
Renewal of Waste Discharge Requirements for Injection of Treated Groundwater

Initial Study and Proposed Negative Declaration

**Colorado River Basin
Regional Water Quality Control Board**

August 2006

PROPOSED NEGATIVE DECLARATION

Name of Project: Renewal of Waste Discharge Requirements (WDRs) for Injection of Treated Groundwater

Lead Agency: Colorado River Basin Regional Water Quality Control Board (RWQCB), 73-720 Fred Waring Drive, Suite 100, Palm Desert, California 92260

Project Proponent: Pacific Gas and Electric (PG&E), P.O. Box 7442, San Francisco, California 94120

Project Location: The project is located in southeastern San Bernardino County approximately 15 miles southeast of Needles, California, near the PG&E Topock Compressor Station (see Figures 1 and 2).

Project Description: PG&E is conducting investigative and remedial activities at the Topock Compressor Station under the oversight of the California Environmental Protection Agency, Department of Toxic Substances Control, as well as the U. S. Department of the Interior, U.S. Bureau of Land Management, U.S. Fish and Wildlife Service, and U.S. Bureau of Reclamation. On-going remedial activities include Interim Measures (IM) No. 3, which involves the extraction, treatment, and management of groundwater with the objective of maintaining hydraulic control of a chromium plume in groundwater. Associated IM No. 3 facilities include groundwater extraction wells, a water treatment system, conveyance piping, injection wells, and monitoring well facilities (see Figure 3).

On-going operation of the IM No. 3 system since July 2005 includes the injection of treated water into injection well fields in accordance with the Waste Discharge Requirements (WDRs) issued by the Colorado River Basin Regional Water Quality Control Board (Regional Board). The WDRs were authorized by the Regional Board on October 13, 2004, and expire on January 31, 2007. Renewal of the permit would allow PG&E to continue to inject treated water. No additional facilities would be constructed or expanded as a result of renewal of the WDRs, and no change to existing operations is anticipated.

Finding: The Regional Board has prepared an Initial Study of the project described above and determined that the proposed renewal of the WDRs could not have a significant effect on the environment. A copy of the Initial Study that supports this finding is attached.

Mitigation Measures: Based on the conclusions provided in the attached Initial Study, the project could not have a significant effect on the environment. Therefore, no mitigation measures are required.

