

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

Setting

Land use at the project area and nearby vicinity is predominantly open space, interspersed with industrial facilities, recreational uses, and transportation infrastructure. Land use at the project area is under the jurisdiction of the County of San Bernardino and BLM. The 100-acre parcel developed with the existing IM No. 3 water treatment plant and related facilities may be subject to local land-use regulations of the County of San Bernardino. Areas surrounding the 100-acre PG&E parcel are federally owned or managed and are not subject to County land-use control. Land-use approvals in these areas are subject to the management considerations of the BLM.

The County of San Bernardino General Plan (1989) designates the 100-acre PG&E parcel as Resource Conservation (RC). This land-use classification provides for the cultivation of crops and other farm-related activities. Pursuant to the County of San Bernardino Development Code, additional uses are allowed in areas designated "Resource Conservation," subject to issuance of a Department Review/Conditional Use Permit. Such additional uses are specified in Section 84.0410 of the County Development Code and include, but are not limited to, gas pressure control stations, water treatment plants, water storage tanks, and hazardous waste operations (treatment, incineration, recycling, storage, transfer, residual repository and land disposal facilities). The IM No. 3 system was approved by the County of San Bernardino in a Departmental Review (DS1455-257/2004/DR01), effective September 21, 2004. BLM approval was provided in the September 2004 Action Memorandum previously mentioned in accordance with the management considerations of that agency.

The project is located near an area of the Colorado River floodplain within the planning area of the Lower Colorado River Multi-species Conservation Program, which extends from Lake Mead north of Topock down to the border with Mexico in the south. The Multi-species Conservation Program is applicable primarily to flood control operations undertaken by the Bureau of Reclamation and other public agencies. Ongoing IM No. 3 operation, including groundwater injection, does not conflict with this program.

Impacts

No change to the existing land use or related operational activities would result from renewal of the WDRs. No land use impacts would result.

X. MINERAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The geology at the project site is not known to support mineral resources of value. The project area is not designated by the County of San Bernardino as a known mineral resource.

Impacts

No known mineral resources occur at the project site. Renewal of the WDRs would not result in any impact to mineral resources.

XI. NOISE -- Would the project result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Setting

Existing stationary noise sources at the project vicinity include the Topock Compressor Station facilities and the existing IM No. 3 treatment plant. Mobile noise sources include vehicles on Interstate 40 and trains along the BNSF rail line. Limited vehicle noise is generated primarily along the access routes during the transport of supplies and waste associated with IM No. 3 operations. Recreational off-highway vehicle (OHV) activity on BLM-managed lands is also a mobile noise source. Other noise sources include boating and watercraft activity on the Colorado River. On-going groundwater monitoring generates noise related to use of ATVs, small trucks, and generators. The project is not located within an airport land-use plan or in the vicinity of a private airstrip.

Noise standards of the County of San Bernardino are specified in Section 87.0905(b) of the Development Code. Typical outdoor noise standards from stationary sources range from 55 dB(A)⁵ for residential land uses to 70 dB(A) for industrial uses. Noise standards are also applicable to mobile sources and vary based on the adjacent land uses; any exceedance of the prescribed noise levels is required to be mitigated accordingly. County noise standards are generally applicable to developed land uses, which are limited primarily to the recreational and

⁵ dB(A) refers to the sound pressure level, which is measured in decibels on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound, placing greater emphasis on those frequencies within the sensitivity range of the human ear.

short-term residential uses at Moabi Regional Park northwest of the project. Noise generated at the IM No. 3 water treatment plant is substantially attenuated at Moabi Regional Park due to the approximately 0.5-mile distance and varied topography between these two areas.

Impacts

No changes to the IM No. 3 facilities or operations would occur as a result of renewal of the WDRs. Therefore, no change to the existing noise environment is anticipated, and no impact would result from renewal of the WDRs.

XII. POPULATION AND HOUSING --

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The immediate project area is unpopulated and contains no housing. Approximately 0.5 mile northwest of the existing IM No. 3 facilities is Moabi Regional Park, which includes approximately 35 recreational vehicle sites and allows for long-term winter stays of up to 5 months. The Topock Marina is located east of the project across the Colorado River in Arizona and includes a mobile home park. A few additional homes are located in the vicinity of the Topock Marina.

Impacts

Ongoing injection of treated water from IM No. 3 operations would not affect existing housing in the project vicinity. Continued injection of groundwater at the project site would not induce

or facilitate population growth. No impacts to population or housing would result from the renewal of the WDRs.

XIII. PUBLIC SERVICES

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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"/>

Setting

The project is located within a rural environment; public services are generally commensurate with the land uses and population density at the project site and surrounding areas. Public services at the project site are provided primarily through the County of San Bernardino.

Impacts

Continued operations resulting from renewal of the WDRs would not change from existing operations. The design of the existing IM No. 3 facilities, including roads providing access to the project, reflects the emergency access requirements of the County of San Bernardino. No impacts to public services would result from renewal of the WDRs.

XIV. RECREATION --

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

No recreational facilities are located at the project site. Nearby lands managed by the BLM do not include any formal recreation facilities, but support recreational activities that include OHV activity. Various recreational facilities are located in the project vicinity. East of the project, the Colorado River is a popular destination for water-related recreational activity. Nearby Moabi Regional Park and the Topock Marina provide facilities such as boat ramps and docks, which support recreational activity on the river. The United States Fish and Wildlife Service HNWR lands provide both water and terrestrial recreational opportunities in the project vicinity.

Impacts

Renewal of the WDRs would not increase demand for recreational facilities or otherwise affect recreational activity in the project vicinity. No impact would result.

XV. TRANSPORTATION/TRAFFIC --

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

roads, or congestion at intersections)?

- | | | | | |
|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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 results 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" 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"/> |

Setting

Access to the project is provided from the Park Moabi Road exit of Interstate 40. Park Moabi Road is a two-lane paved facility that becomes National Trails Highway at the entrance to Moabi Regional Park. National Trails Highway continues in an east-west direction and then continues in a north-south direction along the floodplain of the Colorado River. Access to the existing IM No. 3 treatment plant from the west is provided by the historic alignment of Route 66, which extends off of Park Moabi Road. Eastern access is provided off National Trails Highway along an unnamed access road. Various unimproved roads traverse the project vicinity.

Traffic volumes at the project vicinity reflect the predominantly rural character of the area. Traffic is generated through ongoing operation of the IM No. 3 treatment plant, the most substantial of which is the approximately 26 truckloads per week of brine waste hauled from the treatment plant to an off-site facility in Los Angeles. Additional traffic associated with ongoing IM No. 3 operations relates to the transport of staff, materials, and waste, and maintenance vehicle activity. Adequate parking is provided for staff and visitors at the Topock

Compressor Station and at the IM No. 3 treatment plant. Informal parking is provided at the MW-20 bench to accommodate site visitors.

The San Bernardino Associated Governments (SANBAG) has developed the *Congestion Management Program for San Bernardino County* (SANBAG 2001). However, the project is located in a rural area, which is reflected in the traffic patterns on local roadways (i.e., minimal traffic congestion). No roadway or intersection in the project vicinity is subject to an established standard for level of service.

