on the basis of the attached Initial Study/Environmental Checklist and the documents and sources referenced herein, that the project described above will not have a substantial adverse impact on the environment, provided that the mitigation measures identified in the project applicant's Report of Waste Discharge and the related Subsequent Study/Environmental Checklist are included in the project.

**Subsequent Study/Environmental Checklist:** A draft Initial Checklist was prepared by ARCADIS and submitted to the Water Board by PG&E. The attached version of the Subsequent Study/Environmental Checklist was completed by Lisa Dernbach, Senior Engineering Geologist, of the Water Board. For more information, please contact Lisa Dernbach at (530) 542-5424 and [ldernbach@waterboards.ca.gov](mailto:ldernbach@waterboards.ca.gov).

Draft Environmental Checklist  
Hinkley Chromium Remediation Project  
Pacific Gas and Electric Company Compressor Station  
Hinkley, California

1. Project title:  
***General Permit for Site-wide Groundwater Remediation Project, Hinkley Compressor Station Remediation Project***
2. Lead agency name and address:  
***California Regional Water Quality Control Board, Lahontan Region  
2501 Lake Tahoe Blvd., South Lake Tahoe, California 96150***
3. Contact person and phone number:  
***Lisa Dernbach, Senior Engineering Geologist  
Telephone: (530) 542-5424***
4. Project location:  
***Hinkley, San Bernardino County, California 92347***
5. Project sponsor's name and address:  
***Pacific Gas and Electric Company, 77 Beale Street, San Francisco, CA 94105  
Attention: Robert Doss  
Pacific Gas and Electric Company, 350 Salem Street Chico, CA 95928 Attention:  
Eric Johnson***
6. General plan designation:  
***Various: RL-5 (Rural Living 5-acre minimum); RL-40; AG-AP; RL; RL-10  
Note: San Bernardino County's land use and zoning designations are the same.***
7. Zoning:  
***RL-5 (Rural Living 5-acre minimum); RL-40; AG-AP; RL; RL-10***
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)  
  
***Pacific Gas and Electric Company (PG&E) has submitted a Report of Waste Discharge (ROWD) proposing the implementation of remedial activities for hexavalent-chromium (Cr[VI]) in groundwater within the Project Area (Attachment A). The ROWD supports the preparation and adoption of General Waste Discharge Requirements (GWDRs) by the Lahontan Regional Water Quality Control Board (LRWQCB) for multiple remedial actions.***  
  
***Prior to remedial action, PG&E will submit a Notice of Intent (NOI) to the LRWQCB Executive Officer. The NOI will identify the specific remedial action or combination of actions being proposed and will contain the necessary information to support coverage under the GWDRs. The LRWQCB Executive Officer would approve of the remedial action by issuing a Notice of Applicability (NOA).***

The remedial actions to be included in the GWDRs are: 1) extraction and management of groundwater and 2) in-situ treatment. These remedial actions are for the purpose of cleanup and plume containment and are described briefly below.

### **Extraction and Management of Groundwater**

Remedial actions that require extraction and management of groundwater are: 1) extraction of groundwater and 2) above-ground groundwater treatment, as necessary, and/or amendment with reductant.

Technologies for aboveground treatment to reduce Cr(VI) concentrations, if necessary, are chemical reduction/precipitation, ion exchange, and biological treatment. Prior to discharge, groundwater may be amended by a chemical or biological reductant (calcium polysulfide, ferrous chloride, ferrous sulfate, sodium dithionite, zero-valent iron, emulsified vegetable oil (EVO), ethanol, methanol, lactate, whey, molasses, corn syrup, glucose, or acetate).

Groundwater will be discharged via injection wells. Rehabilitation compounds (acetic acid, citric acid, hydrochloric acid, hydrogen peroxide, sodium hydroxide) may be used to remove microbial or geochemical fouling that may develop within the discharge systems.

Groundwater extracted from outside the chromium plume may be injected near the plume boundary for the purpose of creating a hydraulic barrier to plume migration.

### **In Situ Treatment**

In situ remedial actions will be used to reduce Cr(VI) concentrations in groundwater through the injection of chemical reductants (calcium polysulfide, ferrous chloride, ferrous sulfate, sodium dithionite, or zero-valent iron) or biological reductants (EVO, ethanol, methanol, lactate, whey, molasses, corn syrup, glucose, or acetate). Prior to project implementation, a pilot study may be conducted for compounds not having a prior discharge history at the site or at a site with similar conditions.

Reductants will be injected directly to groundwater by means of manual or semi-automated recirculation systems, or manually using temporary well points or direct injection methods such as a Cone Penetrometer (CPT).

Tracers (bromide and fluorescent tracers including fluorescein and eosine) may be injected to groundwater to characterize flow conditions within the treatment areas. Well rehabilitation compounds (acetic acid, citric acid, hydrochloric acid, hydrogen peroxide, and sodium hydroxide) may be used to remove microbial or geochemical fouling that may develop within the well.

9. Surrounding land uses and setting: Briefly describe the project's surroundings:

The Project site consists of approximately 1,997 acres (2.8 miles long x 1.6 miles wide) of land of varying size located near the town of Hinkley in San Bernardino County, California. The Project site is located north of the Mojave River and southwest of Mt. General along Highway 58. The area is zoned as AG-AP (Agricultural, Agricultural Preserve) and RL (Rural Living). The local setting is agricultural and rural residential.

The Project site is composed of 143 parcels. Of the total number of parcels, PG&E owns 36. The main active uses for the land within the Project Area are the Hinkley Compressor Station and Desert View Dairy, both owned by PG&E. Between the Compressor Station and the Desert View Dairy, PG&E-owned land is mostly vacant that can be characterized by disturbed desert saltbush scrub. Of the 107 parcels within the project area not owned by PG&E, surrounding land uses include farms, rural residences, the Burlington Northern Railroad, and State Highway 58. Water supply is mostly in the form of domestic and agricultural wells. A few municipal wells are used by small purveyors, such as mobile home parks.

The topography of the Project site, located in the Hinkley Valley, is a narrow northwest-trending alluvium-filled depression located north of the Mojave River. The main valley averages about 11 kilometers (km) in length and 4.5 km in width, and the axis of the valley is relatively flat with a gentle slope toward the northwest away from the river (Andrews and Neville 2004). The surrounding area has a typical mountain-and-basin topography with sparse vegetation. The topography at the Project Site generally ranges in elevation from 2,160 feet to 2,200 feet above mean sea level, and slopes gently toward the north at an overall slope of less than one percent.

10. Other public agencies whose approval is potentially required (e.g., permits, financing approval, or participation agreement).

The following permits may be required for this Project depending on the remedial alternatives selected. All are likely non-discretionary and not requiring CEQA analysis, except the LRWQCB's Waste Discharge Requirements:

<b>Agency</b>	<b>Permit</b>	<b>Activity Requiring Permit</b>
Regional Water Quality Control Board	Waste Discharge Requirements	Discharge of extracted contaminated groundwater back into the aquifer.
		Addition of biological or chemical reagents to the groundwater.
		Discharge of treated water to the aquifer.
San Bernardino County Planning Department	Conditional Use Permit	Land uses that are not included in the current agricultural zoning of the site.
	Temporary Use Permit	Temporary trailers or buildings placed onsite during construction or for periods less than 2 years.

<i>San Bernardino County Building Department</i>	<i>Building Permit</i>	<i>Construction of buildings, installation of electrical equipment, installation of piping.</i>
	<i>Grading Permit</i>	<i>Site grading or trenching.</i>
<i>San Bernardino County Health Department</i>	<i>Well Installation or Well Destruction Permit</i>	<i>Installation of extraction, injection, or monitoring wells; installation of borings.</i>
<i>State Water Resources Control Board</i>	<i>Coverage under the General Permit for Discharges of Storm Water Associated with Construction Activities</i>	<i>Construction disturbance of 1 acre or more.</i>
	<i>Coverage under the General Permit for Discharges of Storm Water Associated with Industrial Activities</i>	<i>Applicable industrial activities.</i>
<i>San Bernardino County Fire Department</i>	<i>Hazardous Materials Use &amp; Storage Permit</i>	<i>Hazardous materials used or stored above threshold quantities as specified in the Fire Code.</i>
<i>Mojave Desert Air Quality Management District</i>	<i>Permit to construct and/or Permit to Operate</i>	<i>Air emission source discharges as specified in District regulations.</i>
<i>Alcohol and Tobacco Tax and Trade Bureau</i>	<i>Industrial Alcohol Users Permit</i>	<i>Storage and use of denatured alcohol (ethanol).</i>

11. References

The following references were used in completing this Draft Initial Study:

Albion Environmental, Inc. *Cultural Resources Survey of Six Parcels, Hinkley, California*. Prepared for Pacific Gas and Electric Company. June 2005.

California Department of Fish and Game (CDFG). *California Natural Diversity Database List of California Terrestrial Natural Communities*. September 1999.

California Department of Fish and Game (CDFG). *California Natural Diversity Database (CNDDDB)*. Commercial version. Information dated July 1, 2002. Information accessed April 2005.

CH2M HILL. *Hinkley Remediation Site Biological Resources Technical Memorandum*. September 2002.

CH2M HILL. *Hinkley Remediation Site Biological Resources Technical Memorandum*. November 2003.

Department of the Interior. Bureau of Land Management, California Desert District. Record of Decision: West Mojave Plan – Amendment to the California Desert Conservation Area Plan. March 2006.

Holland, Robert. *Natural Community Descriptions*. California Department of Fish and Game. 1986.

Pacific Gas & Electric Company. *Biological Assessment of Parcels Proposed For Remediation Activities Near Hinkley Compressor Station*. April 2005.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Aesthetics                    | <input type="checkbox"/> Agriculture Resources                         | <input checked="" type="checkbox"/> Air Quality            |
| <input checked="" type="checkbox"/> Biological Resources          | <input checked="" type="checkbox"/> Cultural Resources                 | <input type="checkbox"/> Geology /Soils                    |
| <input checked="" type="checkbox"/> Hazards & Hazardous Materials | <input checked="" type="checkbox"/> Hydrology / Water Quality          | <input type="checkbox"/> Land Use / Planning               |
| <input type="checkbox"/> Mineral Resources                        | <input checked="" type="checkbox"/> Noise                              | <input type="checkbox"/> Population / Housing              |
| <input type="checkbox"/> Public Services                          | <input type="checkbox"/> Recreation                                    | <input checked="" type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities / Service Systems              | <input checked="" type="checkbox"/> Mandatory Findings of Significance |  |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## EVALUATION OF ENVIRONMENTAL IMPACTS:

- 1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
- 2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- 3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
- 4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).
- 5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. CCR, Title 14, Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
  - a) Earlier Analysis Used. Identify and state where they are available for review.
  - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
  - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
- 6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
- 7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

- 8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
- 9) The explanation of each issue should identify:
- the significance criteria or threshold, if any, used to evaluate each question; and
  - the mitigation measure identified, if any, to reduce the impact to less than significance

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<b>I. AESTHETICS</b>				
Would the project:				
<b>a)</b> Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<b>b)</b> Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>Significance:</b> <i>Less Than Significant Impact or No Impact.</i>				
<p><i>a) The Project site consists of 143 parcels of land of varying acreage located near the town of Hinkley in San Bernardino County, California. The Project site is located north of the Mojave River and southwest of Mt. General along Highway 58. The Project site is visible from the roads adjacent to the land parcels and Highway 58. The Site is not located within, or in the vicinity of, a scenic vista or any designated scenic resources.</i></p> <p><i>The proposed project may include low-lying structures associated with treatment of groundwater, which may include temporary buildings, security fencing and lighting, and above-ground storage tanks.</i></p> <p><b>Mitigation Measures:</b> <i>Less than Significant with Mitigation Incorporated.</i></p> <p><i>None of the structures are proposed to exceed 35 feet in total height, and none would visually impair scenic resources in the Project Area such as trees, rock outcroppings, or historic buildings within a state scenic highway because no such resources are in the vicinity of the proposed Project site.</i></p>				
<b>c)</b> Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>Significance:</b> <i>Less than Significant with Mitigation Incorporated.</i>				

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p>The project area is mostly vacant that can be characterized by disturbed desert saltbush scrub. Visual changes to the site as a result of implementing each option are described below.</p> <p><b>Groundwater Extraction:</b> Extraction from groundwater extraction wells will have no significant impact on aesthetics. Extraction wells will be completed at or below ground surface, but some of the extraction well head equipment and surrounding security equipment will be visible. The visual impact of this equipment will be consistent with extraction well setups built on site to date and existing agricultural wells in the vicinity. The extraction well equipment and fencing is consistent with the visual character of the existing agricultural land use in the area. The fences will be a maximum of 12 feet high and may be topped with 3-strand barbed wire. The fencing will have privacy slats installed to hide the equipment contained inside. Most permanent conveyance pipelines would be installed below ground.</p> <p><b>Aboveground Water Treatment Plant:</b> Above ground treatment, if necessary, will be completed using equipment placed on property owned or leased by PG&amp;E. The visual impact will include a fenced area up to approximately 1 acre in size, and may include concrete foundation pads, equipment controls buildings, water treatment tanks, chemical supply tanks, and miscellaneous support structures. The height of tanks, buildings, and structures will not exceed 35 feet. The facilities would be located in predominantly rural agricultural areas, and could create contrast because these areas are generally flat with no other large structures except the existing Compressor Station and the Desert View Dairy LTU. Temporary impacts during construction could also be expected, including site clearing, grading, and soil excavation. Therefore, these facilities could potentially be viewed from nearby roads and highways.</p> <p><b>Discharge:</b> Injection into groundwater via injection wells will have no significant impact on aesthetics. While some of the injection well head equipment and surrounding security equipment will be visible, the visual impact of this equipment will be consistent with injection well head setups built on site to date, and will be completed at or below grade. The injection well equipment is consistent with the visual character of the existing agricultural land use in the area. Permanent conveyance pipelines would be installed below ground.</p> <p><b>In Situ Treatment:</b> The visual appearance of the in situ remediation systems may consist of concrete foundation pads, equipment controls buildings, reagent delivery tanks, and extraction, injection, and monitoring wells similar to existing wells in this area. The footprint of the in situ treatment facilities would be no more than 100 by 200 feet in area and 20 feet in height. Fences surrounding the remediation system will be a maximum of 12 feet high and may be topped with 3-strand barbed wire. The fencing will have privacy slats. Permanent conveyance pipelines will be installed below ground. Limited above ground piping will be contained within the fenced area and will not be visible.</p>				

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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**Mitigation Measures:**

The following mitigation measures would reduce impact to the visual character of the Site from construction of above-ground remediation systems to below a level of significance:

- Screening techniques will include privacy slats for all fencing and/or landscaping for all major structures
- The facilities will be located at least 700 feet away from the nearest residence or major road or highway; the architectural design will include features to reduce the bulk and scale
- All building materials will be designed and constructed utilizing materials and colors that blend in with the local area to the extent possible
- Facilities will be limited to 35 feet in height

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

**Significance:** *Less than Significant.*

The proposed Project will include new lighting in the areas of proposed structures and fencing for the primary purposes of security.