Signature

Date

CEQA Initial Study

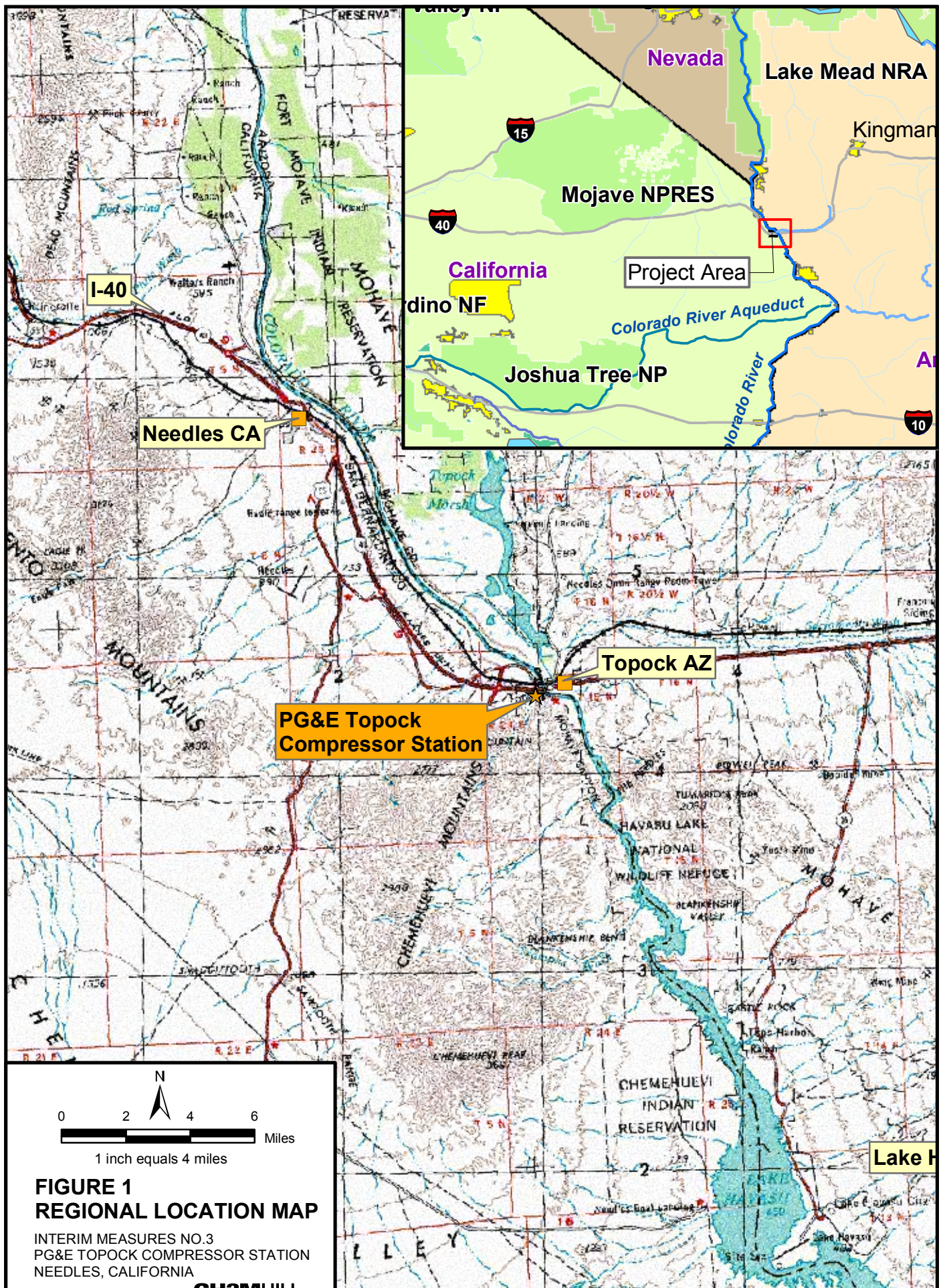
Environmental Checklist Form

1. **Project title:**
Renewal of Waste Discharge Requirements (WDRs) for injection of treated groundwater
2. **Lead agency name and address:**
Colorado River Basin Regional Water Quality Control Board
73-720 Fred Waring Drive, Suite 100
Palm Desert, CA 92260
3. **Contact person and phone number:**
Robert Perdue; (760) 776-8938
4. **Project location:**

The project is located in southeastern San Bernardino County approximately 15 miles southeast of Needles, California near the Pacific Gas and Electric (PG&E) Topock Compressor Station (Figure 1). Associated facilities occupy approximately 4 acres and extend over an area generally bounded by the Colorado River in the east, National Trails Highway in the north, the Burlington Northern-Santa Fe (BNSF) Railway in the south and open space to the west (Figure 2). The majority of the associated facilities are sited within a 100-acre parcel owned by PG&E; the remainder of the nearby area is owned and/or managed by the United States Bureau of Land Management (BLM).

As shown on Figure 2, regional access to the project is provided by Interstate 40. Access is available from a western access road located several hundred feet north of Interstate 40 along Park Moabi Road. Alternate access is available by continuing north on Park Moabi Road, east on National Trails Highway and south on National Trails Highway to the eastern access road.

Directly north of the National Trails Highway, at the underpass of the BNSF Railway, is an approximately 1-acre "bench" located above the Colorado River floodplain. This area is referred to as the MW-20 bench. Some associated facilities are sited on the MW-20 bench, including related trucking operations.
5. **Project sponsor's name and address:**
Pacific Gas and Electric Company
P.O. Box 7442
San Francisco, CA 94120
Contact: Barbara Benson; (415) 973-6634