Impacts

Renewal of the WDRs would not result in any change to the IM No. 3 facilities or operations, including any changes to roadway design or traffic levels. No transportation or traffic impacts would result.⁶

XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁶ As previously mentioned in footnote 4, *supra*, a decision not to renew the WDRs would require implementing some other means for disposing of the treated water from the IM No. 3 water treatment plant. Trucking of the treated water to an offsite disposal facility, the most likely means for managing the treated water, would create significant impacts on existing traffic levels and traffic safety since the volume of treated water generated would require the use of up to 300 truckloads per week.

needed?

- | | | | | |
|---|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Setting

The IM No. 3 injection operations are currently operating in accordance with WDR Order No. R7-2004-103 issued by the Regional Board in October 13, 2004. The WDRs specify effluent limitations, prohibitions, specifications, and provisions for subsurface injection. The effluent limitations apply to Cr(VI), total chromium, and pH. Additionally, effluent must not contain heavy metals, chemicals, pesticides, or other constituents in concentrations toxic to human health. Water extracted for project operations is within the existing PG&E water rights allocation from the Colorado River and associated groundwater basin. The majority of extracted water is injected following treatment, in accordance with WDR Order No. R7-2004-103. Wastes generated from treatment system operations include solid waste (sludge) and reverse osmosis concentrate (brine). These waste streams are characterized and disposed of at a permitted off-site facility.

Impacts

Renewal of the WDRs would not result in the construction of new facilities. Thus, no construction-related impacts would result. Continued operations resulting from renewal of the WDRs would not change from existing operations. PG&E maintains rights to allocated amounts of water from the Colorado River and the nearby groundwater basin. Renewal of the WDRs would not require new or expanded entitlements. IM No. 3 operations since startup in July 2005 have not exceeded the effluent standards established in WDR Order No. R7-2004-103. Standards in the renewed WDRs are expected to be similar to current standards. Based on past IM No. 3 monitoring and reporting, ongoing operations are not expected to exceed WDR requirements.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE --

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

Ongoing IM No. 3 activities occur in proximity to archeological resources and use portions of historic Route 66. As discussed previously under Section V (Cultural Resources), IM No. 3 operations are subject to a Cultural Resources Management Plan, which provides measures for the protection of cultural resources. This includes existing structural protection of the historic fabric of Route 66. The renewal of the WDRs will result in no change to existing conditions.

Renewal of the WDRs would have no impact on fish species. Because no new facilities would be developed as a result of renewal of the WDRs, no disturbance to biological habitat is expected. Recent surveys of the project area (CH2M HILL 2005a) indicate no desert tortoises or other sensitive species are present in the nearby area.

The existing IM No. 3 system is a component of ongoing investigative and interim remedial measures associated with the Topock Compressor Station. Other related projects at the Topock Compressor Station vicinity include groundwater monitoring activities conducted at wells located throughout the project area and concentrated on the floodplain of the Colorado River. In addition, an *in-situ* pilot study is underway in a floodplain area of the Colorado River directly east of the MW-20 bench to determine the viability of this particular method of chromium remediation. *In-situ* floodplain facilities include groundwater wells clustered in an approximately 0.25-acre area of the floodplain.

Future investigative activities at the site may include additional groundwater well installation and monitoring activities, soil sampling activities, and an additional *in-situ* pilot study in an upland location. These investigative activities will culminate in the formulation and implementation of a final cleanup remedy for the site. The parameters of the final remedy are not currently known, and an assessment of the environmental impacts would be speculative at this time.

All activities at the site are subject to the management considerations of the BLM, HNWR, DTSC, and other agencies with full or partial jurisdiction at the project site (e.g., California Department of Fish and Game, San Bernardino County). The measures applied to on-going investigative and interim remedial activities, as well as future activities, will serve to limit adverse environmental impacts. Because no new facilities or activities would result from renewal of the WDRs and, because existing IM No. 3 operations would not change, no adverse impacts are anticipated. Therefore, no cumulative impacts would result from WDR renewal.

IM No. 3 operations include the removal of chromium from groundwater. Ongoing operations resulting from renewal of the WDRs would not cause an adverse effect on human beings.

References

- Applied Earthworks. 2004. *Cultural Resources Management Plan for the Topock Compressor Station Expanded Groundwater Extraction and Treatment System*.
- Applied Earthworks. 2005. DRAFT: *Cultural Resources Investigations, Third Addendum: Survey of the Original and Expanded APE: Volume I, for Topock Compressor Station Site Vicinity, San Bernardino County, California*.
- California Department of Conservation, Division of Mines and Geology. 1994. *Fault Activity Map of California and Adjacent Areas*. Compiled by Charles W. Jennings.
- CH2M HILL. 2004a. *Transportation Management Plan For Cultural Resources Protection For Interim Measures No. 3: Topock Compressor Station Expanded Groundwater Extraction and Treatment System*. June.
- CH2M HILL. 2004b. *Final Biological Resources Investigations for Interim Measures No. 3: Topock Compressor Station Expanded Groundwater Extraction and Treatment System San Bernardino County, California*.
- CH2M HILL. 2004c. *Cultural Resources Investigations for Interim Measures No. 3. Topock Compressor Station Expanded Groundwater Extraction and Treatment System*. August.
- CH2M HILL. 2005a. *Biological Resources Survey Report for the Area of Potential Effect (APE) Topock Compressor Station Expanded Groundwater Extraction and Treatment System Needles, California*. October.
- CH2M HILL. 2005b. *Emergency Notification Binder*. July.
- Colorado River Basin Regional Water Quality Control Board. 2004. Order No. R7-2004-0103. *Waste Discharge Requirements for Pacific Gas and Electric, Owner/Operator Groundwater Remediation Facility*. October 13.
- CH2M HILL. 2005. *Water Quality Control Plan, Colorado River Basin – Region 7. Including amendments adopted by the Regional Board through October 2005*.
- Hall, Shirley. 2004. *County of San Bernardino Planning Department Site Data Sheet*.
- Mojave Desert Air Quality Management District (MDAQMD). 1995. *Final Mohave Desert Planning Area Federal Particulate Matter (PM₁₀) Attainment Plan*. July 31.
- CH2M HILL. 2004. *MDAQMD 2004 Ozone Attainment Plan (State and Federal)*. April 26.
- Pacific Gas and Electric (PG&E). 2006. *Hazardous Materials Business Plan*. February.
- San Bernardino Associated Governments (SANBAG). 2001. *Congestion Management Program for San Bernardino County*.
- San Bernardino County. 1989. *County of San Bernardino General Plan*. June.