**Mitigation Measures:** *Less than Significant with Mitigation Incorporated.*

The lighting will not result in a new source of substantial light or glare in the area because any lighting will be shielded and directed downwards in conformance with County of San Bernardino General Plan. Structures containing lighting will be located more than 700 feet from current residences providing adequate mitigation from potential glare. No further mitigation would be required.

**II. AGRICULTURE RESOURCES:**

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
agricultural use?				
<b>b)</b> Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>c)</b> Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Significance:</b> <i>No Impact.</i></p> <p><i>a)-c) Much of the Project site consists of vacant land that was formerly used for agricultural cultivation. Current San Bernardino General Plan designations for the Project site include RL-5 (Rural Living 5-acre minimum), AG -AP (Agricultural with an Agricultural Preserve Overlay), RL-40 (Rural Living, 10 acre minimum); RL (Rural Living) and RL-10-AP (Rural Living – 10 acre minimum, Agricultural Preserve). No lands will be converted to non-agricultural use.</i></p> <p><i>The Project site does not contain any lands designated as Unique Farmland, or Farmland of Statewide Importance (Farmland). The Project site does contain Prime Farmland but the majority of the land is designated as grazing land, and it will not be converted into non-agricultural use.</i></p> <p><i>The Proposed Project would not affect Williamson Act contracts as no Williamson Act farmlands have been identified on the Proposed Project site.</i></p> <p><i>The Project would not interfere with ongoing or future agricultural activities and would be consistent with the existing agricultural land use designation for the site.</i></p> <p><i>Construction would involve the placement of equipment trailers, mixing tanks, underground pipes and conduits, and installation of wells. Overall, the Project could potentially result in a beneficial impact to agricultural uses by restoring the aquifer to a condition that is appropriate for agricultural needs.</i></p> <p><b>Mitigation Measures:</b></p> <p><i>None Required.</i></p>				

**III. AIR QUALITY**

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.

Would the project:

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Significance:** *Less than Significant with Mitigation Incorporated.*

*b)-c) The Mojave Desert Air Quality Management District (MDAQMD) regulates air quality and emissions in the Project region to achieve Federal and State air quality standards, and addresses local concerns and issues.*

*Due to violations of the Federal standard in the air basin that are unrelated to this project, the Mojave Desert Air Basin (MDAB) was re-designated to a moderate non-attainment status. In 1995, the MDAQMD submitted a Federal Particulate Matter (PM<sub>10</sub>) Attainment Plan (plan), which demonstrated how attainment of the Federal PM<sub>10</sub> standard would be achieved by the earliest practicable date. The plan outlines selected control measures that would limit the amount of PM<sub>10</sub> released into the atmosphere. Part of this plan requires the implementation of dust control plans for construction projects disturbing 100 or more acres.*

*The significance emission threshold values outlined by MDAQMD are shown in Table 1.*

**Table 1**

*Significant MDAQMD Emissions Thresholds*

Criteria Pollutant	Daily Threshold (pounds)	Annual Threshold (tons)
Carbon monoxide (CO)	548	100
Oxides of nitrogen (NO <sub>x</sub> )	137	25
Volatile organic compounds (VOC)	137	25
Oxides of sulfur (SO <sub>x</sub> )	137	25
Particulate Matter (PM <sub>10</sub> )	82	15

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p><i>Air quality impacts associated with construction generally arise from fugitive dust generation and the operation of construction equipment. Fugitive dust results from land clearing, grading, excavation, concrete work, and vehicle traffic on paved and unpaved roads. The amount of dust generated is a function of construction activities, silt and moisture content of the soil, wind speed, frequency of precipitation, vehicle traffic and types, and roadway characteristics. Emissions are greater during drier summer and autumn months and in fine-textured soils. Fugitive dust is a source of airborne particulates, including PM<sub>10</sub>.</i></p> <p><i>Most emissions from the Project would be PM<sub>10</sub> emissions from construction activities such as trenching, drilling, and construction vehicles driving on unpaved roads, as well as decommissioning facilities at the end of the Project.</i></p> <p><i>At any given time, construction of only a few facilities would be underway. Because of the minor level of construction activities, emissions such as NO<sub>x</sub> and SO<sub>x</sub> from construction vehicles themselves would be well below the MDAQMD daily threshold limits.</i></p> <p><i>Point source and fugitive air emissions, such as those from tanker truck unloading, storage, and handling of volatile chemicals including ethanol and methanol, are subject to the Rules and Regulations of the MDAQMD. Under Regulation II (Permits), the MDAQMD requires that all equipment with the potential to emit air pollutants have a valid permit prior to commencing construction and/or operation. Fugitive emissions will be monitored in compliance with the MDAQMD permit.</i></p> <p><i>For the storage of ethanol and methanol at the Site, the MDAQMD will assign a set of conditions to each issued permit. These conditions will define acceptable operation of the device within the air quality requirements. These requirements are derived from Federal, State and MDAQMD laws, rules and regulations, MDAQMD permitting policy and precedent, and regulatory engineering practices. In addition, the permit will define what is allowed through the description and equipment details and/or equipment detail list, in most cases including a maximum rating.</i></p> <p><b>Mitigation Measures:</b></p> <p><i>To minimize any emissions and comply with MDAQMD requirements, the following mitigation measures will be implemented during project construction activities:</i></p> <ul style="list-style-type: none"> <li>• <i>Vehicle speeds on unpaved roads will be limited to 10 miles per hour to minimize vehicle-related dust emissions.</i></li> <li>• <i>During dust-generating activities such as drilling or trenching, water application or other dust suppression measures will be implemented as needed.</i></li> <li>• <i>Construction activities creating dust will cease when winds reach speeds of 25 miles per hour or more.</i></li> <li>• <i>All construction vehicles and equipment will be checked periodically to ensure that they</i></li> </ul>				

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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are in proper working condition and that there is no potential for fugitive emissions of oil or hazardous products.

Other requirements of the MDAQMD will be achieved, including Rule 403.2 which regulates Fugitive Dust Control for the Mojave Desert Planning Area.

d) Expose sensitive receptors to substantial pollutant concentrations?

**Significance:** No Impact.

No sensitive receptors are located within 700 feet of the Project Area. The nearest sensitive receptors are the Hinkley Senior Center and the Hinkley Elementary/Middle School. The Hinkley Senior Center is located at 35997 Mountain View Road, approximately 1,000 feet west of the Project Area boundary near the Hinkley Compressor Station. The Hinkley Elementary/Middle School is located more than 2,000 feet west of the western boundary of the Project Area on Hinkley Road at Santa Fe Avenue (37600 Hinkley Road). Because of this distance, and the low levels of Project emissions, no significant impacts to sensitive receptors would occur.

**Mitigation Measures:**

None Required.

e) Create objectionable odors affecting a substantial number of people?

**Significance:** Less than Significant Impact STET.

There may be some minor odors associated with the injection of biological reductants, due to the potential to generate small amounts of hydrogen sulfide and methane gas. Both of these are only expected to be detectable at the injection well head and will dissipate before reaching the nearest residence.

There may also be some minor and temporary odors associated with the handling, storage, and operation of ethanol and methanol use. The rural location of the remediation site and the distance to the nearest residences will prevent these potential conditions from affecting a substantial number of people.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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**Mitigation Measures:**

An air monitoring program will evaluate any odors, methane, and hydrogen sulfide gas levels during project operations. If high levels of nuisance air constituents are detected, a contingency plan to scale back or shut down injections will be implemented. The site manager will be responsible for recording high levels of nuisance air constituents in a site log book and reporting corrective actions according to agencies permits.

**IV. BIOLOGICAL RESOURCES**

Would the project:

- a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*Three special status species: the Desert tortoise (Gopherus agassizii); the Mohave ground squirrel (Spermophilus mohavensis); and the Mohave Tui chub (Gila bicolor), have been identified as potentially occurring in the general vicinity of the Project Area. In general, the Project Area is not a suitable habitat for the tortoise or the squirrel, due to the developed nature of the land use surrounding the Project Area (CH2MHILL 2002) and is not a suitable habitat for the chub due to the lack of water within the Project Area. Three biological reconnaissance surveys looking for the occurrence of special status wildlife species have been conducted by CH2M HILL, covering roughly half of the Project Area. In August 2002, PG&E property located north of State Highway 58 between Mountain View Road and Summerset Road was surveyed. The area north of Santa Fe Avenue between Mountain View Road and Summerset Road was surveyed in October 2003 and properties abutting Fairview Road and/or Community Boulevard between Highway 58 and Frontier Road near the Hinkley Compressor Station were surveyed in March 2005. The special status species were not found during the three biological surveys.*

*The Project Area does have marginal foraging habitat for three special-status avian species known from the region listed as State species of special concern by California Department of Fish and Game (CDFG): ferruginous hawk (Buteo regalis); loggerhead shrike (Lanius ludovicianus); and prairie falcon (Falco mexicanus). For example, the row of white alder trees (Alnus rhombifolia) in the southern portion of the Desert View Dairy LTU provide suitable roosting habitat for these special-status species. The results of the biological survey listed above determined no resident individuals use the Project Area. Additionally, there is a low*

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p><i>potential for these species to occur onsite as migrants during the breeding season (February to August). Therefore, impacts are not likely to occur during Project implementation. To avoid any potential impacts to these three species, as well as other nesting birds protected under the Migratory Bird Treaty Act, a preconstruction survey shall be conducted 2 weeks before any ground-disturbing construction activities are scheduled to occur during the breeding season (February to August).</i></p> <p><i>The Project Area is within the boundaries of the West Mojave Plan. The Project does not conflict with the West Mojave Plan because: (1) the Project boundary falls outside of the plan's designated habitat conservation areas, and (2) there are no proposed impacts to any special-status species or sensitive habitats covered by the plan.</i></p> <p><i>Biological resources are minimal, and of low quality. There is a low potential for impacts due to the overall sensitive nature of this area. Mitigation measures will be incorporated into the project as described below.</i></p> <p><i>Based on the surveys conducted to date, the Project Area is unlikely to be suitable for habitation by special status wildlife species. If features are implemented on a parcel within the Project Area that was not previously surveyed, the parcel will be surveyed prior to starting construction. If the results of the survey do not indicate the presence of special status species, the activities can be conducted under this CEQA documentation; otherwise, a new CEQA initial study will be completed.</i></p> <p><b>Mitigation Measures:</b></p> <p><i>The following mitigation measures will be incorporated into the Project and will be conducted before and during project implementation as follows:</i></p> <ul style="list-style-type: none"> <li><i>• A biological reconnaissance survey to determine the applicability of the general permit to newly acquired land or land not previously surveyed will be conducted prior to beginning remedial activities.</i></li> <li><i>• A qualified biologist will provide worker environmental awareness training for all construction personnel in the identification of sensitive biological resources. Measures required to minimize Project impacts during the construction and operation phase will also be identified. Workers will be required to report the occurrence of any special-status species observed on the Project site to biological monitors, who will then implement species protection measures.</i></li> <li><i>• Preconstruction surveys by qualified biologist(s) will be implemented for special-status wildlife species in impact areas prior to initiation of ground-disturbing activities at least two weeks prior to construction activities. Pre-construction surveys for nesting pairs, nests, and eggs will occur in areas proposed for vegetation removal, and active nesting areas will be flagged. If necessary and feasible, resource relocation (trapping and release of species) or construction exclusion by devices (such as fences) will be implemented. Coordination with the CDFG, the U.S. Fish &amp; Wildlife Service, or other</i></li> </ul>				

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p>regulatory agencies will be done as deemed appropriate by the qualified biologist.</p> <ul style="list-style-type: none"> <li>• If nesting birds are detected, vegetation removal will be avoided during the nesting season (generally February to August for most birds). All construction activity within 300 feet of active nesting areas will be prohibited until the nesting pair/young have vacated the nests.</li> <li>• To the maximum extent possible, all facilities will be located in existing barren areas or right-of-ways to limit new surface disturbance in consultation with the Project Biologist.</li> <li>• All vehicle traffic will adhere to a speed limit of 10 miles per hour during construction and maintenance to ensure avoidance of impacts to sensitive biological resources on access roads.</li> </ul>				
<p><b>b)</b> Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Significance:</b> <i>Less than Significant Impact STET.</i></p> <p><i>The Project site generally consists of disturbed desert habitats degraded by past agricultural and grading activities. The three habitats include disturbed desert saltbush scrub, agricultural lands, and ruderal habitat. No habitats classified according to the California Natural Diversity Database List of California Terrestrial Natural Communities (CDFG,1999) are present within or adjacent to the Project Area.</i></p> <p><i>Construction of facilities, particularly above-ground treatment facilities, may result in a permanent loss of several acres total of existing vegetation. In addition, temporary impacts to vegetation will occur with construction of some of the Project facilities such as underground piping.</i></p> <p><i>Because of the types of habitat present and the level of impacts that would occur, potential impacts to the habitat types present on the Project site will not be considered significant. A more detailed description of each of the three habitats that occur on Project site is provided below. The habitats are classified according to the vegetation classification system derived by Holland (1986).</i></p> <p><b>Upland Habitats</b></p> <p><i>This habitat type is characterized by the dominance of a variety of saltbush (Atriplex spp.) shrubs in saline soils within the Mojave Desert region. Dominant plant species onsite include shadscale (Atriplex canescens) and saltbush (Atriplex polycarpa). Due to past disturbances to this habitat, many non-native annual species have become frequent associates. The dominant annual cover includes filaree (Erodium ssp.), London rocket (Sisymbrium irio), and</i></p>				

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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*Mediterranean grass (Schismus barbatus). Most of the areas onsite are low in diversity and are dominated by non-native annuals with isolated patches of saltbush stands. This habitat type is not considered a sensitive habitat by CDFG.*

**Agricultural Lands**

*This vegetation type is classified by areas once designated for cultivation of row crops. Many of the agricultural lands on site were used for alfalfa production. The dominant plant species are generally non-native, invasive annual species such as alfalfa (Medicago sativa), London rocket, and filaree. This habitat type is not considered a sensitive habitat by CDFG.*

**Ruderal Habitat**

*This habitat type described by the dominance of non-native, invasive forbs such as Russian thistle (Salsola tragus) and dock (Rumex spp.). Mainly areas that have been disturbed previously by agricultural practices such as grading and tilling are dominated by this non-native vegetation community. Ruderal habitat is not considered a sensitive habitat by CDFG.*

*Based on the surrounding disturbed habitat observed during the surveys conducted it seems likely that parcels adjacent to parcels previously surveyed will have similar habitat to those described above. If features are implemented on a parcel within the Project Area that was not previously surveyed, the parcel will be surveyed prior to starting construction. If the habitat is similar to that described herein, the activities can be conducted under this CEQA documentation. If the habitat is different than what is covered in this CEQA document, a new CEQA initial study will be completed.*

**Mitigation Measures:**

*To determine the applicability of the general site-wide permit to newly acquired land or land not previously surveyed, a biological reconnaissance survey will be conducted prior to the commencement of remedial activities. If the survey finds that the land can be described by one of the three above-referenced types, this CEQA document will be deemed applicable. A new CEQA analysis will be required if the survey finds a habitat type that is not included above.*