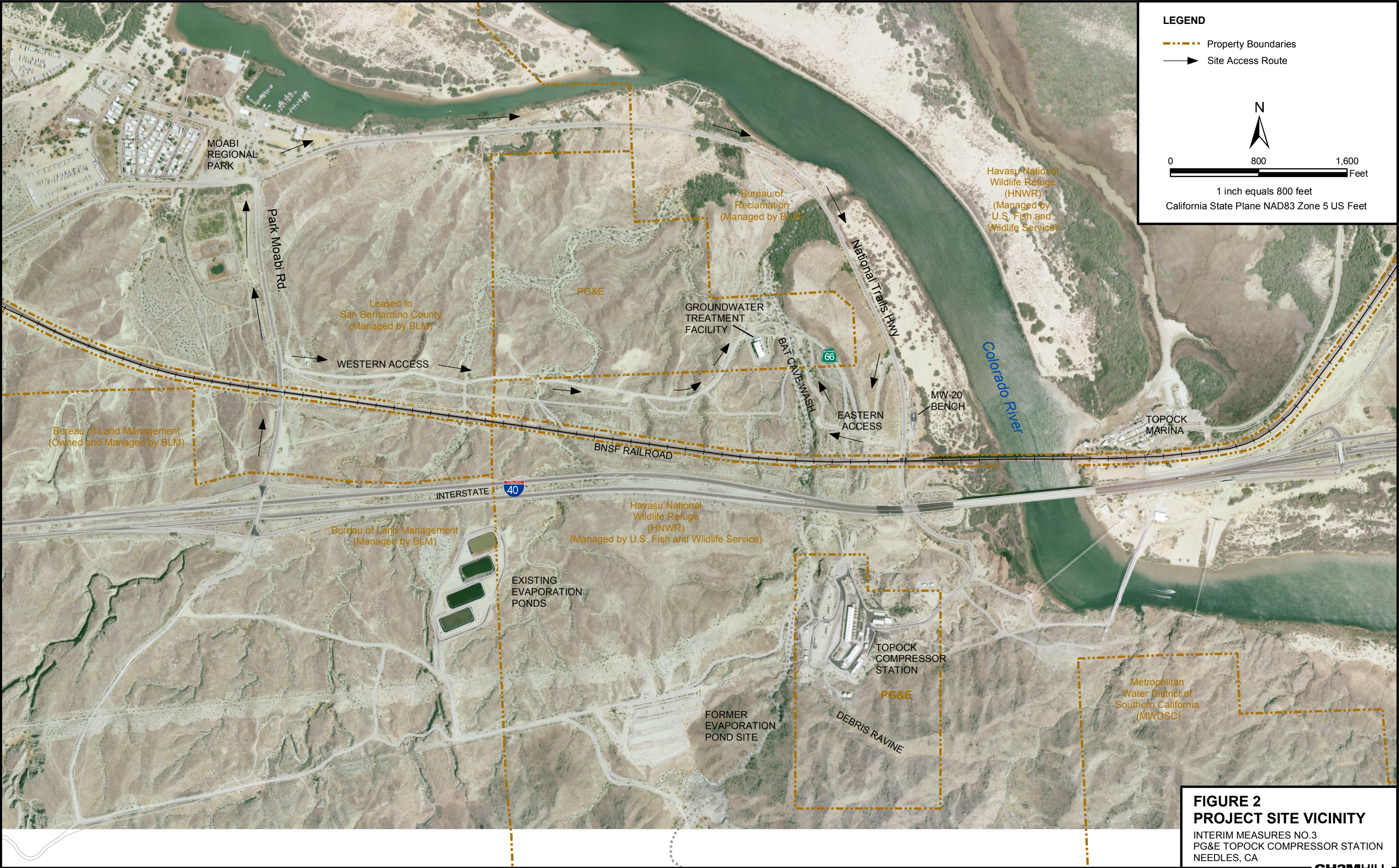


FIGURE 2
PROJECT SITE VICINITY
INTERIM MEASURES NO.3
PG&E TOPOCK COMPRESSOR STATION
NEEDLES, CA

6. **General plan designation:** Resource Conservation (RC)¹
7. **Zoning:** RC
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.)**

Background

PG&E is conducting investigative and remedial activities at the Topock Compressor Station under the oversight of the California Environmental Protection Agency, Department of Toxic Substances Control (DTSC), the United States Department of the Interior, BLM, United States Fish and Wildlife Service, and United States Bureau of Reclamation. These activities relate to historic operations of the Topock Compressor Station that involved the former use of hexavalent chromium in the compressor station cooling water. Subsequent discharge of the cooling water into Bat Cave Wash resulted in the hexavalent chromium [Cr(VI)] entering the groundwater aquifer.

Ongoing remedial activities include Interim Measures (IM) No. 3, titled "Emergency Groundwater Extraction and Management" (IM No. 3), which provides for the extraction and treatment of groundwater with the objective of managing the chromium plume by maintaining hydraulic control through the selected placement and use of several extraction wells. IM No. 3 facilities include groundwater extraction wells, conveyance piping, treatment facilities, injection wells, and monitoring facilities (Figure 3). Construction of IM No. 3 facilities commenced on September 27, 2004. The facilities became operational on July 31, 2005. Ongoing operation of the IM No. 3 system involves the continued extraction of groundwater via the extraction wells, conveyance of the extracted groundwater through the piping system to the IM No. 3 treatment plant, treatment at the plant to remove chromium and total dissolved solids (TDS), and subsequent injection of the treated water back into the groundwater aquifer.

Prior to construction and operation of the IM No. 3 facilities, DTSC, acting as Lead Agency under the California Environmental Quality Act (CEQA) (California Public Resources Code Section 21000 et seq.), was required to determine whether the proposed facilities were subject to environmental review under CEQA. DTSC determined that the IM No. 3 facilities were statutorily exempt from CEQA, concluding that the facilities fell within the statutory exemption for specific actions necessary to prevent or mitigate an emergency. (See California Public Resources Code Section 21080(b)(4); CEQA Guidelines, California Code of Regulations, Title 14, Section 15269(c).) Accordingly,

¹ The RC designation is applied to project lands under the jurisdiction of the County of San Bernardino and allows for the cultivation of crops, farm-related activities, and additional land uses that include hazardous waste operations. Portions of the IM No. 3 site fall under federal jurisdiction and are not subject to general plan policies or the zoning ordinance of the County of San Bernardino.



DTSC filed a Notice of Exemption with the State Clearinghouse on July 1, 2004,² which explained the basis for its determination that the proposed construction and operation of the IM No.3 facilities were exempt from CEQA.

Because portions of the IM No. 3 facilities are located on lands managed by the BLM, project implementation required approval from that federal agency. BLM gave its approval in an Action Memorandum, dated September 17, 2004, which it issued pursuant to its authority under Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 U.S.C. Section 9601 et seq.). The Action Memorandum required PG&E to implement several mitigation measures to mitigate the potential environmental impacts associated with the construction and operation of the proposed IM No. 3 facilities. The DTSC Notice of Exemption and BLM Action Memorandum are provided in Attachment A.

In addition to the BLM and DTSC approvals required, the injection of the treated groundwater from the IM No. 3 facilities also required the approval of the Colorado River Basin Regional Water Quality Control Board (Regional Board). The Regional Board provided that approval by adopting Waste Discharge Requirements Order No. R7-2004-0103 at its regularly-scheduled meeting held on October 13, 2004. The WDRs authorize and regulate treated water injection from the IM No. 3 facilities.