ATTACHMENT A

NOTICE OF EXEMPTION

To: Office of Planning and Research
State Clearinghouse
P.O. Box 3044, 1400 Tenth Street, Room 212
Sacramento, CA 95812-3044

From: Department of Toxic Substances Control
Hazardous Waste Management Program
Geology, Permitting, and Corrective Action
Branch
5796 Corporate Avenue
Cypress, CA 90630

Project Title: Interim Measures #3 Emergency Groundwater Extraction and Management at Pacific Gas and Electric Company, Topock Compressor Station

Project Location – Specific: Topock Compressor Station, near Needles

Project Location – City: Unincorporated

Project Location – County: San Bernardino

Description of Project:**Background**

In February 2004, Department of Toxic Substances Control (DTSC) directed Pacific Gas and Electric Company (PG&E) to initiate immediate pumping, transport, and disposal of groundwater at the Topock site to ensure that groundwater containing chromium does not reach the Colorado River. Due to the influence of the Colorado River stage on groundwater levels (as described below), extracting groundwater at higher rates will be necessary to maintain the stated goal of hydraulic control. The stage in the Colorado River at the Topock site fluctuates (both daily and seasonally) in response to variations in the amount of water released by Davis Dam, located approximately 30 miles upstream.

Over the course of a year, river levels can fluctuate by as much as seven feet. Groundwater levels in wells near the river fluctuate in response to the river levels. The river provides recharge to the groundwater during times of rising river levels. During times of declining river levels, groundwater discharges to the river. For the current year 2004, the river levels will begin to decline in June and will continue to decline steadily through October. Beginning with the June 2004 decrease in river stage, the lowest river levels will occur in the period from October 2004 through January 2005. During the period of declining and low river levels, groundwater within the aquifer will tend to flow toward the river.

The pumping of the chromium plume at the MW-20 bench began in March, coincident with the period of rising river levels. During the spring, a pumping rate of approximately 20 gallons per minute was sufficient to maintain gradients away from the river. As the river levels begin to decline, the pumping rate must increase to overcome the natural tendency of the groundwater to flow toward the river. Space and treatment capacity limitations at the MW-20 bench make necessary the installation of additional facilities to extract, treat and manage the significantly higher groundwater flows required to maintain hydraulic control of the plume near the Colorado River.

Project Activities

Based on groundwater modeling projections by PG&E, extraction at approximately 130 gallons per minute (gpm) from the TW-2 extraction well will be required to provide an inward gradient during month of highest groundwater discharge rates (October 2004). The critical elements for this proposed project are the piping, conveyance of groundwater, construction of temporary treatment facilities, and development of a disposal method for the treated water.

Piping would be installed from the MW-20 bench to a proposed treatment facility on a parcel of land currently owned by the Metropolitan Water District (MWD) with San Bernardino County Assessor's parcel number 650-151-06. The proposed main piping and conveyance alignment for the project follows existing access roads and will avoid impact to the Topock Maze, other artifacts and historic features including Route 66. Buried piping would be placed in trenches except where aboveground crossings are necessary. Trenching along the roadway will minimize the disturbance to the hill sides and slopes around the MW-20 bench. The two effluent water lines to be contained in the trench would convey extracted water to the treatment system and pipe the treated water and reverse osmosis concentrate (brine stream) from the treatment facility to the discharge location and/or back to the MW-20 bench for off-site management.

The treatment process is a continuous process involving chromium (VI) reduction with ferrous chloride, precipitation with sodium hydroxide, and solids removal in a clarifier and microfilter. The resulting water will be polished with reverse osmosis equipment to reduce the amount of salt (measured as total dissolved solids) occurring naturally in the extracted groundwater for broader water reuse options. The reverse osmosis (RO) process produces two end streams: the RO permeate (low salt stream) and the RO concentrate or brine stream (high salt). The RO permeate stream can be reused for industrial process supply, injected back into the ground, or possibly discharged into the river. It is anticipated that the treatment process will comprise three modular treatment units with capacity of 20-30 gpm, 50-60 gpm, and 50-60 gpm. Each modular treatment system can be brought on line as flow increases throughout the year and shut down as flow requirements decrease.

PG&E proposes to inject the treated groundwater to minimize physical disturbance of the land and/or discharge the treated water back into the river under a National Pollutant Discharge Elimination System (NPDES) permit. Optionally, PG&E may reuse a portion of the treated water at the compressor station. The proposed injection well field location is near the southwest corner of Parcel 650-151-06.

Approval of the additional Interim Measure is subject to conditions that require additional workplans be submitted to DTSC for review and concurrence prior to construction activities or implementation. These include:

- Submittal of plans for interim increased pumping rates and batch treatment at the MW-20 bench area.
- A diagram of the route of the pipeline and submittal of a biological and cultural resource study that indicates that any resources have been avoided to the degree feasible.
- A study that evaluates additional extraction well locations and their sphere of influence.
- Additional design details on the continuous treatment system.
- A design and feasibility study that evaluates injection points for treated water and the capacity of these wells to meet the outputs of the treatment system.
- A study that evaluates the influence of injection and extraction on the existing groundwater plume.
- Design to permittable and implementable level for both alternative disposal methods for treated water, specifically the reuse for cooling water and discharge via NPDES permit directly to the Colorado River.
- Verification of the acquisition of the necessary property, easements and permits for the necessary activities from affected landowners and jurisdictions.

Name of Public Agency Approving Project: Department of Toxic Substances Control

Name of Person or Agency Carrying Out Project: Pacific Gas and Electric Company

Exempt Status: *(check one)*

- Ministerial (Sec. 21080(b)(1); 15268);
- Declared Emergency (Sec. 21080(b)(3); 15269(A));
- Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- Categorical Exemption. State type and section number: _____
- Statutory Exemptions. State code number: _____
- General Rule (Sec. 15061(b)(3))

Exemption Title: Title 14, Section 15269(c) Actions necessary to prevent an emergency.

Reasons Why Project is Exempt:

These project activities are necessary to prevent or mitigate an emergency situation wherein the waters of the Colorado River may be impacted with a hazardous constituent, chromium, which is in contaminated groundwater in close proximity to the river. Immediate action is necessary to contain and reverse the flow of groundwater away from the Colorado River. Commencement of the development of additional extraction, treatment, and treated water disposal capacity is urgent to assure that increased pumping rates will be available to respond to impending fluctuations of the Colorado River level.

Cultural and biological resource screening has been conducted to avoid impacts to sensitive areas. Regulatory agency permitting requirements will be addressed for the activities; however, expedited or emergency consideration will be sought. Local standards will be considered during project design.

Emergency approvals will not preclude DTSC from requiring additional interim measures and remedy changes or requiring additional environmental analysis for selection of a final remedy. The goal of the emergency approvals is to stabilize and control the problem to allow a return to the normal corrective measures evaluation and approval process.

Norman Shopay, Project Manager

(510) 540-3943

Lead Agency Contact Person

Phone #

Karen Thomas Baker

6/30/04

DTSC Branch Chief Signature

Date

Chief, Geology, Permitting, and Corrective
Action Branch

Karen T. Baker, CHG, CEG,

DTSC Branch Chief Name

DTSC Branch Chief Title

TO BE COMPLETED BY OPR ONLY

Date Received For Filing and Posting at OPR: _____

BLM Fax Cover Sheet

Bureau of Land Management
Lake Havasu Field Office

2610 Sweetwater Avenue • Lake Havasu City, Arizona 86406

Phone (928) 505-1200 • Fax (928) 505-1280

Toll Free 1-888-213-2582 • Website: lakehavasu.az.blm.gov



Number of Pages _____
(Including this cover sheet)

Date 9/21/04

Deliver To Teri Huser

Office CH7 M Hill

Phone (510) 587-7597 Fax (510) 622-9097

Sender Cat White Phone (928) 505-1309

Notes/Comments:

Signed action Memo #3

w/ Mitigation Measures

will follow up w/

copies!