**c)** Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?





**Significance:** No Impact.

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
<p><i>The Project site does not contain wetland habitats as defined by Section 404 of the Clean Water Act within or adjacent to the Project boundaries. No impacts are expected to occur, therefore, no mitigation will be required.</i></p> <p><b>Mitigation Measures:</b></p> <p><i>None Required.</i></p>				
<p><b>d)</b> Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p><b>Significance:</b> <i>Less than Significant Impact with Mitigation Incorporated.</i></p> <p><i>The Project site does not contain any perennial streams, lakes, or other aquatic habitat that would facilitate movement or migration of fish species, or would be used as a fish nursery site. Therefore, the proposed Project will not interfere with movement of any native or migratory fish.</i></p> <p><i>In addition, no migratory corridors for terrestrial wildlife species have been identified on the Project site. However, the Project Area does have marginal habitat for three special-status avian species as described above. Although there is a low potential for these species to occur on site, mitigation measures as previously described in Section IV.a will be implemented.</i></p> <p><i>As described above, if remedial measures are implemented on a parcel within the Project Area that was not previously surveyed, the parcel will be surveyed prior to starting construction. If the habitat is similar to that described herein, the activities can be conducted under this CEQA documentation. If the habitat is different than what is covered in this CEQA document, a new CEQA initial study will be completed.</i></p> <p><b>Mitigation Measures:</b></p> <p><i>Same as Section IV.a above.</i></p>				
<p><b>e)</b> Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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**Significance:** *No Impact.*

*There is no conflict with any local policies or ordinances protecting sensitive biological resources, such as a tree preservation policy or ordinance.*

**Mitigation Measures:**

*None Required.*

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*The Project Area falls within the boundaries of the West Mojave Plan (March 2006), Map Number 45. The Project would not be in conflict with the West Mojave Plan based on the following: (1) the Project boundary falls outside of the plan's designated habitat conservation areas, and (2) there are no proposed impacts to any special-status species or sensitive habitats covered by the plan. See previous discussion.*

**Mitigation Measures:**

*Same as Section IV.a above.*

**V. CULTURAL RESOURCES**

Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Issues	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

a), b), d) Based on a review of the Project site and vicinity provided by County of San Bernardino staff (S. Hall 2003), the Project site does not fall within the County's cultural resource overlay maps. In June 2005, Albion Environmental Inc. (Albion) conducted a cultural resources survey of approximately 470 acres within the Project Area. The objectives of this survey were to identify and record the cultural resources within the Project Area, develop preliminary evaluations of the resources, and provide PG&E with recommendations for additional archaeological action at the site (if necessary).

The field survey indicated that no prehistoric or historic cultural resources were encountered in the Project Area surveyed. In addition, soils were generally homogeneous, with no evidence of culturally produced stratigraphy. The report does indicate the presence of previously recorded prehistoric and historic sites including a prehistoric village site to the south of the Project Area near the Mojave River. Although unlikely, it is possible that culturally significant site(s) could be present in the Project site.

The Project site is located in areas previously disturbed by agricultural and residential activity. Minor grading activities will be required for construction of new remedial infrastructure. These activities will occur, as much as possible, on lands previously identified by the Albion survey not to have cultural resources.

The project is not underlain by any geologic formations that would contain fossils. Therefore no impacts to paleontological resources are expected.

**Mitigation Measures:**

A qualified archaeologist and Native American monitor will be contacted if prehistoric or historic deposits or features are discovered during construction and/or other groundbreaking activities. If prehistoric or historic deposits or features are discovered, activities will cease and a qualified archaeologist will inspect the discovery and make recommendations for mitigation as needed.

**VI. GEOLOGY AND SOILS**

Would the project:

- |  |                          |                          |                          |                                     |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p><b>Significance:</b> <i>No Impact.</i></p> <p><i>The Southern California region is a tectonically-active area that is subject to strong ground shaking due to the numerous earthquake fault zones in the area. The nearest fault to the Project site is the Lockhart Fault, located approximately 0.7 mile from the site. No known faults traverse the Project site. The Project design will conform to the applicable requirements of the County Uniform Building Code that specify design parameters to reduce seismic and other potential geologic hazards to acceptable levels. PG&amp;E has a detailed emergency preparedness plan that describes the specific procedures to be followed in the event of earthquake-induced damage.</i></p> <p><i>The Project would not result in erosion. No additional wastewater facilities would be required for Project implementation. All above-ground remediation systems and underground piping system will be properly constructed for earthquake safety.</i></p>				

**Mitigation Measures:**

*None Required.*

**VII. HAZARDS AND HAZARDOUS MATERIALS**

Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

**Significance:** *Less Than Significant Impact with Mitigation Incorporated.*

**Groundwater**

*a), b) Total chromium Cr(T) concentrations exceed the Maximum Contaminant Level (MCL) of 50 micrograms per liter (µg/L) in portions of the plume; a large portion of the plume has a Cr(T) concentration below 50 µg/L. When extracted, chromium contaminated groundwater is a liquid designated waste under Section 20210 of Title 27 of the California Code of Regulations (CCR). None of the groundwater exceeds hazardous waste criteria of CCR Title 22 Division 4, 5, chapter 11, Article 1. Management of the extracted groundwater aboveground, such as at treatment facilities, would not create a hazard to the public because the systems are essentially closed systems with little chance for the public to come into contact with the water.*

**Transportation of Hazardous Materials to Project Site for Use in Treatment Technologies**

*Hazardous materials (described below) will be transported to the Project site for use in the various remedial actions. Shipments of hazardous materials will follow United States Department of Transportation (DOT) requirements for hazardous materials packaging, labeling, and transport.*

**Use of Hazardous Materials in Groundwater Extraction Remedies and In Situ Technologies**

*Groundwater extraction remedies (such as above-ground bioreactors and amendment of extracted groundwater) and in situ remedies may entail discharge of a food-grade biological reductant(s) or a dilute chemical reductant(s) into groundwater or the vadose zone. The injection of reagents changes the oxidation-reduction (redox) conditions in the discharge area resulting in direct or indirect reduction of Cr(VI) to trivalent chromium (Cr[III]). The biological reductants for amendment of extracted groundwater and in situ remedies may include sodium lactate, whey, ethanol, EVO, molasses, corn syrup, glucose, and acetate. The chemical reductant(s) for amendment of extracted groundwater and in situ remedies may include*

calcium polysulfide, ferrous chloride, ferrous sulfate, sodium dithionite, and zero-valent iron. In addition to the biological reductants used for amendment of extracted groundwater and in situ remedies, methanol may be used as the biological reductant for the above-ground bioreactor. A polymeric flocculant may also be used for the above-ground bioreactor.

Acetic, citric, and hydrochloric acids, sodium hydroxide, and/or hydrogen peroxide solutions will be used as injection system (i.e. recirculation/injection wells, or subsurface leach fields) rehabilitation compounds. The rehabilitation compounds will be purchased and used as needed, and will not be stored in bulk at the Site.

The chemical reagents typically used for treatment of the groundwater in a treatment plant include ferrous chloride (for chromium removal), sulfuric acid (for pH control), sodium hydroxide (for pH control to improve precipitation), an anionic polymer to facilitate particle settling, and an anti-scalant to reduce mineral buildup on reverse osmosis membrane surfaces. Solutions of each chemical are stored in tanks and metered into the water treatment process as required to complete treatment. A typical treatment plant will maintain the following approximate quantities onsite:

- Ferrous chloride – 1,000 gallons of 38 percent by weight solution
- Sulfuric acid - 600 gallons of 50 percent by weight solution
- Sodium hydroxide - 700 gallons of 25 percent by weight solution
- Citric acid – 150 gallons
- Anionic polymer to facilitate particle settling – 150 gallons
- Anti-scalant – 150 gallons

#### **Mitigation Measures:**

The following mitigation measures will be implemented to prevent hazards to the public and environment for the use of hazardous materials during remedial activities (e.g., releases of hazardous materials):

- Rehabilitation chemicals will be brought to the site in totes (approximately 300 gallons) or smaller containers. Totes and containers will be offloaded in a paved/contained area only and stored and used only in a secondarily contained area.
- Treatment reagent (biological/chemical reductants) tanker truck deliveries will be off-loaded in secondary containment areas with sufficient capacity (110% of the tanker volume) to contain any spilled reagent.
- Reagent delivery vehicle speeds on site access roads and tanker truck turnarounds will be limited to 10 miles per hour to reduce the potential for chemical releases to the environment.
- Hazardous materials storage and usage will be in accordance with the requirements of the San Bernardino County Fire Code, Articles 79 and 80. A Hazardous Materials Business Plan will be prepared for chemicals stored onsite for more than 30 days in excess of the regulatory thresholds (55 gallons, 500 pounds, or 200 standard cubic feet of gas). The plan will list hazardous materials handled and include procedures for emergency response, training, and inspections. Hazardous wastes will be managed in accordance with the requirements of Title 22, California Code of Regulations, Division 4.5.

- Hazardous wastes are not expected to be generated by groundwater extraction and management or in situ treatment; however, if hazardous wastes are generated, they will be managed in accordance with the requirements of Title 22, California Code of Regulations, Division 4.5.
- All spills and corrective actions will be recorded in the field log by the site manager.
- Treatment plants will be constructed on a concrete foundation and provided with secondary containment to contain drips and spills and tanker off-loading areas as necessary.
- A treatment system operations manual will be maintained at each treatment system. System operators will be trained regarding system operation, maintenance, and emergency procedures.
- Electronic control loops will be included in the system designs to link extraction well operations with treatment system operations, regulate process flow rate within the plant and discharge of the treated water and wastes, flow-pace chemical feeds, and backwash filters.
- Level alarms/switches will be provided in tanks to prevent overflows and damage to pumps.
- Extraction well pumps and plant operations will shut down in the event of a process failure and/or mechanical damage. Alarms will be indicated on a local control panel at the treatment unit. Alarm conditions will also be relayed to the PG&E Compressor Station and the on-duty plant operator by means of an automatic phone or electronic dialer. A manual reset will be required to restart the system.
- For remedial technologies using ethanol or methanol, the conveyance systems will employ an educator with potable water as the motive fluid, to ensure that only a dilute ethanol/methanol solution will be conveyed into the remediation systems. The concentration of ethanol/methanol in the water will be limited, to maintain a non-combustible solution based on the flashpoint. Since the ambient temperature can reach 120 degrees Fahrenheit at the Project site, the solution strength will be designed to yield a flashpoint of 130 degrees Fahrenheit or greater. As described above, the system will be outfitted with mechanical and process control systems, to ensure that the ethanol/methanol dilution system is operating properly.
- Personnel involved in the transportation, delivery and handling of the materials will take proper safety precautions, based upon recommendations contained in the Material Safety Data Sheets for the materials.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the Project Area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Project Area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

**Significance:** *No Impact.*

*The Project site is not located within 0.25 mile of an existing or proposed school. The nearest school is Hinkley Elementary/Middle School, located more than 2,000 feet west of the western boundary of the Project Area (37600 Hinkley Road).*

*The Project site is not listed on the state's list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.*

*The Project site is not located within an airport land use plan or is within 2 miles of a public airport. The site does not fall within an existing airport land-use plan and is not within 2 miles of a public or private airport*

*Project implementation will not impair or physically interfere with an adopted emergency response or emergency evacuation plans for the Project site and vicinity. The Hazardous Materials Business Plan, developed specifically for the Project site (and submitted to the San Bernardino County Fire Department), will address evacuation routes for site personnel in the case of release of hazardous materials, fire, etc.*

**Mitigation Measures:**

*None required.*

**VIII. HYDROLOGY AND WATER QUALITY**

Would the project:

- a) Violate any water quality standards or waste discharge requirements?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*The project consists of remedial activities to address Cr(VI) in groundwater. While the discharge of waste is being allowed at the site, it shall not be done in a manner that causes a violation of water quality objectives outside the project boundaries or at locations within the project boundaries that adversely affect a receptor, such as a drinking water well. The following discusses the potentially significant impacts on water quality and hydrology associated with these activities.*

**Potential Significant Impacts from Groundwater Extraction and Management on Water Quality - TDS, Nitrate, and Sulfate**

*The groundwater below the Project site contains constituents from past and present agricultural activities in the area as well as naturally-occurring constituents, including total dissolved solids (TDS), nitrate, and sulfate. Groundwater extraction and discharge may affect water quality with respect to TDS, nitrate, and sulfate if: 1) extracted groundwater contains higher concentrations of TDS, nitrate, and sulfate than the groundwater in the area of discharge, or 2) discharge results in movement of groundwater containing concentrations of TDS, nitrate, and sulfate above water quality standards into areas where water quality standards are not currently exceeded. Although changes in water quality with respect to TDS, nitrate, and sulfate may occur, the impacts will be limited by the mitigation measures discussed below, and will not result in water quality standards being exceeded or increasing more than 25 percent above current concentrations; therefore, there will not be a significant impact (i.e. the loss of an existing or potential beneficial use).*

**Potential Significant Impacts from Groundwater Extraction and Management on Water Quality- Cr(VI)**

*The proposed Project is designed to be compatible with Water Quality Control Plan for the Lahontan Region (Basin Plan). Specifically, the Project will be consistent with Resolution 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California." The Project will comply with the Basin Plan objectives by: (1) minimizing the potential for unexpected migration of the Cr(VI) groundwater plume and (2) treating groundwater to reduce Cr(VI) concentrations in the aquifer. Groundwater extraction and management activities used to achieve these objectives may result in localized changes in plume geometry, such as minor and temporary lateral migration in the area(s) of groundwater injection. The plume will be controlled by the groundwater remedial extraction system(s), and mitigation measures will be implemented to ensure there is not a significant impact (i.e. the loss of an existing or potential beneficial use).*

**Potential Significant Impacts from Use of Reductants on Water Quality- Primary Products**

*Biological and chemical reductants will be injected into the subsurface as a part of in situ remedies and potentially as a part of groundwater extraction and management activities. Prior to project implementation, a pilot study will be conducted for compounds not having a prior discharge history at the site or at a site with similar conditions.*

The injection of chemical reductants and biological reductants into the aquifer may result in an increase above baseline concentrations of primary constituents. Discharges of chemical reduction compounds will temporarily alter pH and cause an increase in iron and total organic carbon concentration in groundwater. Discharges of biological reduction compounds and nutrients will temporarily cause an oily degradation, an alcohol taste and odor, and an increase in total organic carbon concentration in groundwater. All compounds being discharged will either be consumed by microbes or attenuate with distance from the injection points. Therefore, the Project will not cause an increase in groundwater concentrations of primary products above baseline concentrations outside the Project site and will not result in a loss of existing or potential beneficial use.

#### **Potential Significant Impacts from Use of Reductants on Water Quality- Secondary Byproducts**

Biological and chemical reductants will be injected into the subsurface as a part of in situ remedies and potentially as a part of groundwater extraction and management activities. Prior to project implementation, a pilot study will be conducted for compounds not having a prior discharge history at the site or at a site with similar conditions.