Prior to adopting the WDRs, however, the Regional Board was also required, as a Responsible Agency under CEQA, to independently review DTSC's Notice of Exemption and the basis for the emergency determination made by that agency. Following its review, the Regional Board concurred with DTSC's determination, explaining in the WDRs that "an emergency condition exists because the flow of groundwater to the Colorado River has not yet been contained," and "[i]t is necessary and desirable to have in place alternative disposal options to accommodate increased extraction and treatment rates (resulting in the need for increased disposal capacity) that may be required to contain the groundwater flow to the river" (WDRs, Finding No. 37). The Regional Board added that "[w]hile the duration of the Interim Measures has not been determined, it is appropriate to limit the term of this Order [to January 31, 2007], by which time it is reasonable to conclude that DTSC will have undertaken an environmental analysis of all disposal alternatives." (*Ibid.*)

² In the Notice of Exemption, DTSC explained the basis of the emergency, stating that "[t]hese 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."

Subsequent injection of treated water from IM No. 3 has occurred in accordance with the WDRs with no reported violations. Because the WDRs expire on January 31, 2007, PG&E submitted a Report of Waste Discharge to the Regional Board, dated June 8, 2006, to renew the WDRs. The proposed WDRs would allow for the continued injection of treated water from the IM No. 3 treatment facilities.

In accordance with CEQA and implementing CEQA Guidelines, this Initial Study evaluates whether the proposed renewal of the WDRs, which would allow PG&E to continue to inject treated groundwater into the same injection well system (the project) at the same rate and with the same effluent limitations, may have a significant effect on the environment. As discussed further below, the results of the Initial Study will help the Regional Board, as Lead Agency for the project, to determine whether an Environmental Impact Report (EIR) or a Negative Declaration should be prepared. Although the project appears to qualify for four exemptions under CEQA and thus, be exempt from further CEQA review, the Regional Board has decided to prepare this Initial Study to ensure that any potentially significant environmental impacts associated with renewal of these WDRs are identified and considered.³

Associated Facilities

The IM No. 3 facilities include extraction wells, injection wells, monitoring wells, a water treatment plant, and several thousand feet of aboveground and subsurface pipelines. The IM No. 3 facilities are depicted on Figure 3. Construction of the IM No. 3 system was completed in July 2005. No additional facilities would be constructed or expanded as a result of renewal of the WDRs.

IM No. 3 extraction well facilities include TW-3D on the MW-20 bench and PE-1 on the Colorado River floodplain. Extraction wells TW-2D and TW-2S are also located on the MW-20 bench and are available as supplemental or alternative extraction wells.

Extracted water is conveyed via double-walled influent piping installed subsurface. Beginning at the PE-1 extraction well, influent piping extends below ground surface for approximately 500 feet across the Colorado River floodplain to the MW-20 bench. At the

³ The four CEQA exemptions that appear to apply are described in the following CEQA Guidelines sections: (1) Section 15061(b)(3) (a proposed action is exempt from CEQA if “it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment”); (2) Section 15301 (the operation, repair, maintenance, permitting, or minor alteration of existing facilities involving negligible or no expansion of use beyond that existing); (3) Section 15307 (actions by regulatory agencies for protection of natural resources); and (4) Section 15308 (actions by regulatory agencies for protection of the environment). In addition to providing the factual basis for the proposed adoption of a negative declaration, this Initial Study also provides the factual basis for determining that the project is exempt from CEQA pursuant to these four exemptions and that the exceptions to these exemptions, set forth in CEQA Guidelines Section 15300.2, do not apply. As mentioned, even though these exemptions appear to apply, the Regional Board has nevertheless decided to prepare this Initial Study to ensure that any potentially significant environmental impacts associated with the WDR renewal are identified and considered.

MW-20 bench, the influent pipeline interconnects with the TW-3D extraction well piping and continues for approximately 3,000 feet to the IM No. 3 water treatment plant. As shown on Figure 3, the influent piping between the MW-20 bench and treatment plant generally follows existing access roads, extending north within the National Trails Highway alignment and up to the treatment plant within the unnamed eastern access road.

The IM No. 3 water treatment facilities occupy approximately 1 acre. Treated water is conveyed via an approximately 1,900-foot effluent pipeline extending west from the treatment plant along the shoulder of the eastern access road and extending north to the East Mesa injection well field. The East Mesa includes injection wells IW-2 and IW-3 and observation wells installed to monitor changes in water levels and water quality during operation of the injection wells. Four compliance monitoring well clusters (CW-1 through CW-4) generally surround the injection well field, as shown on Figure 3.

Access to the IM No. 3 treatment plant is provided by roads extending from the east and west off Park Moabi Road and National Trails Highway (Figure 2). These access roads have been improved to facilitate safe transportation to the treatment plant and to protect key cultural resources. To protect the historic roadway structure of former Route 66, which provides western access to the IM No. 3 treatment facilities, a protective fabric and approximately 5 inches of road base were placed on the roadway between Park Moabi Road to the west and the IM No. 3 treatment plant to the east. To minimize potential effects on cultural resources, including historic Route 66, ongoing project operations discussed below are subject to the *Cultural Resources Management Plan for the Topock Compressor Station Expanded Groundwater Extraction and Treatment System* (Applied Earthworks 2004), as well as the *Transportation Management Plan For Cultural Resources Protection for Interim Measures No. 3* (CH2M HILL 2004a).