Can you please scan & post this
doc so it can go E-mail
to all Cat.

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
LAKE HAVASU FIELD OFFICE

In Reply Refer To:
CAAZCA 43660
2640 (AZ-070)

September 17, 2004

ACTION MEMORANDUM

TO: State Director

FROM: Acting Field Manager, Lake Havasu Field Office

THROUGH: Acting District Manager, Colorado River District

SUBJECT: Time Critical Removal Action No. 3,
Pacific Gas and Electric Topock Compressor Facility

I. PURPOSE

This Action Memorandum documents the basis for authorizing a time critical removal action to address the release of hazardous substances from the Pacific Gas and Electric ("PG&E") Compressor Station near Topock, Arizona (hereafter "PG&E facility"). Hazardous substances released from the PG&E facility have migrated onto or under land managed by the Bureau of Land Management ("BLM") on behalf of the Bureau of Reclamation ("BOR"). Specifically, hazardous substances including, without limitation, hexavalent chromium released from the PG&E facility have been detected in groundwater under BLM-managed land. This plume of contaminated groundwater has been detected in groundwater within 100 feet of the Colorado River and is or may be migrating toward the Colorado River.

This proposed time critical removal action is authorized pursuant to the response action authority of Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act, as amended ("CERCLA"), 42 U.S.C. 9604. Pursuant to Executive Order 12580, as amended, and Department of the Interior ("DOI") Departmental Manual, Section 104 response action authority has been delegated to BLM to address the release or threatened release of hazardous substances on or from land under BLM's jurisdiction, custody, or control.

The purpose of this proposed time critical removal action is to undertake additional measures, as specified herein, to maintain hydraulic control of the groundwater plume to prevent or abate the release of hexavalent chromium into the Colorado River.

II. SITE CONDITIONS AND BACKGROUND

A. Site Description

The PG&E facility comprises approximately 265 acres located 15 miles southeast of Needles, California, south of Interstate 40, in the north end of the Chemehuevi Mountains. The facility is on private land owned by PG&E and is situated within the Havasu National Wildlife Refuge. The facility is located within one-half a mile of BLM-managed land and is less than one mile from the Colorado River.

PG&E has been the owner and operator of the PG&E facility since 1951 and has owned the property on which the facility is located since 1965. Beginning in 1951 and continuing to approximately 1989, PG&E conducted onsite disposal of significant quantities of wastewater containing hexavalent chromium from the cooling towers of the compressor station at the facility. According to PG&E's estimates, from 1951 to 1969, PG&E disposed annually at least six million gallons of untreated chromium-contaminated wastewater into Bat Cave Wash, an ephemeral stream that flows north from the facility across Havasu National Wildlife Refuge and BLM-managed land emptying into the Colorado River. From 1970 to 1989, PG&E disposed its wastewater into evaporation ponds on Havasu National Wildlife Refuge property adjacent to BLM-managed property.

B. Other Actions to Date

In 1988, PG&E completed a soil investigation in the Bat Cave Wash area at the request of the California Department of Health Services (now known as the Department of Toxic Substances Control ("DTSC")) and the U.S. Environmental Protection Agency ("EPA"). The soil investigation documented chromium releases to the environment. In 1989, a "Comprehensive Ground Water Monitoring Evaluation" prepared by the California Regional Water Quality Control Board identified chromium releases in groundwater.

By letter dated May 29, 1995, PG&E reported the presence of chromium in groundwater samples taken on the east side of Bat Cave Wash near the north boundary of the PG&E facility. In response, on February 26, 1996, DTSC and PG&E executed a Corrective Action Consent Agreement pursuant to State law under which DTSC directed PG&E to perform a "Facility Investigation" as well as any "Interim Measures" determined to be necessary to address immediate or potential threats to human health and/or the environment.

In the course of implementing groundwater monitoring required under the Corrective Action Consent Agreement, PG&E has documented an extensive plume of groundwater contaminated with hexavalent chromium that stretches from the PG&E facility under National Wildlife Refuge and BLM-managed property toward the Colorado River. On February 3, 2004, PG&E reported concentrations of hexavalent chromium of 111 parts per billion ("ppb") in groundwater taken

from monitoring well MW34-80. This monitoring well is located on BLM-managed property within 100 feet from the Colorado River.

Based on this finding, DTSC ordered PG&E to prepare and submit Interim Measures ("IM") Work Plan No. 2 "to immediately begin pumping, transport and disposal of groundwater from existing monitoring wells at the MW20 cluster." These monitoring wells located on or near the "MW20 bench" are on BLM-managed property. By Action Memorandum issued March 3, 2004, BLM authorized PG&E to conduct a time critical removal action, consistent with IM No. 2, to prevent or abate the release of hexavalent chromium into the Colorado River. The scope of this removal action was to extract contaminated groundwater from existing or, if necessary, new wells to reverse the groundwater gradient away from the Colorado River and maintain hydraulic control of the chromium-contaminated plume.

On May 20, 2004, BLM issued a second Action Memorandum authorizing PG&E to operate, for a limited period of time, a batch treatment system on the MW20 bench. The purpose of this time critical removal action was to reduce the volume of hazardous waste being shipped offsite by allowing treatment of contaminated groundwater onsite prior to offsite transport and disposal as non-hazardous waste.

III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT

As documented by recent groundwater sampling results, hexavalent chromium has been detected in significant concentrations in wells within 100 feet of the Colorado River. The proximity of the groundwater plume to the Colorado River constitutes an actual or potential threat to the environment.

To date, the rate of extraction of groundwater has succeeded in maintaining hydraulic control of the chromium plume. However, due to the influence of water levels in the Colorado River on groundwater gradient, increasing groundwater extraction rates is expected to be necessary to maintain hydraulic control of the chromium-contaminated plume. Specifically, during the period of lowest river levels from October 2004, through January 2005, extraction rates between 120-150 gallons per minute may be required to maintain such hydraulic control. Existing storage and treatment capacity on the MW20 bench is insufficient to satisfy these increased extraction rates.