The injection of biological reductants and some chemical reductants (such as sodium dithionite) into the aquifer may result in the temporary mobilization of metals (arsenic, manganese, and iron) above baseline concentrations as naturally occurring minerals are reduced. This mobilization is temporary, and any mobilized metals are expected to precipitate once the substrates have been depleted and/or the metals are exposed to background aerobic groundwater conditions before reaching the plume boundary of 4 micrograms per liter for Cr(VI). Therefore, the Project will not cause an increase in groundwater concentrations of arsenic, manganese or iron above baseline concentrations outside the Project site and will not result in a loss of existing or potential beneficial use.

#### **Mitigation Measures:**

##### **Mitigation Measures for Groundwater Extraction and Management-TDS, Nitrate, and Sulfate**

Projects covered under the General Permit will not result in water quality standards being exceeded or increasing more than 25 percent above current concentrations for TDS, nitrate, or sulfate. Where these water quality standards are already exceeded, unrelated to PG&E activities, the project will not cause concentrations to increase.

For groundwater extraction and management activities, trigger levels will be proposed in the NOI for monitoring wells. The locations will be proposed such that changes in water quality conditions can be monitored and mitigation measures can be instituted before there is an impact (i.e., water quality standards are exceeded).

Mitigation measures may include, but are not limited to:

- Scaling back groundwater extraction and discharge.
- Halting groundwater extraction and discharge.
- Groundwater treatment.

##### **Mitigation Measures for Groundwater Extraction and Management- Cr(VI)**

Projects covered under the General Permit will not cause changes in plume geometry such that the plume boundary, as defined by the 4 µg/L iso-concentration line for Cr(VI), or the plume core, as defined by the 50 µg/L iso-concentration line for Cr(VI), migrate laterally into

areas where down-gradient hydraulic control features (pumping) implemented by PG&E do not capture the area of migration. Projects covered under the general site-wide permit will not cause the plume core to migrate to receptors or property not owned by PG&E.

Trigger levels will be established at key monitoring wells to provide an early detection system for lateral spreading of the Cr(VI) that may result from groundwater pumping and/or discharge activities. The monitoring wells will be in locations such that water quality changes can be detected and mitigation measures can be instituted before there is an impact.

Mitigation measures may include, but are not limited to:

- Scaling back groundwater extraction and discharge.
- Halting groundwater extraction and discharge.
- Modifying downgradient pumping to more effectively capture the area(s) where changes in plume geometry occur.

#### **Mitigation Measures for Use of Reductants - Primary Products**

Projects covered under the General Permit will not result in primary products exceeding water quality standards outside the in situ treatment zone. The impacts must be limited to PG&E owned property and be temporary in nature.

Mitigation measures will be implemented when primary constituent concentrations exceed trigger levels at specified monitoring locations. The NOI will propose the trigger levels (generally, baseline concentrations or MCLs, which ever is higher) and monitoring well locations at which exceedence of trigger levels will cause implementation of mitigation measures. The monitoring well locations will be placed on PG&E owned property such that mitigation measures can be implemented well before primary products could migrate to property where existing beneficial uses could be affected.

Mitigation measures may include, but are not limited to:

- Scaling back reductant injections.
- Operation of a groundwater extraction system up gradient of the water supply wells to provide capture of primary products.
- Groundwater oxygenation (such as recirculation of aerated water or air sparging).

#### **Mitigation Measures for Use of Reductants - Secondary Byproducts**

Projects covered under the General Permit will not result in secondary byproducts exceeding water quality standards outside the in situ treatment zone. The impacts must be limited to PG&E owned property and be temporary in nature.

Mitigation measures will be implemented when secondary byproduct concentrations exceed trigger levels at specified monitoring locations. The NOI will propose the trigger levels (generally, baseline concentrations or MCLs, which ever is higher) and monitoring well locations at which exceedence of trigger levels will cause implementation of mitigation measures. The monitoring well locations will be placed on PG&E owned property such that mitigation measures can be implemented well before secondary byproducts could migrate to property where existing beneficial uses could be affected.

Mitigation measures may include, but are not limited to:

- Scaling back reductant injections.
- Operation of a groundwater extraction system up gradient of the water supply wells to provide capture of secondary byproducts.
- Groundwater oxygenation (such as recirculation of aerated water or air sparging).

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*Groundwater extraction will affect water levels in the area surrounding the extraction. Extraction will be designed such that existing private wells do not experience a decrease in water level that results in a loss of yield for existing or potential beneficial uses.*

**Hydraulic Influence on the Groundwater Basin**

*The use of groundwater resources at the Project site is subject to the 1996 stipulated agreement for groundwater use in the Mojave Basin. Groundwater extraction rates for the extraction remedies will be either maintained within the allocated groundwater rights or additional water rights will be obtained. Given rising groundwater levels since the adjudication and the fact that the proposed Project will extract groundwater within allocated limits, Project implementation would not deplete groundwater supplies in the Project vicinity.*

**Localized Effects**

*The proposed Project accommodates groundwater extraction throughout the Project Area. A review of the water level data throughout the Project Area suggests that a majority of domestic wells in the vicinity are drilled into bedrock, with the depth to the bottom of the well screens range from 60 to 195 feet below ground surface (bgs). Well screen lengths range from 20 feet to 128 feet bgs. The water level in this area is approximately 80 feet bgs. Given the available data, it is assumed that groundwater extraction throughout the Project Area will not negatively affect the beneficial use for the domestic wells. To ensure beneficial use of the domestic wells are maintained, the water levels will be monitored and mitigation measures will be implemented if adverse conditions should occur.*

**Mitigation Measures:**

*The following actions will be implemented as necessary during operation of the extraction system(s) to ensure the domestic wells in the vicinity of the extraction maintain beneficial use:*

- *Prior to implementation, PG&E will evaluate the potential effects of the extraction through groundwater modeling and will develop maps showing the extent of drawdown.*
- *Monitoring well locations and trigger levels for implementing drawdown mitigation measures will be established in the NOI based upon the hydraulic modeling. The trigger*

levels will be established at monitoring points located between the PG&E extraction area(s) and the private wells so as to provide an effective monitoring so mitigation can be taken before impacts occur.

- Once extraction has begun, aquifer water level monitoring will be conducted to evaluate the effects of pumping on off-site domestic wells and to re-calibrate the groundwater model, as necessary.
- Adjustment of the pumping (increase or decrease) will be made to maintain beneficial use for nearby domestic wells while attempting to maintain plume capture if trigger levels are exceeded at specified monitoring locations.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

**Significance:** *No Impact.*

*Project implementation (in situ treatment or groundwater extraction and management) will create minor impervious surfaces for treatment system equipment pads, wellhead protection pads, etc. Project implementation would not result in an alteration of drainage patterns such that erosion, siltation, or flooding will result on or off the Project site.*

**Mitigation Measures:**

*None Required.*

f) Otherwise substantially degrade water quality?

**Significance:** *No Impact.*

*Water quality degradation beyond what was discussed in Section VIII. a and b above are not expected as a result of Project activities.*

**Mitigation Measures:**  
*None Required.*

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance:** *No Impact.*

*The nearest surface water to the site is an unnamed ephemeral stream located about 4,000 feet northeast of the northern plume boundary. In addition, the Mojave River is located less than one mile south of the Project's southern boundary. The site is not located within a 100-year floodplain and would not be subject to flood-related hazards, nor would it expose people or structures to risk of loss, injury or death involving flooding. The site is not subject to risk from seiche, tsunami, or mudflows.*

**Mitigation Measures:**  
*None Required.*

**IX. LAND USE AND PLANNING**

Would the project:

a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

**Significance:** *No Impact.*

*No new development of housing or infrastructure that would divide existing portions of the community would occur with Project implementation. The proposed treatment technologies would be implemented on land owned or leased by PG&E and would not affect existing residential or other types of land uses.*

*As set forth in the San Bernardino County General Plan, the land use designations for the Project site and surrounding areas are RL-5 (Rural Living 5-acre minimum), AG - AP (Agricultural with an Agricultural Preserve Overlay), RL-40 (Rural Living, 10 acre minimum); RL (Rural Living) and RL-10-AP (Rural Living – 10 acre minimum, Agricultural Preserve). The Project would not conflict with any future land uses developed in compliance with the existing County General Plan and Development Ordinance. Therefore, no conflict with the San Bernardino County General Plan or zoning ordinances will result from implementation of the Project.*

*The Project Area falls within the boundaries of the West Mojave Plan (March 2006), Map Number 45. However, the Project is not in conflict with the West Mojave Plan based on the following criteria: (1) the Project boundary falls outside of the plan's designated habitat conservation areas, and (2) there are no proposed impacts to any special-status species or sensitive habitats covered by the plan.*

**Mitigation Measures:**

*None Required.*

## X. MINERAL RESOURCES

Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

**Significance:** *No Impact.*

*The Project site is not located within a delineated mineral resource zone (i.e., the site is not included on the County of San Bernardino Mineral Resource Zone Overlay). The Project site is located on land that was previously or is currently used for agriculture. Much of the land is fallow. No loss of, or interference with, mineral resource operations would result from Project implementation.*

**Mitigation Measures:**

*None Required.*

**XI. NOISE**

Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*The revised project may expose persons to excessive groundborne vibrations for a limited time during the installation of wells. The vibrations are associated with drill rig operations and support equipment.*

**Mitigation Measures:**

*The following mitigation measures will be implemented to prevent excessive vibrations produced by the project from becoming a significant impact:*

- Well installation and construction will be conducted during normal daytime business hours.*
- No more than two drill rigs will be present on site during the same time.*
- The project is located approximately 700 feet of the nearest residence. The rural location of the remediation site and the distance to the nearest residences will prevent these potential conditions from affecting a substantial number of people.*
- Personnel and workers will adhere to the Health and Safety Manual for wearing ear protection.*
- The site manager will note in the site log book if complaints of excessive vibrations are reported. He/she will document corrective actions taken to reduce vibrations.*

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*The County of San Bernardino's General Plan Noise Element standard for residential land use are a community noise equivalent level of 60 decibels (dBA) and an equivalent steady-state sound level [L<sub>eq</sub>(h)] of 55 dBA between 7:00 a.m. and 10:00 p.m. and 45 dBA between 10:00 p.m. and 7:00 a.m.*

*Audible noise levels during Project operations will be limited to the immediate vicinity of the proposed treatment systems (i.e. noise generated by above-ground treatment facilities, extraction pumps, etc.). The noise generated by treatment systems will be attenuated by the distance to the nearest receptor (over 700 feet). Over such a distance, noise levels can be expected to decrease to levels well below the County thresholds. Power to the treatment systems will be provided from the local utility, Southern California Edison, or by the PG&E Hinkley Compressor Station. Diesel generators may be required intermittently; however, the impacts will be less than significant due to distances to the nearest sensitive receptors. Infrequent bulk reagent deliveries will be conducted during normal daytime business hours, and will not significantly increase the ambient noise levels.*

**Mitigation Measures:**

*When diesel generators and above-ground treatment facilities are operational, a noise monitoring plan will be implemented to verify compliance with the County's noise standards.*

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?                       

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*Chapter 9 of the San Bernardino County Noise Ordinance exempts noise emissions from temporary construction, repair, or demolition activities between the hours of 7:00 a.m. and 7:00 p.m. except Sundays and Federal Holiday from meeting the County's community noise equivalent level requirements.*

*Project construction activities (drill rig, trenching for pipes, treatment system construction) will temporarily increase noise levels at the Project site; however, construction noise will be limited to the duration of construction and construction activities will be limited to normal daytime business hours. Table 2 shows approximate noise levels from typical construction equipment both at the Project site, as well as at a distance of 500 feet.*

**Table 2**  
Construction Equipment Noise Levels

<b>Equipment Type</b>	<b>Noise Level At 50 Feet (dB)</b>	<b>Noise Level at 500 Feet (dB)</b>
<b>Earthmoving</b>		
Front Loaders	79	54
Backhoes	85	60
Dozers	80	55
Tractors	80	55
Scrapers	88	63
Graders	85	60
Truck	91	66
Pavers	89	64
<b>Material Handling</b>		
Concrete Mixers	85	60
Concrete Pumps	82	57
Cranes	83	58
<b>Stationary</b>		
Pumps	76	51
Generators	78	53
Compressors	81	56
<b>Impact</b>		
Pile Drivers	101	76
Jack Hammers	88	63
Pneumatic Tools	86	61
<b>Other</b>		
Saws	78	53
Vibrators	76	51

The nearest sensitive receptor is over 700 feet away from the proposed Project site. Project operating conditions will not result in significant levels of noise emanating from vehicles and extraction/injection well pumps.

The exact locations of any extraction wells, injection wells, or treatment facilities will be selected with consideration for the proximity to the residences. Due to the distance between the nearest sensitive receptor and the Project site, construction and operation noise will not be significant.

**Mitigation Measures:** *Less than Significant with Mitigation Incorporated.*

The project will be conducted in accordance with the County of San Bernardino's General Plan Noise Element standard for residential development. In addition, the following mitigation measures will be implemented by project personnel to ensure that noise from the revised project will be as minimal as possible:

- *Work will only be conducted during daytime business hours.*
- *Vehicle traffic will be scheduled so as to prevent excessive vehicles from being on site at any one time.*
- *If noise complaints are received, the site manager will measure the noise level using a deciblemeter at the project limits. All measurements will be documented in the site log. If the noise level is found to exceed the County ordinance, the site manager will take appropriate action to reduce noise on site and note such actions in the log.*

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the Project Area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Project Area to excessive noise levels?

**Significance:** *No Impact.*

*The Project site is not located within an airport land-use plan, or within 2 miles of a public airport. There are no private airstrips in the Project vicinity that will be affected by Project implementation.*

**Mitigation Measures:**

*None Required.*

**XII. POPULATION AND HOUSING**

Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

**Significance:** *No Impact.*

*Project implementation does not involve the construction of new residential or commercial development or infrastructure that could support additional population growth in the Project Area. Project implementation would not displace existing housing or people.*

**Mitigation Measures:**

*None Required.*

**XIII. PUBLIC SERVICES**

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance:** *No Impact.*

*Project construction and operation activities have the potential for emergencies and accidents involving fire and spills/releases of hazardous materials and it is possible for injuries to occur. These may require local emergency fire service personnel and equipment. However, Project implementation would not require the expansion of existing emergency services and would not affect current response times.*

*Project operations could potentially involve full time operators, but no population growth would result from the Project. The project includes an emergency plan as discussed above and permits issued by the appropriate regulatory agency. Therefore, no impact to police, schools, parks, or other public facilities is anticipated. There will be no impact due to new or physically altered government facilities.*

**Mitigation Measures:**

*None Required.*

**XIV. RECREATION**

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

**Significance:** *No Impact.*

*The Project will not result in an increased demand for recreational amenities, nor will it interfere with existing recreational uses. No direct or indirect population growth will occur with implementation of the proposed Project; therefore, Project implementation will not increase the use or demand for recreational facilities.*

*The proposed Project does not include the construction, expansion, or elimination of recreational facilities.*

**Mitigation Measures:**

*None Required.*

**XV. TRANSPORTATION/TRAFFIC**

Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?