Existing Operations

Operation of IM No. 3 commenced in July 2005. Up to 135 gallons per minute of groundwater are currently extracted and conveyed to the water treatment facility. Periodically, small volumes of purge water from groundwater well installation and monitoring activities are also treated within the IM No. 3 treatment system. The treatment system reduces hexavalent chromium to the less-soluble trivalent form [Cr(III)] by chemical reaction with ferrous chloride. Iron and Cr(III) solids are formed by precipitating the solution with sodium hydroxide and air. The majority of the precipitated solids are removed by gravity separation in a clarifier. Clarified water is passed through a microfilter to remove additional solids. TDS in the groundwater are reduced using reverse osmosis.

Treated water is conveyed along approximately 1,900 feet of pipeline to the East Mesa injection well field. Treatment residuals include brine (water with elevated TDS) and precipitated solids (sludge). The brine is conveyed via pipeline from the treatment plant to the MW-20 bench along the same alignment as the influent pipeline. Approximately

26 truckloads per week of brine waste are transported via tanker truck from the MW-20 bench to an appropriate permitted offsite disposal facility. The disposal facility currently in use is located in Los Angeles. Sludge is hauled directly from the treatment plant approximately twice per month to an appropriate permitted solid waste facility.

Ongoing IM No. 3 operations require one to two staff to manage and monitor IM No. 3 functions 24 hours per day, primarily at the IM No. 3 treatment plant. Operations personnel drive to the injection well area and the extraction well locations several times each day to monitor the condition of the wells and conveyance piping and to conduct any necessary maintenance activities on equipment. In addition to the operations staff, a security company employed by PG&E provides 24-hour-a-day patrol. IM No. 3 operations also involve supplemental staff conducting regular sampling and data collection at the observation and compliance monitoring wells.

Periodic maintenance activities include routine repairs, well maintenance, waste removal, and deliveries of supplies and treatment compounds. Delivery of supplies and materials occurs several times per week. Typical repair activities include recent repairs to the IM No. 3 access road, which involved installing culverts sized to convey stormwater below the roadway, and adding fill material to repair eroded sections.

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

The project lies within an area of significant cultural and sacred tribal resources. Portions of the Topock Maze are located nearby. The maze is a geoglyph (ground marking) and is of extreme importance to the local Native American community. The project is within the traditional territory of the Aha Makav or Fort Mojave Indian Tribe. While the material remains of the past are important to these tribes, this area of traditional and spiritual use knows no boundaries for the Fort Mojave Indian Tribe.

The project is located within the Mojave Desert ecological and geographic province. The area is characterized by arid conditions with precipitation averaging less than 5 inches per year and high temperatures typical to the Mojave Desert. The landscape within the project area is considerably eroded by natural processes, which include wind and water erosion. The resulting landforms are characterized in part by alluvial terraces and incised drainage channels. One of the largest incised channels is Bat Cave Wash, which runs from the Chemehuevi Mountains in the south toward the Colorado River in the north. Terraces occurring onsite are homogeneous and comprise rocky soils with very sparse vegetation. Elevations in the project area range from about 550 feet above mean sea level (msl) at the compressor station to 450 feet above msl at the Colorado River floodplain.

Land uses near the project are predominantly open space, interspersed with industrial facilities, recreational uses, and transportation infrastructure. Open space at and nearby the project area is characterized primarily by desert vegetation, but also includes Bat Cave Wash and several unnamed washes that flow north across the project area to the confluence of the Colorado River. Open space on the Colorado River floodplain is

characterized by shifting sand dunes and associated riparian vegetation, primarily non-native tamarisk (salt cedar).

Developed land uses near the project include the existing IM No. 3 facilities, National Trails Highway, former Route 66, and various unnamed access roads. In addition, numerous groundwater well clusters are located throughout the area, related to the ongoing groundwater investigation activities. A major gas utility and transportation corridor is located directly south of the project. This corridor is developed with gas transmission pipelines, the BNSF Railway, and Interstate 40.

Directly south of the BNSF Railway is the United States Fish and Wildlife Service's Havasu National Wildlife Refuge (HNWR). The 37,515-acre HNWR extends for approximately 26 miles along the Colorado River, from Needles, California, to Lake Havasu City, Arizona. Further south of the railway is the Topock Compressor Station, located on an approximately 65-acre parcel owned by PG&E. Remaining lands surrounding the project include primarily open space owned or managed by the BLM. This includes the Moabi Regional Park located northwest of the project, which is leased by BLM to the County of San Bernardino. East of the project across the Colorado River is the Topock Marina and related water and recreational infrastructure.

The local geology consists of recent and older river deposits progressing westward to older alluvial deposits associated with the local mountains. Sand, gravel, and cobblestone dominate these deposits, comprising the principal groundwater aquifer at the site. Surface water drainage at the project site flows to Bat Cave Wash and a large unnamed desert wash to the west. These ephemeral desert washes are dry most of the year, but during heavy precipitation events the washes can have surface flow.