Expansion of the existing facilities on the MW20 bench as the sole means of managing the maximum projected groundwater volume poses several concerns for public health and safety, and ease of implementation. Our review of the Potential Expansion of Facilities on the Monitoring Well 20 (MW20) Bench, submitted on September 17, 2004 shows that transporting the maximum projected volume of groundwater from the MW20 bench would require more than 40 trucks per day, increasing risks of transportation accidents and hazardous waste spills, adverse impacts on local roads and residents, and potential impacts on cultural and biological resources. Additional offsite treatment and disposal facilities that could accommodate the additional volume of hazardous waste on a 24 hours a day, seven days a week basis would be required. Such disposal facilities would be several hundred miles from the Topock site. For these reasons and others, expanding the MW20 bench facilities as the sole means of managing the volume of

extracted groundwater necessary to maintain hydraulic control of the chromium-contaminated plume is undesirable.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances through groundwater may continue to migrate toward the Colorado River and may reach the River if not addressed by implementing the time critical removal action described in this Action Memorandum. This time critical removal action is necessary to prevent or abate the release or substantial threat of release of hazardous substances into the Colorado River. Due to the proximity of the groundwater plume to the River, BLM determines, in accordance with Section 300.415(b)(2) of the National Oil and Hazardous Substances Contingency Plan ("National Contingency Plan" or "NCP"), 42 U.S.C. §300.415(b)(2), that a time critical response is necessary.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

As described specifically in the attached *Interim Measures No. 3 Work Plan, Revision 1* ("Work Plan"), which is incorporated herein, the proposed time critical removal action includes the following actions: (1) installation and utilization of piping from the MW20 bench to a proposed private treatment facility on Parcel 650-151-06; (2) installation and utilization of piping for conveyance of treated water from the proposed private treatment facility to proposed injection wells on Parcel 650-151-06; (3) any necessary improvements to existing access roads to install piping or remove waste materials from the proposed private treatment facility; (4) potential installation of monitoring wells to evaluate the effects on groundwater flow and chemistry due to injection of treated waste water; and (5) expansion of facilities on, and transportation from, the MW20 bench to accommodate, for a limited time period, the potential need to transport treated water and brine until more permanent disposal measures are in place. These activities, as identified in the attached Work Plan, are authorized by this Action Memorandum: provided, however, that prior to implementation all such activities are subject to BLM review and approval. Specifically, all such measures must comply with appropriate mitigation measures as identified by BLM in consultation with affected parties, to address impacts on cultural and biological resources and satisfy all applicable Federal requirements.

In particular, implementation of the activities identified in the Work Plan must comply with all mitigation measures identified in the *Cultural Resources Management Plan for the Topock Compressor Station Expanded Groundwater Extraction and Treatment System, San Bernardino County, California (September 2004)*, as specified by the Memorandum of Agreement executed on September 14, 2004, by BLM, and the California State Historic Preservation Officer regarding Interim Measures No. 3. Furthermore, implementation of the activities identified in the Work Plan must comply with all mitigation measures identified, and to be identified by BLM in the attached Lake Havasu Field Office Wildlife and Threatened or Endangered Species Stipulations, and in consultation with State agencies and the U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act, 16 U.S.C. §1536.

Because such actions will be financed by PG&E, BLM has not determined the estimated costs to implement this time critical removal action.

VI. EXPECTED CHANGE IN SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

In the event this time critical response action is delayed or not taken, hazardous substances may be released, or there is a substantial threat of such release, into the Colorado River.

VII. OUTSTANDING POLICY ISSUES

BLM is coordinating this time critical removal action with work required of PG&E pursuant to the Corrective Action Consent Agreement issued by DTSC. This coordination of BLM CERCLA authorities and State RCRA authorities is intended to facilitate and streamline PG&E's performance of work necessary to protect the Colorado River. BLM must ensure, however, that such work is performed in a manner consistent with CERCLA, the NCP, and other applicable Federal requirements. In the event that Federal requirements are not satisfied through this coordination effort, BLM may be required to initiate, or require PG&E to perform, activities independent of State law.

VIII. ENFORCEMENT

BLM and DOI have determined that PG&E is a responsible party pursuant to Section 107 of CERCLA, 42 U.S.C. §9607. As defined by CERCLA, PG&E is the owner and operator of the PG&E facility from which hexavalent chromium has been released into the environment. Hexavalent chromium is a hazardous substance under CERCLA.

By letter dated February 12, 2004, DOI has notified PG&E of its potential liability under CERCLA and has requested that PG&E enter into an administrative order on consent ("AOC") by which PG&E would perform future response action and agree to reimburse DOI, BLM, and other DOI bureaus for response costs incurred in overseeing PG&E's performance of response action on Federal property. In the event that DOI is unable to reach an agreement with PG&E over the terms of this AOC, DOI may decide to take response action unilaterally, may initiate enforcement action or take any other measures necessary to direct or require PG&E to perform response action, and seek to recover all response costs incurred from PG&E.

IX. ADDITIONAL MITIGATION MEASURES

Further review of the proposal revealed that the Mitigation Measures in Section 7.0 of Interim Measures No. 3 Work Plan, Revision 1 need further revision. The attachment entitled Mitigation Measures, Lake Havasu Field Office replaces Section 7.0 of the Interim Measures No. 3 Workplan, Revision 1, in its entirety.

X. RECOMMENDATION

This decision document identifies the current proposed time critical removal action to prevent or abate releases of hexavalent chromium from the PG&E facility from migrating to the Colorado River. BLM has determined that PG&E is capable of performing this removal action in a manner consistent with the NCP, contingent on PG&E's full compliance with the requirements of this Action Memorandum including the attached Work Plan. Conditions at the site meet the criteria for undertaking the proposed time critical removal action, as specified by Section 300.415 (b)(2) of the NCP, 40 CFR §300.415(b)(2). We recommend your approval of the proposed time critical removal action.

Patricia A. Taylor
Acting Field Manager

9-17-04
Date

I Concur:

Wayne King WAYNE King
Acting District Manager

9/17/2004
Date

Stanley J. Zielinski
Approval
State Director

9/17/04
Date

Disapproval
State Director

Date

Attachments:

- Interim Measures No. 3 Work Plan, Revision 1
- Memorandum of Agreement between BLM, Lake Havasu Field Office and California State Historic Preservation Officer
- Mitigation Measures, Lake Havasu Field Office
- Potential Expansion of Facilities on the Monitoring Well 20 (MW20) Bench