**Significance:** *Less than Significant with Mitigation Incorporated.*

*The effects of traffic and transportation associated with system construction and routine operations and maintenance will not be significant. An increased level of traffic will result during periods of construction, however the duration of these construction events will be limited (ie: weeks to months). During times of construction, designated areas located outside of the right of way will be identified for parking, loading, and unloading.*

*During routine operations, infrequent bulk reagent deliveries and pickups for waste disposal will be required; however, there will be no impact to existing traffic patterns trucks will not stop on existing roadways or block traffic. If needed, a designated truck loading and unloading station(s) will be located outside the right of way of existing roadways.*

**Mitigation Measures:**

*During project construction, measures will be taken to minimize traffic and transportation issues at the site, including:*

- *Work will only be conducted during daytime business hours.*
- *Vehicle speeds on unpaved roadways will be limited to 25 miles per hour to minimize vehicle-related dust emissions.*
- *Dirt roads will be sprayed with water to minimize dust generation.*
- *Project personnel will direct traffic to prevent vehicles from lining up on County roads that could impede through traffic during construction, delivery, and drilling activities.*

b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**Significance:** *Less than Significant with Mitigation Incorporated.*

*The transportation of construction materials and equipment will be in accordance with standard safety practices and applicable laws and regulations, and will not substantially increase cumulative traffic levels. Truck trips associated with maintenance operations will be compatible with existing roadway infrastructure and surrounding activities. Adequate emergency access to the Project site will be provided from several surface streets.*

*The negligible increase in traffic generated by Project operations from operators commuting to and from the site will not affect existing levels of service on surrounding roadways in the vicinity of the Project. Project operations will not generate parking demand that exceeds capacity. No effect on transportation policy, plans, or programs will result from Project implementation, including those involving alternative transportation. Project implementation does not involve any change to the design of existing roadway configurations.*

The exception to the decrease in traffic being the infrequent bulk deliveries (once every 30 to 90 days) of ethanol, a flammable liquid, and methanol. Such deliveries will increase traffic hazard during ingress and egress at the site. Other than that, there will be no impact to existing traffic patterns as the tanker trucks will not stop on existing roadways or block traffic (and delivery frequency and volumes will be similar to those previously approved). A designated tanker offloading station will be located off the existing roadways.

The Project site is not located within the nearby vicinity of an airport or airfield; the proposed Project improvements and operations will have no effect on existing air traffic patterns or safety.

**Mitigation Measures:**

Following project construction, project personnel will ensure that the ethanol delivery truck has immediate access to enter the site so that it does not pose a potential hazard to other vehicles on the road. This mitigation measure will be implemented by project personnel being on site prior to time of expected ethanol deliveries.

**XVI. UTILITIES AND SERVICE SYSTEMS**

Would the project

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

g) Comply with federal, state, and local statutes and regulations related to solid waste?

**Significance:** *No Impact.*

*Treatment and discharge of groundwater will comply with the facility GWDRs issued by the LRWQB. In the event the LRWQCB modifies the GWDRs or issues new GWDRs, PG&E will comply with those requirements.*

*No potable water or wastewater treatment facilities would be constructed as part of this Project or as a result of the Project, and no existing facility will be used to treat water under this Project.*

*Project implementation would not require additional storm water drainage facilities.*

*Groundwater extraction for Project operations would fall within the allocation granted to the PG&E properties in accordance with the adjudication of groundwater rights in the Mojave Basin in 1996.*

*No demand would be placed on the regional wastewater treatment facilities serving the area.*

*The nominal volume of solid waste generated by the proposed Project will be disposed of in accordance with all applicable laws and regulations.*

*Implementation of the Project would have no significant impacts on the utilities and solid waste disposal. Construction and operation would comply with Federal, State, and local statutes and regulations related to solid waste.*

**Mitigation Measures:**

*None Required.*

#### **XVII. MANDATORY FINDINGS OF SIGNIFICANCE**

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*The Project is designed to avoid areas providing significant environmental habitat for fish wildlife species and cultural or historical resources. The Project is not expected to threaten fish, wildlife, or plant populations. Procedures are in place to evaluate potential habitat before*

disturbance and to respond to the discovery of historical or cultural resources. Therefore, the Project will have a less-than-significant impact after mitigation measures have been incorporated.

**Mitigation Measures:**

Environmental awareness training for all drilling and construction personnel will be provided to identify sensitive biological resources, using the current PG&E training program. Workers will be required to report to the project biologist the occurrence of any special-status species observed during the drilling and construction operations, who would then implement species protection measures.

When the mitigation measures described are implemented, potential impacts will be reduced below a level of significance. Therefore, no adverse cumulative impact to the environment is anticipated

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*This General Site-Wide CEQA Initial Study evaluates the cumulative impact of all the potential activities at the Project site and the cumulative impact is expected to be less than significant once mitigation measures have been incorporated.*

**Mitigation Measures:**

Groundwater and air monitoring plans will effectively determine whether water degradation or nuisance air emissions are occurring. Contingency plans will ensure that potential impacts are identified. Noise monitoring will be implemented to ensure that cumulative impacts are less than significant. When the mitigation measures are implemented, potential impacts will be reduced below a level of significance. Therefore, no adverse cumulative impact to the environment is anticipated.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

**Significance:** *Less than Significant Impact with Mitigation Incorporated.*

*This General Site-Wide CEQA Initial Study evaluates the impact on human beings and establishes mitigation measures for all the potential activities at the Project site. The implementation of the project per this Initial Study is expected to have a less than significant impact on human beings.*

**Mitigation Measures:**

*When the mitigation measures described are implemented, potential impacts will be reduced below a level of significance. Therefore, no adverse cumulative impact to the environment is anticipated.*

**ENCLOSURE 3**

03-0060



ARNOLD SCHWARZENEGGER  
GOVERNOR

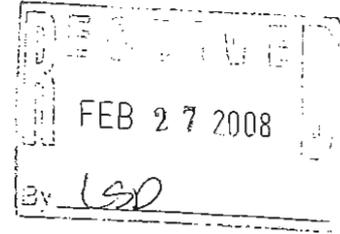
STATE OF CALIFORNIA  
GOVERNOR'S OFFICE of PLANNING AND RESEARCH  
STATE CLEARINGHOUSE AND PLANNING UNIT



CYNTHIA BRYANT  
DIRECTOR

February 25, 2008

Lisa Dernbach  
Regional Water Quality Control Board, Region 6 (Labontan)  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150



Subject: General Permit for Site-wide Groundwater Remediation Project  
SCH#: 2008011097

Dear Lisa Dernbach:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. The review period closed on February 22, 2008, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts  
Director, State Clearinghouse

03-0061

## State Clearinghouse Data Base

**SCH#** 2008011097  
**Project Title** General Permit for Site-wide Groundwater Remediation Project  
**Lead Agency** Regional Water Quality Control Board, Region 6 (Lahontan), South Lake Tahoe

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**Type** MN Mitigated Negative Declaration  
**Description** D  
PG&E proposes to implement various groundwater remediation methods to clean up hexavalent chromium in the aquifer. The remedial actions include (1) groundwater extraction and management and (2) in-situ remediation using injected reagents.

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### Lead Agency Contact

**Name** Lisa Dernbach  
**Agency** Regional Water Quality Control Board, Region 6 (Lahontan)  
**Phone** (530) 542-5424 **Fax**  
**email**  
**Address** 2501 Lake Tahoe Boulevard  
**City** South Lake Tahoe **State** CA **Zip** 96150

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### Project Location

**County** San Bernardino  
**City**  
**Region**  
**Cross Streets** Community Boulevard / Fairview Road  
**Parcel No.** 143 parcels  
**Township** **Range** **Section** **Base**

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### Proximity to:

**Highways** 58  
**Airports**  
**Railways** ATSF  
**Waterways**  
**Schools** Hinkley Elementary  
**Land Use** RL-5, RL-40, AG-AP, RL, RL-10

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**Project Issues** Aesthetic/Visual; Air Quality; Archaeologic-Historic; Biological Resources; Noise; Toxic/Hazardous; Traffic/Circulation; Water Quality; Water Supply

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**Reviewing Agencies** Resources Agency; Department of Parks and Recreation; Native American Heritage Commission; Integrated Waste Management Board; Public Utilities Commission; Office of Historic Preservation; Department of Fish and Game, Region 6; Department of Water Resources; Department of Conservation; California Highway Patrol; Caltrans, District 8; Department of Toxic Substances Control

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**Date Received** 01/24/2008 **Start of Review** 01/24/2008 **End of Review** 02/22/2008

03-0062

# ENCLOSURE 4

03-0063



**Pacific Gas and  
Electric Company**

Eric P. Johnson  
Hinkley Project Manager  
Remediation Program Office  
Gas Transmission and  
Distribution

350 Salem Street  
Chico, CA 95928  
(530) 520-2959  
(530)896 4657 (fax)  
epj1@pge.com

February 25, 2008

Chuck Curtis, P.E.  
Lahontan Regional Water Quality Control Board  
2501 Lake Tahoe Boulevard  
South Lake Tahoe, CA 96150

**Subject:** Comments Regarding Tentative Waste Discharge Requirements for the  
Pacific Gas and Electric Company General Permit for Site-Wide  
Groundwater Remediation Project  
*Hinkley, San Bernardino County*

Dear Mr. Curtis:

This letter transmits Pacific Gas and Electric Company's (PG&E) comments with regards to the above-referenced tentative Waste Discharge Requirements (WDRs):

- 1) **Finding 11 - Project Description** - The tentative WDRs state that the purpose of the project is to *"implement various remediation projects for reducing hexavalent chromium in groundwater to trivalent chromium for achieving water quality standards."* PG&E recommends that this description of the project purpose be expanded to include activities that will be included in the General Permit and are focused solely on plume boundary control. Such activities may include pumping water from the fringes of the plume and re-injecting the water in the core of the plume without treatment, and/or injection of water not affected by hexavalent chromium (i.e., "fresh water") outside the plume boundary for the purposes of creating a hydraulic barrier to enhance plume boundary control.
- 2) **Finding 11 - Project Description** - The tentative WDRs state that the *"GWDRs would allow for the following: 1) Extraction and management of groundwater, including by re-injection. The groundwater may be treated and/or dosed with chemical or biological reductant prior to discharge..."* PG&E assumes that item 1) of Finding 11 as quoted here would include pumping water that is not affected by hexavalent chromium (i.e., "fresh water") from outside the plume and re-injecting the water near the plume boundary for the purposes of creating a hydraulic barrier to enhance plume boundary control. PG&E would appreciate if Water Board staff would confirm this

assumption, and make additions to Finding 11 as needed to clarify this point. We recommend that the Water Board staff consider amending item 1) under Finding 11 to state: *"Extraction and management of groundwater, including by re-injection. This may include pumping water that is not affected by hexavalent chromium (i.e., "fresh water") from outside the plume and re-injecting the water near the plume boundary for the purposes of creating a hydraulic barrier to enhance plume boundary control..."*

- 3) **Finding 20 - Non-Degradation** - In the first sentence of paragraph two of this finding, the tentative WDRs refer to *"oily degradation"* to water quality as a result of in-situ activities. In order to clarify the potential temporary degradation, PG&E recommends that the first sentence of the second paragraph be modified to read as follows: *"The injections of reagents will temporarily result in localized water quality degradation associated with organic carbon present in the various reductants."*
- 4) **Discharge Specification I.A. (Eligibility)** - Coincident with PG&E comment #2 above please confirm our assumption that the phrase *"re-injection of treated or untreated extracted groundwater"* included as item 1.b. of this Discharge Specification allows for the injection of fresh water for the purposes of creating a hydraulic barrier to enhance plume boundary control. We recommend that the Water Board staff consider modifying item 1.b. to state: *"b) re-injection of treated or untreated extracted groundwater, which may include pumping water that is not affected by hexavalent chromium (i.e., "fresh water") from outside the plume and re-injecting the water near the plume boundary for the purposes of creating a hydraulic barrier to enhance plume boundary control."*
- 5) **Discharge Specification I.D. (General Requirements and Prohibitions)** - Discharge Specification I.C. (Receiving Water Limitation) states that: *"The discharge of waste shall not cause a violation outside the project boundaries of any applicable water quality standard for receiving water adopted by the Lahontan Water Board or the State Water Board..."* However, Discharge Specification I.D. does not qualify the various requirements (items 1 through 11) with reference to the "project boundaries". For example, Discharge Specification 1.3., which discusses creation of pollution, contamination, or nuisance as defined in Section 13050 of the Water Code, could be interpreted to prohibit the temporary and localized water quality degradation that is specifically addressed under Finding 20 (non-degradation) and allowed for in other requirements and specifications of the permit. PG&E requests that Discharge Specification I.D. be amended to include the following introductory statement: *The discharge of waste shall not cause a violation of the following General Requirements and Prohibitions. With reference to General Requirements and Prohibitions Items 3, 5, 6, and 7, the discharge shall not cause a violation outside the project boundaries."*

Chuck Curtis, P.E.  
February 25, 2008  
Page 3

PG&E appreciates the efforts of Water Board staff to prepare the tentative WDRs for this project. If you have any questions or comments regarding this letter, please contact me at (530) 520-2959.

Sincerely,



Eric P. Johnson  
Hinkley Remediation Manager

cc: Robert Dodds/RWQCB Lahontan Region, South Lake Tahoe  
Mike Plaziak/ RWQCB Lahontan Region, Victorville

# ENCLOSURE 5

03-0067



California Regional Water Quality Control Board  
Lahontan Region



Linda S. Adams  
Secretary for  
Environmental Protection

2501 Lake Tahoe Boulevard, South Lake Tahoe, California 96150  
(530) 542-5400 • Fax (530) 544-2271  
www.waterboards.ca.gov/lahontan

Arnold Schwarzenegger  
Governor

MAR 17 2008

Eric P. Johnson  
Pacific Gas and Electric Company  
350 Salem Street  
Chico, CA 95926

**RESPONSE TO PG&E COMMENTS ON TENTATIVE WASTE DISCHARGE  
REQUIREMENTS FOR GENERAL PERMIT FOR SITE-WIDE GROUNDWATER  
REMEDATION PROJECT, PG&E COMPRESSOR STATION, HINKLEY, SAN  
BERNADINO COUNTY**

Thank you for your February 25, 2008 comments on the Tentative Waste Discharge Requirements (WDR) for the General Permit for Site-wide Groundwater Remediation Project (Project) at the PG&E Compressor Station, Hinkley.

**COMMENTS AND RESPONSES**

The comments list four areas of recommended changes to the proposed WDR. Water Board staff has reviewed your comments and has the following responses in numerical order.

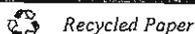
Comment Nos. 1 & 2: Finding No. 11 - Project Description. Recommends that the project description be expanded to include activities for plume boundary control which do not involve the conversion of hexavalent chromium to trivalent chromium. Such activities may include pumping clean water from the fringes of the plume and re-injecting the water in the core of the plume or outside the plume boundaries.