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

Beyond renewal of the WDRs by the Regional Board, no other approvals are required to continue the injection of treated water from the IM No. 3 water treatment system. Prior approvals obtained from the DTSC, BLM, and County of San Bernardino remain in effect. IM No. 3 implementation was also subject to various ministerial approvals, including issuance of the Authority to Construct and Permit to Operate by the Mojave Desert Air Quality Management District (MDAQMD).

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

EVALUATION OF ENVIRONMENTAL IMPACTS:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The visual environment of the project area is characterized primarily by open space over topographically varied terrain, interspersed with industrial facilities and transportation infrastructure. Elevations at the site range from approximately 450 msl at the Colorado River to just over 550 feet msl at the Topock Compressor Station; the Chemehuevi Mountains rise abruptly south of the project area. The overall landscape within the study area is considerably eroded, as characterized by the terraces and incised drainage channels throughout the project area. The terraces are comprised of rocky soils with very sparse vegetation. The largest incised channel is Bat Cave Wash, which runs from the Chemehuevi Mountains in the south toward the Colorado River in the north.

Prominent visual features near the project and vicinity include the Colorado River and adjacent floodplain, which traverse the northern and eastern portions of the site. The IM No. 3 water treatment plant occupies approximately 1 acre and is located directly west of Bat Cave Wash. The Interstate 40 and the BNSF Railway corridors traverse the southern portion of the area in an east-west fashion. The paved two-lane Park Moabi Road and National Trails Highway extend across the northern and eastern portion of the area. Several unpaved roadways also traverse the area. Various groundwater wells have been installed throughout the area. The groundwater wells are not visually prominent; many are flush-mounted to the ground and not visible from a distance.

South of the project are industrial facilities associated with the Topock Compressor Station. Other prominent visual features in the project vicinity include development at Moabi Regional Park northwest of the project, the four lined evaporation ponds associated with the Topock Compressor Station southwest of the project, and the Topock Marina across the Colorado River east of the project.

Impacts

Renewal of the existing WDRs would allow for the continued injection of water treated by the IM No. 3 water treatment plant. No additional facilities are proposed, and no change to the existing visual environment would result from renewal of the WDRs. No aesthetic impacts would result from ongoing operations.

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-agricultural use?

Potentially
Significant
Impact

Less Than
Significant with
Mitigation
Incorporation

Less Than
Significant
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No
Impact

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b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

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c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

☐
☐
☐
☒

Setting

The project area is comprised primarily of open space, along with a mix of recreational and industrial land uses, including the existing IM No. 3 facilities. No agricultural lands or activities occur at the project area. Based on information provided by the County of San Bernardino planning staff (S. Hall 2004), the project is not located within an area of prime, unique, or important farmland.

Impacts

No agricultural resources occur at the project site or nearby vicinity. No impact will result.

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:	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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The project area is characterized by arid conditions and high temperature. Precipitation averages less than 5 inches per year at the project site and mainly comes during winter months, and occasionally during the summer. The California Air Resources Board regulates air quality in California and has divided the state into air basins according to topographic and air-related characteristics. Each District is responsible for regulating stationary sources of air pollution and the implementation of air quality programs per state and federal mandates. The project area falls within the jurisdiction of Mojave Desert Air Quality Management District (MDAQMD). Prior to construction of the IM No. 3 facilities, the MDAQMD issued the Authority to Construct and Permit to Operate the IM No. 3 facilities. In addition, the onsite portable generator used for backup electrical power was registered with the California Air Resources Board under the portable equipment registration program.

The project is located in an area designated as non-attainment for ozone and particulate matter less than 10 microns (PM_{10}). The project falls within a federal non-attainment area for both PM_{10} and ozone (1-hour and 8-hour standards). In addition, the project is located in a State of California non-attainment area for both PM_{10} and ozone. No sensitive receptors (e.g., hospital, school, etc.) are located at the project site or nearby vicinity.

The MDAQMD has prepared the *Federal Particulate Matter (PM_{10}) Attainment Plan* to address the United States Environmental Protection Agency (USEPA) moderate non-attainment classification for PM_{10} . However, the project is not located within the planning area; therefore, project activities are not subject to the PM_{10} attainment plan. Activities at the project site are typically implemented in accordance with MDAQMD Rule 403, which provides reasonable precautions to minimize fugitive dust emissions. Operations at the project area include the watering of access roads several times per week to minimize dust and PM_{10} emissions resulting from vehicle traffic.

MDAQMD has also adopted the *2004 Ozone Attainment Plan (State and Federal)*. As noted in the plan, MDAQMD does not propose any additional measures beyond the existing Reasonably Available Control Technology requirements applicable to new sources (i.e., with emissions greater than 25 tons per year). This does not apply to activities associated with the IM No. 3 operations.

Existing IM No. 3 air emissions include those from delivery and maintenance vehicles, pickup truck, and ATV operation during the Compliance Monitoring Program and Performance Monitoring Program activities and the off-site transport of brine waste from IM No. 3 operations (approximately 26 trucks per week). In addition, IM No. 3 operations involve the periodic use of an onsite generator when electrical power from the electrical utility is unavailable.