MITIGATION MEASURES

LAKE HAVASU FIELD OFFICE

1. All project activities shall be conducted in a manner that avoids take of a Federally listed species. Take is defined to include any harm or harassment, including significant habitat modification or degradation that could potentially kill or injure listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Should a listed species enter the project site or become harmed or killed by project activities, the project shall be shut down and the USFWS, BLM and CDFG shall be consulted. Impacts to habitat shall also be minimized to the maximum possible extent.
2. PG&E shall designate a field contact representative (FCR) who shall be responsible for overseeing compliance with the mitigation measures. The FCR must be onsite during all construction activities. The FCR shall have authority to halt all activities that are in violation of the mitigation measures and/or pose a danger to listed species. The FCR shall have a copy of all mitigation measures when work is being conducted on the site. The FCR may be a project manager, PG&E representative, or a biologist.
3. PG&E shall have a qualified biologist responsible for assisting crews in compliance with the mitigation measures, performing surveys in front of the crew as needed to locate and avoid listed species, and monitoring compliance. Preconstruction surveys by a biologist shall be implemented for special-status wildlife species in impact areas immediately prior to initiation of ground-disturbing activities. The inspection shall provide 100 percent coverage of the area within the project limits. All desert tortoise burrows and pallets outside of, but near, the project footprint shall be flagged at that time so that they may be avoided during work activities. At the conclusion of work activities, all flagging shall be removed.
4. Listed species including the desert tortoise shall not be handled or harassed. Encounters with a listed species shall be reported to the project biologist and BLM Lake Havasu (BLM) biologists. These biologists will maintain records of all listed species encountered during project activities. This information will include for each individual: the locations (narrative, vegetation type, and maps) and dates of observations; general conditions and health; any apparent injuries and state of healing; and diagnostic markings.
5. All PG&E employees and contractors involved with the proposed project shall be required to attend PG&E's threatened and endangered species education program prior to initiation of activities. New employees shall receive formal, approved training prior to working on-site.
6. To the maximum extent possible, facilities (treatment facility, pipelines, injection wells, and access routes) shall be sited within an existing right-of-way (ROW) and previously-disturbed or barren areas to limit new surface disturbance.
7. Existing routes of travel to and from the proposed project site shall be used. Cross-country use of vehicles and equipment shall be prohibited.
8. Trash and food items shall be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators such as common ravens (*Corvus corax*), coyotes (*Canis latrans*), and feral dogs.

9. To minimize effects, lights shall be angled toward the ground, reduced in intensity to levels compatible with safety concerns, and limited in duration of usage. The hue of lighting shall be that which is most compatible with and least disturbing to wildlife.
10. Employees shall not bring pets to the project site.
11. Firearms shall be prohibited from the project site, except as required for security employees.
12. Employees shall be required to check under their equipment or vehicle before it is moved. If a desert tortoise is encountered, the vehicle is not to be moved until the animal has voluntarily moved to a safe distance away from the parked vehicle.
13. Upon project completion, all unused material and equipment shall be removed from the site. This condition does not apply to fenced sites.
14. Palo verde, ocotillo, mesquite, cat-claw, smoke tree, and cacti species are considered sensitive by the BLM. To the extent practicable, these species shall be avoided. If avoidance is not possible, these species shall be transplanted when practical. Should any of the aforementioned plants be destroyed, they shall be replaced.
15. The area of disturbance shall be confined to the smallest practical area, considering topography, placement of facilities, location of burrows, nesting sites or dens, public health and safety, and other limiting factors. As needed, work area boundaries shall be delineated with flagging or other marking to minimize surface disturbance associated with vehicle straying.
16. All activities shall be restricted to a pre-determined corridor. If unforeseen circumstances require project expansion, the potential expanded work areas shall be surveyed for listed species prior to use of the area. All appropriate mitigation measures shall be implemented within the expanded work areas based on the judgment of the agencies and the project biologist. Work outside of the original ROW shall proceed only after receiving written approval from the BLM, Fish and Wildlife Service (Service) and CDFG describing the exact location of the expansion.
17. PG&E has the option of erecting desert tortoise fencing in lieu of inspection of open trenches. If the trench is short, personnel may monitor the trench. All open holes and trenches shall be inspected for trapped desert tortoises at the beginning, middle, and end of the work day, at a minimum. During excavation of trenches or holes, earthen ramps shall be provided to facilitate the escape of any wildlife species that may inadvertently become entrapped. If desert tortoises are trapped, the project biologist shall be notified immediately. The desert tortoise shall be allowed to escape before work continues in that location. A final inspection of the open trench segment shall also be made immediately before back filling. All open pipe segments shall be covered when work activity is not occurring at the site.
18. All construction vehicles and equipment shall be periodically checked to ensure proper working condition and to ensure that there is no potential for fugitive emissions of oil, hydraulic fluid or other hazardous products. The BLM shall be informed of any hazardous spills.

19. Workers shall exercise caution when traveling to and from the project area. To minimize the likelihood for vehicle strikes of listed species, speed limits when commuting to project areas on ROW roads shall not exceed 20 miles per hour.
20. Intentional killing or collection of either plant or wildlife at construction sites and surrounding areas shall be prohibited. The BLM shall be notified of any such occurrences.
21. For emergency situations involving a pipeline leak or spill or any other immediate safety hazard, PG&E shall notify the BLM within 48 hours. As a part of this emergency response, the BLM may require specific measures to protect listed species. During cleanup and repair, the agencies may also require measures to recover damaged habitats.
22. Once the treatment facility is no longer needed, PG&E shall restore disturbed areas in a manner that will assist in the re-establishment of biological values within the disturbed ROW. Methods of such restoration shall include the reduction of erosion, re-spreading of the top two inches of soil, planting with appropriate native shrubs, and scattering of bladed vegetation and rocks across the ROW, depending upon the appropriateness or effectiveness in a given area.
23. Within 60 days of completion of construction activities, the FCR and biologist shall prepare a brief report for the BLM documenting the effectiveness and practicality of the mitigation measures and making recommendations for modifying the measures to enhance species protection. The report will also provide information on survey and monitoring activities, observed listed species, and the actual acreage disturbed by the project.
24. Any future construction during the nesting season for migratory birds, generally February to August for most birds, will require preconstruction surveys for nesting pairs, nests, and eggs. These preconstruction surveys shall occur in areas proposed for any vegetation removal and active nesting areas flagged. If nesting birds are detected, vegetation removal will be avoided during the nesting season. All construction activity within 200 feet of active nesting areas will be prohibited until the nesting pair/young have vacated the nests.
25. All areas within the proposed action area, subject to operations and maintenance activities, and within the potential impact of the action shall be monitored semiannually during the active period for tortoise by a biologist knowledgeable of desert tortoise ecology. Surveys shall be completed throughout the duration of the action to verify the presence or absence of desert tortoise and reports shall be provided to the biologists in the BLM Lake Havasu Field Office on an annual basis.
26. Riparian areas surrounding the proposed action site and subject to influence of operations and maintenance activities shall be surveyed for southwestern willow flycatchers according to the protocol established by the Service. These surveys shall be completed each year by a biologist permitted by the Service to carry out flycatcher surveys until the action has been completed and all facilities have been removed. Reports shall be provided to the biologists in the BLM Lake Havasu Field Office on an annual basis.
27. Upon locating an individual of a dead or injured listed species, PG&E shall make initial notification to the BLM and US Fish and Wildlife Service (Service) within three working days of its finding. The notification must be made in writing to the Service's Division of Law Enforcement in Torrance (370 Amapola Avenue, Suite 114, Torrance, California 90501;

(310) 328-1516) and by telephone and writing to the Ventura Fish and Wildlife Office (2493 Portola Road, Suite B, Ventura, California 93003; (805) 644-1766). The report will include the date and time of the finding or incident (if known), location of the carcass, a photograph, cause of death (if known), and other pertinent information. Animals injured through PG&E activities shall be transported to a qualified veterinarian for treatment at the expense of PG&E. If an injured animal recovers, the CDFG and the BLM shall be contacted for final disposition of the animal.