Response: We concur with the comment and will include a statement in the project description about creating a hydraulic barrier using fresh water extracted from outside the plume to enhance plume boundary control.

Comment No. 3: Finding No. 20 – Non-Degradation. Recommends that the term "oily degradation" as a result of in-situ activities be removed and the section be modified to read as follows: "The injections of reagents will temporarily result in localized water quality degradation associated with organic carbon present in the various reductants."

Response: The recommended statement concerning organic carbon is currently listed in the tentative WDR for emulsified vegetable oil and other carbon substrates. The reference to "oily degradation" as a result of injections from emulsified vegetable oil is an appropriate and accurate description of water quality degradation from the project.

*California Environmental Protection Agency*



03-0068

The term is also consistent with four previous WDRs issued by the Water Board since 2004. Therefore, so long as emulsified vegetable oil is being proposed in the project, the term "oily degradation" shall remain in the proposed WDR with reference to water quality degradation.

Comment No. 4: Discharge Specification I.A. (Eligibility). Recommends that section be modified to clarify that treated and un-treated groundwater can be injected for the purposes of creating a hydraulic barrier to enhance plume boundary control.

Response: Water Board staff concurs with the recommended modification. Item 1.b. in the section will read: *b) injection of treated or un-treated groundwater, which may include extracted water that is not affected by hexavalent chromium from outside the plume, can occur near the plume boundary for the purposes of creating a hydraulic barrier to enhance plume boundary control.* The suggested use of "fresh water" will not be included in this section because there is no regulatory definition for the term.

Comment No. 5: Discharge Specification I.D. (General Requirements and Prohibitions). Requests that section be amended to include an introductory statement similar to that listed in Discharge Specification I.C. stating that violations are not allowed outside the project boundaries.

Response: Water Board staff concurs with the suggestion. The section will contain the following introductory statement: *The discharge of waste shall not cause a violation of the following General Requirements and Prohibitions. With reference to General Requirements and Prohibitions Items 3, 5, 6, and 7, the discharge shall not cause a violation outside the project boundaries. The boundaries are described in Finding No. 2 and shown in Attachment A.*

#### **ADDITION**

The proposed WDRs for the project must be able to protect receptors, such as wells, from discharges of waste that could adversely affect water quality. The Tentative WDRs issued by this agency only prohibited the discharge of waste that causes a violation of water quality objectives outside the project boundaries. Upon retrospect, the Proposed WDRs needs to also prohibit the discharge of waste that cause a violation of water quality objectives at the location of receptors *inside the project boundaries*.

Therefore, under Items 1.C. and 1.D. in Discharge Specification, a statement is being added to clarify that the discharge of waste shall not cause a violation of water quality objectives *inside the project boundaries* at locations that adversely affect a receptor, such as a drinking water well or agricultural well.

Eric P. Johnson

- 3 -

Thank you for your interest in this issue. Please contact Lisa Derrbach at (530) 542-5424 or me at (530) 542-5460, if you should have any questions.

*Lisa Derrbach*

*for*

Chuck Curtis, P.E.  
Planning and Toxics Division Chief

cc: Mailing List

LSD/didT:/PGE WDR General Permit comm 308.let  
[Send to file: WDID No. 6B369107001 (VVL)]

03-0070

## **ENCLOSURE 6**

03-0071

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION  
BOARD ORDER NO. R6V-2008-(PROPOSED)

WDID NO. 6B369107001

GENERAL WASTE DISCHARGE REQUIREMENTS

FOR

PACIFIC GAS AND ELECTRIC COMPANY  
GENERAL SITE-WIDE GROUNDWATER REMEDIATION PROJECT

San Bernardino County

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The California Regional Water Quality Control Board, Lahontan Region (Lahontan Water Board), finds:

1. Discharger

Pacific Gas and Electric Company (PG&E) submitted a Report of Waste Discharge (RWD) to conduct a General Site-wide Remediation Project (Project) at the PG&E Compressor Station, located southeast of the community of Hinkley in San Bernardino County. The RWD consists of transmittals dated August 27, 2007 and September 19, 2007. PG&E proposes to implement various remediation projects to clean up chromium contamination in groundwater at different locations within and outside of the plume boundaries. For the purposes of this Order, PG&E is referred to as the "Discharger."

2. Facility

The compressor station began operating in 1952 and discharged untreated cooling tower water containing hexavalent chromium (Cr(VI)) to unlined ponds until 1964. Wastewater then percolated through soil to the water table, approximately 80 feet below, creating a chromium plume. The compressor station is located at 35863 Fairview Road (APN 0488-112-52) in Hinkley. Remediation activities are being planned throughout the entire plume area. The project area is approximately 2,000 acres and includes all areas within the chromium plume boundaries (according to the February 2007 groundwater monitoring event) and approximately 1,000 feet beyond the plume boundary (see Attachment A). The chromium plume extends generally north from the compressor station to the Desert View Dairy (north of Santa Fe Avenue) and west of Summerset Road to west of Mountain View Road. For the purposes of this Order, the project area including the chromium plume and area approximately 1,000 feet beyond the plume boundary is referred to as the "Facility."

03-0072

### 3. Facility Location

The Facility is located as close as one-half mile east of the community of Hinkley in San Bernardino County in the Harper Valley Subarea of the Mojave Hydrologic Unit. The project area is shown on Attachment A, which is made a part of this Order. Most of the remediation projects will take place on parcels owned by the Discharger. However, project activities could potentially occur on parcels not owned by the Discharger. A list of the 143 County Assessor Parcel Numbers included within the project area is included in Attachment B.

### 4. Permit History

These are new General Waste Discharge Requirements (GWDRs) for a prior facility. PG&E had operated a groundwater remediation system at the East Land Treatment Unit (LTU) from 1991 to 2001 under the WDRs set forth in Board Order No. 6-91-917 and revised in Board Order No. 6-97-81. In addition, the Ranch LTU operated from 1997 to 2001 under WDRs set forth in Board Order No. 6-97-81. Also, since August 2004, PG&E has operated a groundwater remediation system at the Desert View Dairy under the WDRs set forth in Board Order No. R6V-2004-034. On June 14, 2006, the Water Board issued Board Order No. R6V-2006-0023 allowing for the reagent injections to groundwater for the Central Area In-situ Remediation Pilot Study. On November 9, 2006, the Water Board issued Board Order No. R6V-2006-0054 allowing for reagent injections to groundwater for chromium remediation in the source area at the PG&E Compressor Station. And on November 28, 2007, the Water Board issued two Board Orders: No. R6V-2004-0034A1 is for the Desert View Dairy Optimization Project and allows the use of off-site extraction wells for containing plume migration and No. R6V-2007-0032 is for the Central Area In-situ Remediation Project and allows discharges of lactate, whey, emulsified vegetable oil, ethanol, fluorescent tracers, and well rehabilitation compounds. The GWDRs will enable the Discharger to efficiently implement various remediation activities at different locations and still protect water quality.

### 5. Enforcement History

On December 29, 1987, the Executive Officer issued Cleanup and Abatement Order (CAO) No. 6-87-160 to the Discharger, ordering the investigation, clean up and abatement of the effects of chromium in the soil and groundwater from discharges at the PG&E Compressor Station. The selected remediation system consisted of extracting groundwater for irrigation of pasture crops on the East and Ranch LTUs. Natural soil properties promoted the reduction of hexavalent chromium in extracted groundwater to trivalent chromium [Cr(III)] that adhered to soil.

In June 2001, the Executive Officer issued CAO 6-01-50 ordering PG&E to eliminate the threatened nuisance condition created at the East and Ranch LTUs due to the spray irrigation of chromium-polluted groundwater to crops. In response to this order, PG&E shut down the groundwater remediation system.

#### 6. Reason for Action

Enforcement orders issued by the Water Board Executive Officer require the Discharger to clean up and abate the effects of chromium in the soil and groundwater from discharges at the PG&E Compressor Station. The Discharger proposes to implement remedial activities for hexavalent chromium in groundwater in the project area. These GWDRs will allow more timely and efficient implementation of the various projects.

#### 7. Site Geology

The soils underlying the Facility are comprised of interbedded sands, gravels, silts, and clays. The depth to bedrock ranges from about 300 feet below ground surface in the southern project area to cropping out (bedrock comes to the ground surface) in the northern portion of the project area. In general, the thickness of sediments overlying the bedrock becomes thinner to the north and to the west. The nearest active fault is the northwest-southeast trending Lenwood fault located 200 feet southwest of the Facility.

#### 8. Site Hydrogeology and Hydrology

The hydrogeology in the southern 75 percent of the project area consists of an upper, unconfined aquifer and a lower, confined aquifer separated by a lacustrine clay that forms a regional aquitard. The hydrogeology in the northern 25 percent of the project area consists of just the upper, unconfined aquifer, as the lower aquifer and clay aquitard pinch out (terminated against the upward sloping bedrock). In general, groundwater flow is primarily to the north-northwest towards the Harper Dry Lake, with an average gradient of 0.004 feet per foot.

The chromium plume resides primarily in floodplain sediments originating from the Mojave River and alluvial sediments eroded from local mountains. The closest surface water is an unnamed ephemeral stream, located about 4,000 feet northwest of the plume's northern boundary. In addition, the Mojave River is located less than one mile to the southeast of the Facility.

### 9. Climate

The precipitation in the area of the Facility is less than five inches annually. The evaporation rate is approximately 74 inches annually. The area has hot summers and mild winters.

### 10. Groundwater Quality

The groundwater in the upper aquifer below the Facility contains hexavalent chromium from the PG&E compressor station plume and naturally occurring constituents. At the Facility, chromium concentrations in groundwater are highest at the compressor station and become less concentrated towards the north. Based on 2007 data from monitoring wells, total chromium [Cr(T)] concentrations were up to 3370 micrograms per liter ( $\mu\text{g/L}$ ) and hexavalent chromium concentrations were up to 3390  $\mu\text{g/L}$ . (Different analytical methods can result in hexavalent chromium concentrations being greater than total chromium concentrations when most or all of the chromium is in the hexavalent form.)

The maximum contaminant level (MCL) for a municipal water source for these constituents is 50  $\mu\text{g/L}$  for Cr(T). The plume core containing total chromium concentrations at and above 50  $\mu\text{g/L}$  extends from the compressor station north to Santa Fe Avenue, a distance of 1.86 miles. Therefore, groundwater at the Facility in the plume core does not presently support the beneficial use of a municipal and domestic supply. There is no standard for hexavalent chromium.

### 11. Project Description

The purpose of this project is to implement various remediation projects for reducing hexavalent chromium in groundwater to trivalent chromium for achieving water quality standards. This project allows various discharges to carry out those remediation activities. Implementation will take place in the groundwaters of the Middle Mojave River Valley Ground Water Basin.

The GWDRs would allow for the following:

- 1) Extraction and management of groundwater, including by re-injection. The groundwater may be treated and/or dosed with chemical or biological reductant prior to discharge within the plume. Groundwater may also be extracted from outside the chromium plume and re-injected near the plume boundaries to contain migration.
- 2) In-situ activities consisting of the injection of chemical or biological reductant directly to groundwater.
- 3) Associated activities, including well rehabilitation and groundwater flow tracing.

12. Waste Classification

The chromium-contaminated groundwater is classified as a liquid designated waste under California Code of Regulations, section 20210, Title 27, (CCR).

13. Waste Management Unit Classification

The soils and aquifer materials beneath the Facility are classified as a Class II LTU in accordance with section 20614 of title 27, CCR.

14. Authorized Disposal Sites

The project area, shown on Attachment A, is the only authorized disposal site.

15. Water Quality Protection Standard

A Water Quality Protection Standard (WQPS) is established in this Order for the Facility. Specific constituents of concern (including monitoring parameters), concentration limits, monitoring points, and the point of compliance will be issued for each project in a Monitoring and Reporting Program. The WQPS applies over the active life of the Facility, post-closure monitoring period, and the compliance period.

16. Land Uses

The land uses at, and surrounding, the Facility consist of residential, commercial, agricultural, and open desert land. The nearest residences and domestic wells are located within and adjacent to the plume core in the northwestern portion of the Facility. No polluted domestic wells are currently in use.

17. Receiving Waters

The receiving waters are the groundwaters of the Harper Valley Hydrologic Area of the Mojave Hydrologic Unit. The Department of Water Resources (DWR) designation for the Harper Valley Hydrologic Area is 628.42.

18. Lahontan Basin Plan

The Regional Board adopted a Water Quality Control Plan for the Lahontan Basin (Basin Plan), which became effective on March 31, 1995. This Order implements the Basin Plan.

### 19. Beneficial Groundwater Uses

The beneficial uses of the groundwater of the Middle Mojave River Valley Groundwater Basin as set forth in the Basin Plan are:

- a. MUN - municipal and domestic supply;
- b. AGR - agricultural supply;
- c. IND - industrial supply;
- d. FRSH - freshwater replenishment; and
- e. AQUA - aquaculture.

### 20. Non-Degradation

In accordance with State Water Resources Control Board (State Water Board) Resolution No. 68-16 (*Statement of Policy with Respect to Maintaining High Quality of Waters in California*) and the Water Quality Control Plan for the Lahontan Region (Basin Plan), water quality degradation may be allowed if the following conditions are met: (1) any change in water quality must be consistent with maximum benefit to the people of the State; (2) the degradation will not unreasonably affect present and anticipated beneficial uses; (3) the degradation will not result in water quality less than that prescribed in the Basin Plan; and (4) discharges must use the best practicable treatment or control to avoid pollution or nuisance and maintain the highest water quality consistent with maximum benefit to the people of the State.

Discharges of biological reduction compounds and nutrients will temporarily cause some organic carbon, an alcohol taste and odor, and oily degradation to water quality in the area of injections. Discharges of chemical reduction compounds will temporarily alter pH and cause an increase in iron and total organic carbon concentration in groundwater. During bioremediation, biological and chemical reduction compounds will be consumed by naturally occurring microbes, and the concentrations will become diluted in the aquifer during groundwater recirculation or through natural groundwater mixing. The project will monitor anaerobic reducing conditions used to convert Cr(VI) to Cr(III) to concentrations below the MCL. Any potential by-products of the reaction, such as mobilized reduced metals, also attenuate with distance following contact with aerobic aquifer conditions in the downgradient portion of the project area. Therefore, any degradation to water quality will be temporary, should improve over time, and will be localized to the project area.

The discharge of tracers, including bromide and fluorescent dyes, will provide better information about aquifer conditions and the fate and transport of discharges. The injection of fluorescent tracers will cause a coloration of groundwater. Fluorescent and bromide tracers will become diluted in the

aquifer during groundwater recirculation and/or natural mixing. Coloration will dissipate to undetectable levels prior to reaching the Facility boundary. There are no established standards for fluorescent tracers, such as fluorescein or eosine. The Basin Plan, however, does require compliance with narrative objectives, which includes nuisance. Coloration of groundwater from the disposal of wastes would fall under the definition of "nuisance." Since groundwater outside the Facility boundaries is not expected to contain any color, there will be no adverse impacts to beneficial uses following the tracer test.