Impacts

Air emission levels following renewal of the WDRs would not change from existing emission levels. Ongoing IM No. 3 operations following renewal of the WDRs would involve the periodic use of an onsite generator when electrical power from the electrical utility is unavailable. Air emissions associated with generator usage would be short term and would not constitute a substantial portion of any criteria pollutant, including ozone. As noted above, the backup IM No. 3 generator is authorized to operate under the California Air Resources Board portable equipment registration program. Dust control measures, such as the watering of IM No. 3 access roads, would minimize dust and associated PM₁₀ emissions resulting from ongoing IM No. 3 operations. Mobile emission sources include the approximately 26 truckloads per week associated with the off-site hauling of brine waste. Air emissions from this activity and other IM No. 3 operations (e.g., delivery and maintenance vehicles) would not represent a substantial contribution to regulated air emissions.

No air quality impacts would result from renewal of the WDRs.⁴

IV. BIOLOGICAL RESOURCES --

Would the project:

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

⁴ It should also be noted that 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. The likely means of doing this would be to truck the treated water to a permitted offsite disposal facility. Up to 300 truckloads per week of treated water might be required to be hauled offsite if the existing WDRs are not renewed. The vehicle emissions from these trucking operations would be significantly greater than existing air emission levels, as well as the emission levels associated with renewal of the WDRs.

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|--|--------------------------|--------------------------|--------------------------|-------------------------------------|
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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 type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Setting

Prior to the construction of the IM No. 3 facilities, biological investigations were conducted at the project area, as documented in the *Final Biological Resources Investigations for Interim Measures No. 3: Topock Compressor Station Expanded Groundwater Extraction and Treatment System* (CH2M HILL 2004b). Subsequent biological surveys at the project site are documented in the *Biological Resources Survey Report for the Area of Potential Effect (APE) Topock Compressor Station Expanded Groundwater Extraction and Treatment System Needles* (CH2M HILL 2005a). The following information summarizes the biological conditions at the project site and in the vicinity of the existing IM No. 3 facilities, as documented in these reports.

The Colorado River is the primary aquatic habitat located approximately 1,300 feet east of the Topock Compressor Station. The river is approximately 700 to 900 feet wide and 8 to 15 feet deep at this location. Little to no submergent vegetation exists within the river. Small patches of emergent vegetation along the banks consist of common reed (*Phragmites communis*), cattails (*Typha* sp.), sedges (*Carex* sp.), and bulrush (*Scirpus* sp.). Several of these wetland patches are located at the confluence of Bat Cave Wash and near Moabi Regional Park. Larger wetlands and marshes exist along the eastern bank of the peninsula near the Topock Marina. The Topock

Marsh, located northeast of the project within the HNWR, provides important aquatic marsh and riparian habitat in the project vicinity.

Terrestrial habitats near the project consist of creosote bush scrub, Mojave wash, desert riparian, and tamarisk thicket. The dominant upland plant community is creosote bush scrub. The area is sparsely vegetated with widely-distributed creosote bushes (*Larrea tridentata*). Other plant species that occur within this plant community include burrobush (*Ambrosia dumosa*), allscale (*Atriplex polycarpa*), split grass (*Schismus* sp.), spineflower (*Chorizanthe* sp.), desert trumpet (*Eriogonum inflatum*), beavertail cactus (*Opuntia basilaris*), golden cholla (*Opuntia echinocarpa*), brittlebush (*Encelia farinosa*), cheesebush (*Hymenoclea salsola*), dalea (*Dalea mollissima*), red barrel cactus (*Ferocactus pilosus*), sweetbush (*Bebbia juncea*), and ratany (*Krameria erecta*).

Mojave Wash is comprised of Bat Cave Wash and other unnamed washes in the area. Bat Cave Wash is an ephemeral drainage that extends from the Chemehuevi Mountains to the Colorado River approximately 3,500 feet north of the Topock Compressor Station. Although this wash may periodically flood during stormwater runoff events, it remains dry throughout most of the year due to arid desert conditions. The wash floor is relatively barren of vegetation and consists of sand, gravel, and cobblestone substrate. Although the drainages occur within the creosote bush scrub plant community, several native tree species are associated with the washes including palo verde (*Cercidium* sp.), acacia (*Acacia greggii*), mesquite (*Prosopis* sp.), and smoke tree (*Dalea spinosa*).

Desert riparian vegetation is present at the confluence of Bat Cave Wash and the Colorado River. This plant community consists of scattered mesquite, palo verde, and tamarisk (*Tamarix* sp.).

Tamarisk thicket is the dominant plant community along the Colorado River floodplain. This invasive, exotic plant species has displaced native plant species. This plant community consists of dense monotypic stands of tamarisk with an understory of arrowweed (*Pluchea sericea*). In general, tamarisk does not provide optimal wildlife habitat, but it does provide a roosting structure for several avian species.

Avian species commonly associated with the river include American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), pied-billed grebe (*Podilymbus podiceps*), great egret (*Casmerodius albus*), great blue heron (*Ardea herodias*), northern rough-winged swallow (*Stegidopteryx serripennis*), and belted kingfisher (*Ceryle alcyon*). Other avian species found in the upland areas include red-tailed hawk (*Buteo jamencensis*), Gambel's quail (*Callipepla gambelii*), mourning dove (*Zenaida macroura*), common raven (*Corvus corax*), song sparrow (*Melospiza melodia*), Canyon wren (*Catherpes mexicanus*), brewer's blackbird (*Euphagus cyanocephalus*), great-tailed grackle (*Quiscalus mexicanus*), turkey vulture (*Cathartes aura*), greater roadrunner (*Geococcyx californianus*), lesser nighthawk (*Chordeiles acutipennis*), and rock dove (*Columba livia*).