28. PG&E will immediately notify the BLM Lake Havasu Field Manager (or his designated representative) of any cultural resources (prehistoric/historic sites or objects) and/or paleontological resources (fossils) encountered during permitted operations and will maintain the integrity of such resources pending subsequent investigation. All operations in the immediate area of the discovery must be suspended until written authorization from BLM to proceed is issued. An evaluation of the discovery shall be made by a qualified archaeologist or paleontologist to determine appropriate actions to prevent the loss of significant cultural or scientifically-important paleontological values.
29. No permanent improvements that affect the integrity of the bridge/culvert over Bat Cave Wash on historic Route 66 will be implemented.
30. Actions that result in impacts to archaeological or historical resources are subject to the provisions of the Archaeological Resources Protection Act of 1979, as amended, and the Federal Land Policy and Management Act of 1976.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

**MEMORANDUM OF AGREEMENT
BETWEEN
THE BUREAU OF LAND MANAGEMENT, LAKE HAVASU FIELD OFFICE
AND
THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING
THE PACIFIC GAS & ELECTRIC TOPOCK INTERIM MEASURES NO. 3,
EXPANDED GROUNDWATER EXTRACTION AND TREATMENT PROJECT
SAN BERNARDINO COUNTY, CALIFORNIA**

16 WHEREAS, Pacific Gas & Electric Company (PG&E) proposes to construct; operate and
17 maintain in the area depicted as the "Area of Potential Effects" (APE) in Figure 1 of Attachment
18 1 to this Memorandum of Agreement (MOA), an expanded groundwater extraction and treatment
19 system, called the Topock Interim Measures No. 3 Project (Project), in order to maintain
20 hydrologic control of an area in which groundwater has been contaminated by Chromium VI to
21 prevent Chromium-contaminated groundwater from impacting the Colorado River; and

22
23 WHEREAS, the U.S. Department of the Interior, Bureau of Land Management (BLM), Lake
24 Havasu Field Office, proposes to issue an Action Memorandum under the Comprehensive
25 Environmental Response, Compensation, and Liability Act (CERCLA) (Undertaking)
26 authorizing PG&E to conduct that portion of the Project located on public lands, and will act as
27 lead federal agency for all lands within the current and within any expanded APE of the
28 Undertaking and the Project, regardless of ownership, for purposes of complying with Section
29 106 of the National Historic Preservation Act, as amended (NHPA) (16 U.S.C. 470f), and its
30 implementing regulations codified at 36 CFR part 800; and

31
32 WHEREAS the BLM, in consultation with the California State Historic Preservation Office
33 (SHPO), has determined that construction, operation, maintenance, and subsequent dismantling
34 of the Project will have an adverse effect upon CA-SBr-2910H, a property determined eligible
35 for inclusion in the National Register of Historic Places (NR) and upon CA-SBr-219, a property
36 listed in the NR (historic properties), and notified the Advisory Council on Historic Preservation
37 (ACHP) of the adverse effect finding in accordance with 36 CFR part 800, regulations effective
38 January 11, 2001, implementing Section 106 of the NHPA; and

39
40 WHEREAS, PG&E will construct, operate, maintain, and ultimately dismantle the Project,
41 implement the *Cultural Resources Management Plan for the Topock Compressor Station*
42 *Expanded Groundwater Extraction and Treatment System, San Bernardino County, California*
43 (Applied Earthworks, September 2004) (CRMP) that is Attachment 1 to this MOA, has
44 participated in the consultation, and has been invited to concur in this MOA; and

1
2 WHEREAS, the BLM has consulted the Quechan Tribe-Fort Yuma, Ft. Mohave Indian Tribe,
3 Cocopah Indian Tribe, Chemehuevi Indian Tribe, Havasupai Tribe, Hualapai Tribe, Yavapai-
4 Prescott Indian Tribe, Twenty-Nine Palms Band of Mission Indians and Colorado River Indian
5 Tribes (Tribes) regarding the Project and the Undertaking and their effect on historic properties,
6 and will continue to consult with the Tribes throughout the implementation of this MOA and the
7 CRMP;

8
9 NOW, THEREFORE, the BLM and the SHPO agree that the Project and the Undertaking shall
10 be implemented in accordance with the following stipulations in order to take into account the
11 effects of the Project and the Undertaking on historic properties, and further agree that these
12 stipulations shall govern the Project and the Undertaking and all of their parts until this MOA
13 expires or is terminated.

14 Stipulations

15
16 The BLM shall ensure that the following measures are carried out:

17 I. MANAGEMENT OF HISTORIC PROPERTIES AND CULTURAL RESOURCES

- 18
19
20
21
22 A. The BLM shall ensure that known historic properties and other cultural resources, whether
23 known or unknown that may be subsequently identified, within the current APE and within
24 any expanded APE, are managed in accordance with the CRMP. Unsurveyed portions of the
25 current APE and any expanded APE shall be surveyed and inventoried as prescribed in the
26 CRMP.
27
28 B. Notwithstanding the current provisions of section 1.3, page 4, of the CRMP, the parties to
29 this MOA agree that copies of survey and evaluation reports and of annual reports will
30 routinely be submitted to the SHPO.
31
32 C. The parties to this MOA agree that the effects and any prospective effects of the Project and
33 of the Undertaking on historic properties and cultural resources subject to this MOA shall be
34 resolved by satisfactory implementation and completion of the measures prescribed in the
35 CRMP or in any amendments thereto agreed upon pursuant to stipulation II.C.2., below.

36 II. ADMINISTRATIVE PROVISIONS

- 37
38
39 A. **Confidentiality.** The parties to this MOA acknowledge that historic properties and cultural
40 resources covered by this MOA are subject to the provision of § 304 of the National Historic
41 Preservation Act of 1966 and § 6254.10 of the California Government Code (Public Records
42 Act), relating to the disclosure of archaeological site information and, having so
43 acknowledged, will ensure that all actions and documentation prescribed by this MOA are
44 consistent with § 304 of the NHPA and § 6254.10 of the California Government Code.

1
2 **B. Resolving Objections.**
3

4 1. Should any party to this MOA object to the manner in which the terms of this MOA are
5 implemented, to any action carried out or proposed with respect to implementation of the MOA
6 (other than the Project and the Undertaking itself) or to any documentation prepared in
7 accordance with and subject to the terms of this MOA, the BLM shall immediately notify the
8 other parties to this MOA of the objection and consult with the objecting party and the other
9 parties to this MOA for no more than fourteen (14) days to resolve the objection. The BLM shall
10 reasonably determine when this consultation will commence. If the objection is resolved through
11 such consultation, the action in dispute may proceed in accordance with the terms of that
12 resolution. If, after initiating such consultation, the BLM determines that the objection cannot be
13 resolved through consultation, the BLM shall forward all documentation relevant to the objection
14 to the ACHP, including the BLM's proposed response to the objection, with the expectation that
15 the ACHP will within thirty (30) days after receipt of such documentation:
16