The use of acids and compounds to remove biofouling from screens in monitoring and extraction wells will alter pH in groundwater and increase the concentration of total organic carbon (TOC). Both effects, however, are will be localized to the vicinity of the well screen due to the strong buffering capability of the aquifer. Baseline sampling shows that bicarbonate alkalinity averaged 300 milligrams per liter (mg/L) and pH is neutral to alkaline. These groundwater characteristics will confine acid and other reactions to the point of injection. Therefore, since groundwater pH will return to background conditions before reaching the Facility boundaries, there will be no adverse impacts to beneficial uses following the injection of well rehabilitation compounds.

Re-injection of groundwater extracted from outside the chromium plume boundaries may affect water quality near or within the plume boundaries with respect to total dissolved solids, nitrate, and sulfate. Potential degradation will not result in water quality standards being exceeded or increasing more than 25 percent above current concentrations for total dissolved solids, nitrates, and sulfates.

The extraction, ex-situ treatment, and in-situ treatment processes are designed to be the equivalent of the Best Practicable Technologies, as required by the State Water Board's Resolution No. 68-16. In addition, reagent injection will be calculated to be the lowest dosage possible for creating anaerobic reducing conditions and will likely minimize the likelihood of creating conditions that could produce potential by-products. The long-term benefit of the project will result in removal of chromium from groundwater. Therefore, the resulting water quality from this project will be consistent with the State Water Board's Resolution No. 68-16.

#### 21. Constituents of Concern

The Constituents of Concern (COCs) consist of total chromium (Cr(T)) and hexavalent chromium (Cr(VI)). Potential constituents of concern include reagents to be analyzed as volatile fatty acids (lactic acid, acetate, pyruvate, propionate, and butyrate), and naturally-occurring reducible metals, such as arsenic, manganese, and iron. In addition, other potential constituents of

concern include total dissolved solids, nitrate, and sulfate and tracers, such as bromide and fluorescent dyes.

#### 22. Water Quality Data Evaluation

Since the project involves the injection of unregulated, food-grade reagents, acids, and tracers and regulated Pharmacopoeia-grade reagents, acids and oxidizers to groundwater to stimulate bioremediation, rehabilitate wells, and characterize flow conditions, a statistical method of monitoring data for detection of a release of waste from the Facility is superfluous. Water quality data will be evaluated as required in a Monitoring and Reporting Program for each project, and any potential releases from the Facility will be assessed through that monitoring.

#### 23. Corrective Action

A Corrective Action Program (CAP) to remediate released wastes from the Facility may be required pursuant to sections 20385 and 20430, title 27, CCR, if results of an Evaluation Monitoring Program (EMP) warrant a CAP.

#### 24. California Environmental Quality Act

The Project is a new project under the California Environmental Quality Act (CEQA) and is subject to the provisions of CEQA (Public Resources Code, section 21000 et seq.) The Lahontan Water Board is the lead agency for this project. An Initial Study describing the project was prepared by Arcadis on behalf of the Lahontan Water Board and PG&E. It was circulated under State Clearinghouse No. 2008011097 to satisfy CEQA with the Water Board as Lead Agency. The Initial Study indicates the intent of the Lahontan Board to consider a Mitigated Negative Declaration.

In a public meeting on April 9-10, 2008, the Lahontan Water Board adopted a resolution certifying the environmental document that states the effects on the environment from the Project are not significant as mitigated, adopting a Mitigated Negative Declaration and a Mitigation Monitoring and Reporting Plan to satisfy CEQA, and authorizing Lahontan Water Board staff to send a Notice of Determination to the Office of Planning and Research.

The discharge described in these GWDRs is consistent with the Negative Declaration and no new significant or potentially significant impacts are expected from the discharge allowed by these GWDRs.

#### 25. Notification of Interested Parties

The Lahontan Water Board has notified the Discharger and all known interested parties of its intent to adopt new GWDRs for the project.

## 26. Consideration of Interested Parties

The Lahontan Water Board, in a public meeting, heard and considered all comments pertaining to the discharge.

**IT IS HEREBY ORDERED** that the Discharger shall comply with the following:

### I. DISCHARGE SPECIFICATIONS

#### A. Eligibility

1. The Discharger may seek coverage under this Order for implementing remediation projects that may include:
  - a. discharges to groundwater of biological chemical reduction compounds, well rehabilitation compounds, tracers, process chemicals, and nutrients identified in I.B., below, for the cleanup of hexavalent chromium.
  - b. re-injection of treated or untreated extracted groundwater, within the plume boundary
  - c. re-injection of untreated extracted groundwater that is not affected by hexavalent chromium to areas outside of the plume to create a hydraulic barrier for plume control.
2. To be covered under this Order, a discharge must meet the following criteria:

The Executive Officer must find, based on a Notice of Intent submitted pursuant to Order II, Authorization, that the groundwater discharges for which coverage under this Order are sought have a threat to water quality of Category 3 and Complexity rating of A for a combined rating of 3-A, using the criteria established by the State Water Board.

#### B. Discharge Limitations

The GWDRs would allow the following materials to be used for remediation purposes. Prior to project implementation, a pilot study may be required for compounds not having a prior discharge history at the site or at a site with similar conditions.

1. Chemical Reduction Compounds:
  - Calcium polysulfide
  - Ferrous chloride
  - Ferrous sulfate
  - Sodium dithionite
  - Zero-valent iron

2. Biological Reduction Compounds:
  - Emulsified vegetable oil
  - Ethanol
  - Lactate
  - Whey
  - Molasses
  - Corn syrup
  - Acetate
  - Glucose
  - Methanol
  
3. Tracer compounds shall not be reactive with current contaminants to be treated or other compounds used in the remediation process. Tracers may include:
  - Bromide
  - Fluorescein
  - Eosine
  - Additional fluorescent tracers
  
4. Well Rehabilitation Compounds:
  - Acetic acid
  - Citric acid
  - Hydrochloric acid
  - Hydrogen peroxide
  - Sodium hydroxide
  
5. Process Chemicals:
  - Aluminum sulfate
  - Anti-scalants
  - Calcium hydroxide
  - Calcium oxide
  - Hydrochloric acid
  - Phosphoric acid
  - Polymeric flocculants
  - Sodium hydroxide
  - Sulfuric acid
  
6. Nutrients:
  - Ammonium
  - Nitrate
  - Phosphate
  - Vitamins
  - Yeast extract

C. Receiving Water Limitation

The discharge of waste shall not cause a violation outside the project boundaries of any applicable water quality standards for receiving water adopted by the Lahontan Water Board or the State Water Board. The boundaries are described in Finding No. 2 and shown in Attachment A. Additionally, the discharge of waste shall not cause a violation of water quality objectives inside the project boundaries at locations that adversely affect a receptor, such as a drinking water well or agricultural well. The discharge shall not cause the presence of the following substances or conditions in groundwaters as described.

1. Chemical Constituents - Groundwaters shall not contain concentrations of chemical constituents (with the exception of chromium) outside the project boundaries in excess of the maximum contaminant level (MCL) or secondary maximum contaminant level (SMCL) based upon drinking water standards specified in the following provisions of Title 22 of the CCR (with the exception of TDS and nitrate, which already exceed the MCL or SMCL at locations within and outside the Facility): Table 64431-A of Section 64431 (Inorganic Chemicals), Table 6444-A of Section 64444 (Organic Chemicals), Table 64449-A of Section 64449 (SMCLs - Consumer Acceptance Limits), and Table 64449-B of Section 64449 (SMCLs - Ranges). This incorporation-by-reference is prospective including future changes to the incorporated provisions as the changes take effect. Groundwaters shall not contain concentrations of chemical constituents that adversely affect the water for beneficial uses.
2. Taste and Odors - Groundwaters outside of the projected boundaries shall not contain taste or odor-producing substances other than from chromium in concentrations that cause nuisance or that adversely affect beneficial uses. For groundwaters designated as Municipal or Domestic Supply, at a minimum, concentrations shall not exceed adopted SMCLs specified in Table 64449-A of Section 64449 (SMCLs - Ranges), and Table 64449-B of Section 64449 (SMCLs - Ranges) of Title 22 of the CCR, including future changes as the changes take effect.
3. Any presence of toxic substances in concentrations outside the project boundaries that individually, collectively, or cumulatively cause detrimental physiological response in humans, plants, animals, or aquatic life is prohibited.

4. The discharge of wastes shall not cause the pH of the receiving groundwater outside the project boundaries, beyond the range of 6.5 and 8.5.
5. Waste discharged shall not cause the groundwater to contain concentrations of salts in amounts that adversely affect any designated beneficial use outside the project boundaries or in amounts significantly exceeding baseline conditions specific for that area of the project,

D. General Requirements and Prohibitions

The discharge of waste shall not cause a violation of the following General Requirements and Prohibitions. Additionally, the discharge of waste shall not cause a violation of water quality objectives inside the project boundaries at locations that adversely affect a receptor, such as a drinking water well or agricultural well.

1. The discharge of wastes other than those which meet eligibility requirements in Discharge Specifications section I.A. of this Order is prohibited unless the Discharger obtains coverage under another general permit or an individual site-specific permit that regulates the discharge of such wastes.
2. Surface flow or visible discharge of waste to land surface, surface waters, or surface water drainage courses is prohibited.
3. Creation of pollution, contamination, or nuisance, as defined in section 13050 of the Water Code, is prohibited outside the project boundaries.
4. The discharge of waste except to the authorized disposal site is prohibited.
5. The discharge of waste, as defined in the Water Code, that causes a violation of any narrative water quality objective (WQO) contained in the Basin Plan, including the Nondegradation Objective, is prohibited outside the project boundaries.
6. The discharge of waste that causes a violation of any numeric WQO contained in the Basin Plan is prohibited outside the project boundaries.

7. Where any numeric or narrative WQO contained in the Basin Plan is already being violated, the discharge of waste that causes further degradation or pollution is prohibited outside the project boundaries.
8. The Discharger shall remove and relocate or otherwise mitigate any wastes that are discharged not in accordance with these GWDRs.
9. Hazardous waste, as defined under article 1, chapter 11, division 4.5 (§66261.3 et seq.) of title 22, CCR, shall not be disposed and/or treated at the Facility, outside the scope of these waste discharge requirements.
10. The discharge to the ground of any chemicals stored in tanks at the Facility is prohibited.
11. Discharge of solid waste to the Facility is prohibited.

## II. AUTHORIZATION

To be authorized to discharge under this Order, the Discharger must submit a Notice of Intent (NOI). Upon receipt of the NOI, the Executive Officer shall determine the applicability of this Order to such a discharge and the completeness of the application package. If the discharge is eligible, the Executive Officer shall notify the Discharger that the discharge is authorized under the terms and conditions of this Order, and prescribe an appropriate monitoring and reporting program. The NOI must contain essential project description information that describes the discharge, the site of discharge, reaction or effects of the discharge upon water quality and public health, and other information deemed necessary by the Executive Officer. The latter may include modeling to evaluate the hydrogeologic area affected by the project and potential degradation to water quality.

## III. MONITORING AND REPORTING

- A. Pursuant to Water Code section 13267, subdivision (b), the Executive Officer is hereby authorized to prescribe Monitoring and Reporting Programs for each authorized remediation project implemented under these GWDRs.
- B. The Discharger must file with the Water Board technical reports for self-monitoring conducted according to the Monitoring and Reporting Program specified by the Executive Officer and submit other reports as requested by the Water Board.

## VI. PROVISIONS

### A. Standard Provisions

The Discharger shall comply with the "Standard Provisions for Waste Discharge Requirements," dated September 1, 1994, in Attachment C, which is made a part of this Order.

### B. Other Permits

This Order does not alleviate the responsibility of the Discharger to obtain other necessary local, state, and federal permits to construct facilities necessary for compliance with this Order. Nor does this Order prevent imposition of additional standards, requirements, or conditions by any other regulatory agency.

### C. Claim of Copyright or Other Protection

Any and all reports and other documents submitted to the Lahontan Water Board pursuant to this request will need to be copied for some or all of the following reasons: (1) normal internal use of the document, including staff copies, record copies, copies for Board members and agenda packets, (2) any further proceedings of the Lahontan Water Board and the State Water Board, (3) any court proceeding that may involve the document, and (4) any copies requested by members of the public pursuant to the Public Records Act or other legal proceeding.

If the Discharger or its contractor claims any copyright or other protection, the submittal must include a notice, and the notice will accompany all documents copied for the reasons stated above. If copyright protection for a submitted document is claimed, failure to expressly grant permission for the copying stated above will render the document unusable for the Lahontan Water Board's purposes, and will result in the document being returned to the Discharger as if the task had not been completed.

### D. Expiration

These general waste discharge requirements do not expire.

I, Harold J. Singer, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Lahontan Region, on April 9, 2008.