- 17 a. advise the BLM that the ACHP concurs in the BLM's proposed response to the
18 objection, whereupon the BLM will respond to the objection accordingly; or
19
20 b. provide the BLM with recommendations, which the BLM will take into account in
21 reaching a final decision regarding its response to the objection; or
22
23 c. notify the BLM that the objection will be referred for comment pursuant to 36 CFR §
24 800.7(c), and proceed to refer the objection and comment. The BLM shall take the
25 resulting comment into account in accordance with 36 CFR § 800.7(c)(4) and Section
26 110(1) of the NHPA.
27

- 28 2. Should the ACHP not exercise one of the above options within thirty (30) days after receipt of
29 all pertinent documentation, the BLM may assume the ACHP's concurrence in its proposed
30 response to the objection.
31
32 3. The BLM shall take into account any ACHP recommendation or comment provided in
33 accordance with this stipulation with reference only to the subject of the objection. The
34 BLM's responsibility to carry out all actions under this MOA that are not the subjects of the
35 objection will remain unchanged.
36
37 4. At any time during implementation of the measures stipulated in this MOA, should an
38 objection pertaining to such implementation be raised by a Tribe, the BLM shall notify the
39 other parties to the MOA in writing of the objection and take the objection into consideration.
40 The BLM shall consult with the objecting party and, if the objecting party so requests, with
41 the other parties to this MOA for no more than fifteen (15) days. Within ten (10) days
42 following closure of this consultation period, the BLM will render a decision regarding the
43 objection and notify all consulting parties hereunder of its decision in writing. In reaching its
44 decision, the BLM will take into account any comments from the consulting parties and the

1 objecting party regarding the objection. The BLM's decision regarding the resolution of the
2 objection will be final.

3
4 5. The BLM shall provide all parties to this MOA, and the ACHP when ACHP comments have
5 been issued hereunder, and any parties that have objected pursuant to paragraph 4. of section
6 B. of this stipulation, with a copy of its final written decision regarding any objection
7 addressed pursuant to this stipulation.

8
9 6. The BLM may authorize any action subject to objection under this stipulation to proceed after
10 the objection has been resolved in accordance with the terms of this stipulation.

11
12 7. Notwithstanding any provision of stipulation II.B., the Project and the Undertaking may
13 proceed without interruption during the resolution of any objections under this MOA.
14 Following resolution of any objection, the BLM shall ensure that measures required by such
15 resolution are carried out.

16
17 **C. Amendments.**

18
19 1. Any party to this MOA may propose that this MOA be amended, whereupon the parties to
20 this MOA will consult for no more than fifteen (15) days to consider such amendment. The
21 amendment process shall comply with 36 CFR §§ 800.6(c)(1) and 800.6(c)(7). This MOA
22 may be amended only upon the written agreement of the signatory parties. If it is not
23 amended, this MOA may be terminated by either signatory party in accordance with
24 Stipulation II.D., below.

25
26 2. Attachment 1 (CRMP, including Appendices) to this MOA may be amended through
27 consultation among the parties to this MOA without amending the MOA proper.

28
29 **D. Termination.**

30
31 1. If this MOA is not amended as provided for in section C.1. of this stipulation, or if either
32 signatory party proposes termination of this MOA for other reasons, the signatory party
33 proposing termination shall, in writing, notify the other parties to this MOA, explain the
34 reasons for proposing termination, and consult with the other parties for at least thirty (30)
35 days to seek alternatives to termination. Such consultation shall not be required if the BLM
36 proposes termination because the Undertaking no longer meets the definition set forth in 36
37 CFR § 800.16(y).

38
39 2. Should such consultation result in an agreement on an alternative to termination, then the
40 consulting parties hereunder shall proceed in accordance with the terms of that agreement.

41
42 3. Should such consultation fail, the signatory party proposing termination may terminate this
43 MOA by promptly notifying the other parties to this MOA in writing. Termination hereunder
44 shall render this MOA without further force or effect.

1
2 4. If this MOA is terminated hereunder and if the BLM determines that the Undertaking and the
3 Project authorized by the Undertaking will nonetheless proceed, then the BLM shall either
4 consult in accordance with 36 CFR § 800.6 to develop a new MOA or request the comments
5 of the ACHP pursuant to 36 CFR Part 800.
6

7 **E. Duration of the MOA.**
8

- 9 1. Unless terminated pursuant to section D. of this stipulation, or unless it is superseded by an
10 amended MOA, this MOA will be in effect following execution by the signatory parties until
11 the BLM, in consultation with the other parties to this MOA, determines that all of its
12 stipulations have been satisfactorily fulfilled. Upon a determination by the BLM that all of
13 the terms of this MOA have been satisfactorily fulfilled, this MOA will terminate and have no
14 further force or effect. The BLM will promptly provide the other parties to the MOA with
15 written notice of its determination and of the termination of this MOA. Following provision
16 of such notice, this MOA will have no further force or effect.
17
- 18 2. The terms of this MOA shall be satisfactorily fulfilled within ten (10) years following the date
19 of execution by the SHPO. If the BLM determines that this requirement cannot be met, the
20 parties to this MOA will consult to reconsider its terms. Reconsideration may include
21 continuation of the MOA as originally executed, amendment, or termination. In the event of
22 termination, the BLM will comply with section D.4 of this stipulation if it determines that the
23 Undertaking and the Project authorized by the Undertaking will proceed notwithstanding
24 termination of this MOA.
25
- 26 3. If the Undertaking has not been implemented within ten (10) years following execution of this
27 MOA by the SHPO, this MOA shall automatically terminate and have no further force or
28 effect. In such event, the BLM shall notify the other parties to this MOA in writing and, if it
29 chooses to continue with the Undertaking and the Project authorized by the Undertaking, shall
30 reinitiate review of the Undertaking and the Project in accordance with 36 CFR Part 800.
31

32 **F. Effective Date of this MOA.** This MOA will take effect on the date that it has been
33 executed by the BLM and the SHPO.
34

35 **EXECUTION** of this MOA by the BLM and the SHPO, its transmittal by the BLM to the
36 ACHP in accordance with 36 CFR § 800.6(b)(1)(iv), and subsequent implementation of its
37 terms, shall evidence, pursuant to 36 CFR § 800.6(c), that this MOA is an agreement with the
38 ACHP for purposes of Section 110(1) of the NHPA, and shall further evidence that the BLM has
39 afforded the ACHP an opportunity to comment on the Undertaking and the Project and their
40 effects on historic properties, and that the BLM has taken into account the effects of the
41 Undertaking and the Project on historic properties.
42
43
44

RECEIVED LAKE
HAVASU FIELD OFFICE

2004 SEP 16 A 11: 22

LAKE HAVASU CITY, AZ

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33

SIGNATORY PARTIES:

BUREAU OF LAND MANAGEMENT,
LAKE HAVASU FIELD OFFICE

By: Patricia Taylor Date: 9-14-04

Title: Acting Field Manager
CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By: Wayne O'Neil Date: 14 SEP 2004

Title: State Historic Preservation Officer

CONCURRING PARTY:

PACIFIC GAS & ELECTRIC COMPANY

By: Robert C. Doss Date: SEPT. 14, 2004

Title: PRINCIPAL ENGINEER, ENVIRONMENTAL AFFAIRS