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HAROLD J. SINGER  
EXECUTIVE OFFICER

- Attachments: A. Map of Project Area  
B. List of Parcels within Project Area  
C. Standard Provisions for Waste Discharge Requirements

Proposed

# **ATTACHMENT A**



# ATTACHMENT B

**Attachment B. Assessor's Parcel Numbers  
General Site-Wide Permit  
Pacific Gas and Electric Company, Hinkley**

APN	Owner Name	Owner Address	Owner City
0488-112-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0488-112-06	GREENE, CUONG J	22623 COMMUNITY BLVD	HINKLEY CA 92347
0488-112-07	DOMINGUEZ, HENRY P	22611 COMMUNITY BLVD	HINKLEY CA 92347
0488-112-08	REY, MARTA A	35985 MOUNTAIN VIEW RD #A	HINKLEY CA 92347
0488-112-09	SWEET, DAVID D JR	205 S WALNUT	CAMERON MO 64429
0488-112-10	SMITH, LESTER (GUERLE)	35922 HERVEY RD	HINKLEY CA 92347
0488-112-11	CLOTFELTER, WILLIAM E TR	7611 E DAVID DR	TUCSON ARIZONA
0488-112-12	HEWITT, GEOFFREY	909 ARMORY RD #235	BARSTOW CA 92311
0488-112-13	LINEBAUGH, NANCY M	35889 DIXIE RD	HINKLEY CA 92347
0488-112-15	SOUTHERN CALIFORNIA EDISON COMPANY	P.O. BOX 800	ROSEMEAD, CA 91770
0488-112-17	THORNE, PAMELA S	2113 STETSON CREEK DR	FORT COLLINS CO 80528
0488-112-18	WHIPPLE, DAVID P	35754 HERVEY RD	HINKLEY CA 92347
0488-112-21	HAUTER, BARRY L	P O BOX 621	ATASCADERO, CA
0488-112-30	WHITSON, BARBARA J	35633 FAIRVIEW RD.	HINKLEY CA 92347
0488-112-31	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0488-112-32	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0488-112-52	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0488-112-53	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0488-112-54	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0488-112-55	MARCUM, MURIEL I	22771 COMMUNITY BLVD	HINKLEY CA 92347
0488-112-56	MARCUM, MURIEL I	22771 COMMUNITY BLVD	HINKLEY CA 92347
0488-112-57	MARCUM, MURIEL I	22771 COMMUNITY BLVD	HINKLEY CA 92347
0488-112-58	MARCUM, MURIEL I	23579 OSAGE	BARSTOW CA 92311
0488-121-20	VERNOLA, PAT & MARY - SURVIVOR TR-ES	1604 N LAUREL AVE	UPLAND CA 91784
0494-021-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-021-08	VERNOLA, PAT & MARY - SURVIVOR TR-ES	1604 N LAUREL AVE	UPLAND CA 91784
0494-021-21	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-031-19	HAMBLIN, SANDRA E	1152 EASTSIDE SCHOOL RD	SENOIA GA 30276
0494-041-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-041-07	BURDICK, DONALD O TR	13030 DETROIT CT	CHINO CA 91710
0494-041-08	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-14	LEYERLY, RICHARD E REV TRUST 1996	21988 W HWY 58	HINKLEY CA 92347
0494-041-18	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-20	LEYERLY, RICHARD E TR	21988 HIGHWAY 58	HINKLEY CA 92347
0494-041-21	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-22	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-29	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-30	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-31	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-32	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-37	MILLER, KENNETH J FAM TR 2004 777/04	1515 W ARROW ROUTE # 51	UPLAND CA 91786
0494-041-39	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-40	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-41	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-42	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-43	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-041-44	ARMAN MALIK	8431 RIDGELA AVE	BUENA PARK, CA 90621
0494-051-13	ATCHISON TOPEKA AND SANTA FE RR CO	740 EAST CARNEGIE DRIVE	SAN BERNARDINO, CA 92408
0494-051-22	RASCOE, JOAN	3955 CEANOTHUS PL APT "O"	CALABASAS CA 91302
0494-051-23	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-051-24	MONTGOMERY, JANICE C	25092 BELLOTA	MISSION VIEJO CA 92692
0494-051-25	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-051-26	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-051-33	DUVAL FAMILY LIMITED PARTNERSHIP	430 N MAPLE DR #201	BEVERLY HILLS CA 90210
0494-201-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-201-19	STEELE, GLORIA	11320 SANTOL DR	SLYMAR CA 91552
0494-201-22	GREENWOOD	P O BOX 56 36682 MT VIEW RD	HINKLEY CA
0494-201-35	MT VIEW LLC	831 W MAIN ST	BARSTOW CA 92311
0494-201-37	HALL, JOHN	PO BOX 1116	FORT COLLINS, CO
0494-201-42	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-201-43	HALL, JOHN	PO BOX 1116	FORT COLLINS, CO
0494-201-52	GISLER, JOSEPH	36634 MT VIEW	HINKLEY CA 92347
0494-201-54	QUITY TRUST CO FBO REIICHI EMERSON I	225 BURNS RD.	ELYRIA OH 44035
0494-201-55	NIEDERT, ERROL L	36506 MOUNTAIN VIEW RD	HINKLEY CA 92347
0494-201-57	MILLER, JAMES J	22062 COMMUNITY BLVD	HINKLEY CA 92347
0494-201-58	WATERS, PAUL D	36626 MT VIEW	HINKLEY CA 92347
0494-211-01	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-211-02	COTTRELL LIVING TRUST MARCH 1990	23005 ALCUDIA RD	HINKLEY CA 92347
0494-211-03	SEIZED PROPERTY	PO BOX 431	MIRA LOMA CA
0494-211-07	WESTRA, RICHARD H	7851 BICKMORE ST	CHINO CA 91710
0494-211-10	WESTRA, RICHARD H	7851 BICKMORE ST	CHINO CA 91710
0494-211-11	YANG, YOUNG MO	301 ELMHURST PL	FULLERTON CA 92835

**Attachment B. Assessor's Parcel Numbers  
General Site-Wide Permit  
Pacific Gas and Electric Company, Hinkley**

APN	Owner Name	Owner Address	Owner City
0494-211-13	WESTRA, RICHARD H	7851 BICKMORE ST	CHINO CA 91710
0494-221-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-221-02	WILSON, LEONARD R	2552 CAPISTRANO AVE	LAS VEGAS NV 89121
0494-221-11	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-12	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-13	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-14	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-15	YANG, YOUNG MO	301 ELMHURST PL	FULLERTON CA 92835
0494-221-17	DEAGULAR	5486 INDUSTRIAL PARKWAY	SAN BERNADINO, CA 92407
0494-221-18	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-20	COLLINS, BARBARA M	15075 DEL REY DR	VICTORVILLE CA 92392
0494-221-23	TONG, NHIEM	11902 E EBERLE ST	CERRITOS CA 90703
0494-221-27	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-28	LEE, MYUNG O	566 N SYCAMORE AVENUE	FULLERTON CA 92831
0494-221-29	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-31	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-32	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-37	EAP, KEARN P	203 N MOORE AVE # B	MONTEREY PARK CA 91754
0494-221-38	GOLCONDA UTILITIES CO	P O BOX 212	KEELER CA
0494-221-39	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-40	DEAGULAR	5486 INDUSTRIAL PARKWAY	SAN BERNADINO, CA 92407
0494-221-41	LEE, LEON D	P O BOX 335	YERMO CA
0494-221-42	COLLINS, BARBARA M	15075 DEL REY DR	VICTORVILLE CA 92392
0494-221-43	BRAL, RAMIN	P O BOX 18037	BEVERLY HILLS CA
0494-221-44	LEE, MYUNG O	566 N SYCAMORE AVE	FULLERTON CA 92831
0494-221-45	ESTEVEZ, PABLO	12027 S EAST END AVE	CHINO CA 91710
0494-221-46	BLACKWOOD, JAMES TR - DECEASED	23146 HIGHWAY 58	HINKLEY CA 92347
0494-221-47	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-221-49	KURTH, ALVIN V	23124 SANTA FE RD	HINKLEY CA 92347
0494-221-50	WESTRA, RICHARD H	7851 BICKMORE ST	CHINO CA 91710
0494-221-51	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-231-06	YOSHINAGA, SUNAO	P O BOX 1635	UPLAND CA
0494-231-07	ATCHISON TOPEKA AND SANTA FE RR CO	740 EAST CARNEGIE DRIVE	SAN BERNARDINO, CA 92408
0494-231-09	MUNOZ, ANTONIO M	16774 WILLOW CIR	FOUNTAIN VALLEY CA 92708
0494-241-02	VERNOLA, PAT & MARY - SURVIVOR TR-ES	1604 N LAUREL AVE	UPLAND CA 91784
0494-251-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-251-03	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-251-04	VERNOLA, PAT & MARY - SURVIVOR TR-ES	1604 N LAUREL AVE	UPLAND CA 91784
0494-251-07	COOK, KWON WHAN	2601 CAMINO DEL SOL	FULLERTON CA 92633
0494-251-08	YU, CHUL SOO	2667 CLARELLEN ST	TORRANCE CA 90505
0494-251-09	HWANG, MOLLY	8116 BEVERLY BLVD	LOS ANGELES CA 90048
0494-251-10	TROWBRIDGE, JOHN INVESTMENTS, LLC	1599 SUPERIOR AVE B-5	COSTA MESA CA 92627
0494-251-15	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-261-00	SAN BERNARDINO COUNTY	385 N. ARROWHEAD AVE	SAN BERNARDINO, CA 92415-0120
0494-261-15	WENDLBERGER, ELEANOR A	2700 CAMPUS DRIVE	SAN MATEO, CA
0494-261-18	WENDLBERGER, ELEANOR A	2700 CAMPUS DRIVE	SAN MATEO, CA
0494-261-19	WENDLBERGER, ELEANOR A	2700 CAMPUS DRIVE	SAN MATEO, CA
0494-261-26	SCHUMACHER, HARRY P	27624 CINNABAR RD	BARSTOW CA 92311-6206
0494-261-29	VASQUEZ, YVONNE F	601 E SANTA PAULA ST	SANTA PAULA CA 93060
0494-261-37	ZAVALA, FELIPE A	3061 N CALIFORNIA ST	SAN BERNARDINO CA 92407
0494-261-38	ZAVALA, FELIPE A	3061 N CALIFORNIA ST	SAN BERNARDINO CA 92407
0494-261-39	FRITZ, EUGENIA B	4057 PAVILION TOWERS CIR	COLUMBIA SC
0494-261-40	TAYLOR, FRANCES M	16202 MENAHPKA RD	APPLE VALLEY CA 92307
0494-261-41	MUNOZ REV LIVING TRUST 10/28/05	16774 WILLOW CIRC	FOUNTAIN VALLEY CA 92708
0494-261-42	FAN, SHIH-WANG	3221 SAMANTHA AVE	WEST COVINA CA 91792-2420
0494-261-43	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-261-46	WALLIS, WARREN O	P O BOX 998	BARSTOW CA
0494-261-47	TONGCO, FELORINO P	3832 E AVE R12	PALMDALE CA 93550
0494-261-48	TONGCO, FELORINO P	3839 E AVE R12	PALMDALE CA 93550
0494-261-49	FAVORITE, MARIA G	VIA MONTEVIDEO 4	ROME ITALY 00198
0494-261-50	FAVORITE, JOSEPH J	4054 HARCLARE LN	MENCINO CA 91436
0494-261-51	BALLESIO, GIULIANA	VIA ALFREDO CASELLA N 4	00199 ROMA ITALY
0494-261-52	BALLESIO, GIULIANA	VIA ALFREDO CASELLA N 4	00199 ROMA ITALY
0494-261-58	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0494-261-59	PACIFIC GAS AND ELECTRIC CO	77 BEALE ST	SAN FRANCISCO CA 94104
0495-041-14	GORMAN TRUST 2002-215 (7-1-02)	PO BOX 215	HINKLEY CA
0495-041-16	FREDERICKSON, HANS M -EST OF	40113 TEAKWOOD RD	SHELBY IA 51570
0495-041-23	YAGLA, JEANETTE L	P O BOX 41	HINKLEY, CA
0495-041-25	NELSON, BILLENA L	22858 ALCUDIA RD	HINKLEY CA 92347
0495-041-26	FRY, STEPHEN R	15669 E FAIRGROVE AVE	LA PUENTE CA 91744

# ATTACHMENT C

03-0092

ATTACHMENT "C"

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
LAHONTAN REGION

STANDARD PROVISIONS  
FOR WASTE DISCHARGE REQUIREMENTS

1. Inspection and Entry

The discharger shall permit Regional Board staff:

- a. to enter upon premises in which an effluent source is located or in which any required records are kept;
- b. to copy any records relating to the discharge or relating to compliance with the waste discharge requirements;
- c. to inspect monitoring equipment or records; and
- d. to sample any discharge.

2. Reporting Requirements

- a. Pursuant to California Water Code 13267(b), the discharger shall immediately notify the Regional Board by telephone whenever an adverse condition occurred as a result of this discharge; written confirmation shall follow within two weeks. An adverse condition includes, but is not limited to, spills of petroleum products or toxic chemicals, or damage to control facilities that could affect compliance.
- b. Pursuant to California Water Code Section 13260 (c), any proposed material change in the character of the waste, manner or method of treatment or disposal, increase of discharge, or location of discharge, shall be reported to the Regional Board at least 120 days in advance of implementation of any such proposal. This shall include, but not be limited to, all significant soil disturbances.
- c. The owner(s) of, and discharger upon, property subject to waste discharge requirements shall be considered to have a continuing responsibility for ensuring compliance with applicable waste discharge requirements in the operations or use of the owned property. Pursuant to California Water Code Section 13260(c), any change in the ownership and/or operation of property subject to the waste discharge requirements shall be reported to the Regional Board. Notification of applicable waste discharge requirements shall be furnished in writing to the new owners and/or operators and a copy of such notification shall be sent to the Regional Board.
- d. If a discharger becomes aware that any information submitted to the Regional Board is incorrect, the discharger shall immediately notify the Regional Board, in writing, and correct that information.

- e. Reports required by the waste discharge requirements, and other information requested by the Regional Board, must be signed by a duly authorized representative of the discharger. Under Section 13268 of the California Water Code, any person failing or refusing to furnish technical or monitoring reports, or falsifying any information provided therein, is guilty of a misdemeanor and may be liable civilly in an amount of up to one thousand dollars (\$1000) for each day of violation.
- f. If the discharger becomes aware that their waste discharge requirements are no longer needed (because the project will not be built or the discharge will cease) the discharger shall notify the Regional Board in writing and request that their waste discharge requirements be rescinded.

3. Right to Revise Waste Discharge Requirements

The Board reserves the privilege of changing all or any portion of the waste discharge requirements upon legal notice to and after opportunity to be heard is given to all concerned parties.

4. Duty to Comply

Failure to comply with the waste discharge requirements may constitute a violation of the California Water Code and is grounds for enforcement action or for permit termination, revocation and reissuance, or modification.

5. Duty to Mitigate

The discharger shall take all reasonable steps to minimize or prevent any discharge in violation of the waste discharge requirements which has a reasonable likelihood of adversely affecting human health or the environment.

6. Proper Operation and Maintenance

The discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) that are installed or used by the discharger to achieve compliance with the waste discharge requirements. Proper operation and maintenance includes adequate laboratory control, where appropriate, and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by the discharger, when necessary to achieve compliance with the conditions of the waste discharge requirements.

7. Waste Discharge Requirement Actions

The waste discharge requirements may be modified, revoked and reissued, or terminated for cause. The filing of a request by the discharger for waste discharge requirement modification, revocation and reissuance, termination, or a notification of planned changes

or anticipated noncompliance, does not stay any of the waste discharge requirements conditions.

8. Property Rights

The waste discharge requirements do not convey any property rights of any sort, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations.

9. Enforcement

The California Water Code provides for civil liability and criminal penalties for violations or threatened violations of the waste discharge requirements including imposition of civil liability or referral to the Attorney General.

10. Availability

A copy of the waste discharge requirements shall be kept and maintained by the discharger and be available at all times to operating personnel.

11. Severability

Provisions of the waste discharge requirements are severable. If any provision of the requirements is found invalid, the remainder of the requirements shall not be affected.

12. Public Access

General public access shall be effectively excluded from treatment and disposal facilities.

13. Transfers

Providing there is no material change in the operation of the facility, this Order may be transferred to a new owner or operation. The owner/operator must request the transfer in writing and receive written approval from the Regional Board Executive Officer.

14. Definitions

- a. "Surface waters" as used in this Order, include, but are not limited to, live streams, either perennial or ephemeral, which flow in natural or artificial water courses and natural lakes and artificial impoundments of waters. "Surface waters" does not include artificial water courses or impoundments used exclusively for wastewater disposal.
- b. "Ground waters" as used in this Order, include, but are not limited to, all subsurface waters being above atmospheric pressure and the capillary fringe of these waters.

15. Storm Protection

All facilities used for collection, transport, treatment, storage, or disposal of waste shall be adequately protected against overflow, washout, inundation, structural damage or a significant reduction in efficiency resulting from a storm or flood having a recurrence interval of once in 100 years.

ShT:Forms/WDR Standard Provisions