Mammals that may occur at the project area include deer mouse (*Peromyscus maniculatus*), Merriam kangaroo rat (*Dipodomys merriami*), whitetail antelope squirrel (*Ammospermophilus leucurus*), desert woodrat (*Neotoma lepida*), California ground squirrel (*Spermophilus beecheyi*),

desert cottontail (*Sylvilagus audubonii*), and black-tailed hare (*Lepus californicus*), coyote (*Canis latrans*), desert kit fox (*Vulpes macrotis*), American badger (*Taxidea taxus*), bobcat (*Lynx rufus*), striped skunk (*Mephitis mephitis*), beaver (*Castor canadensis*), and raccoon (*Procyon lotor*).

Reptiles that may occur in the area include chuckwalla (*Sauromalus obesus*), side-blotched lizard (*Uta stansburiana*), western whiptail lizard (*Cnemidophorus tigris*), zebra-tailed lizard (*Callisaurus draconoides*), coachwhip (*Masticophis flagellum*), gopher snake (*Pituophis melanoleucus*), and western diamondback rattlesnake (*Crotalus atrox*).

Impacts

Renewal of the WDRs would allow for the continued injection of treated water into the groundwater aquifer. No physical changes will occur. Thus, no impact to biological resources is anticipated to result from renewal of the WDRs.

V. CULTURAL RESOURCES -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" 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 type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Setting

The project site and surrounding area has been the subject of several cultural resource investigations, including most recently the *Cultural Resources Investigations, Third Addendum: Survey of the Original and Expanded APE: Volume I, for Topock Compressor Station Site Vicinity, San Bernardino County, California* (Applied Earthworks 2005). Prior to construction of the IM No. 3 facilities, the *Cultural Resources Investigations for Interim Measures No. 3 Topock Compressor Station Expanded Groundwater Extraction and Treatment System* was prepared (CH2M HILL 2004c) and was used for the consultation with the State Historic Preservation Office (SHPO). As a result of the SHPO consultation, a Memorandum of Agreement was signed by the BLM and SHPO, with concurrence provided by PG&E. The Memorandum of Agreement provided for the preparation

and implementation of a Cultural Resources Management Plan during construction and operation of the IM No. 3 facilities. The *Cultural Resources Management Plan for the Topock Compressor Station Expanded Groundwater Extraction and Treatment System* (Applied Earthworks 2004) was prepared in September 2004 and remains in effect.

Archeological resources in the project vicinity include the Topock Maze. The Maze was created by modifying the desert landscape through creation of long parallel rows of stacked or piled dark colored desert-varnished rocks. These dark lines alternate with light bands formed where the varnished desert pavement was removed. The resultant pattern, also called the "Mystic Maze," carries cultural and spiritual significance for the Fort Mojave Indian Tribe. One of the three manifestations of the Maze was included in the National Register of Historic Places (NRHP) in 1978 for its unique scale and design and for its potential to provide data on geoglyph (ground markings) construction and use. Along with this portion of the Maze, 136 lithic scatters and other prehistoric remnants have been recorded in the project vicinity.

As previously mentioned, the Maze and the project are within an area of extreme importance to the local Native American community. The project area lies within the traditional territory of the Fort Mojave Indian Tribe or Aha Makav. While the material remains of the past are of import to them, this area of traditional and spiritual use knows no boundaries for the Fort Mojave Indian Tribe.

Historic resources in the area include two segments of historic Route 66, which was listed in the NRHP in 1990. The first segment is a 1.3-mile section of road extending from Park Moabi Road to the BNSF railway, which was designated Route 66 between 1926 and 1947. Several features such as flagstone drainages, gutters, right-of-way marker posts, and a stacked concrete bag revetment also are a part of this segment. Along with the physical elements of the roadway itself, historical debris and other features may be associated with the roadway and may have characteristics that contribute to its significance. This segment of historic Route 66 is intersected by two abandoned graveled road sections, which may represent portions of National Old Trails Road, the predecessor to Route 66.

The second segment of Route 66 in the area follows the former alignment of a railway constructed by the Southern Pacific Railroad Company in 1883. This segment passes through the southeastern portion of the project area and is currently operated as National Trails Highway. Between 1947 and 1966, Route 66 followed this alignment. The former railroad right-of-way is eligible for the NRHP.

Prior to the construction of IM No. 3 facilities, historic Route 66 between Park Moabi Road and the BNSF railway was provided with structural protection to minimize any potential impact to the roadway fabric. Specifically, a geotextile membrane and approximately 5 inches of road base were placed on the road to protect the historic roadway fabric between Park Moabi Road and the IM No. 3 treatment plant. This protection remains in place and will be removed when no longer needed.

In addition to Route 66, there are 12 other historic sites that occur near the project, as documented in the CH2M HILL report (2004c) and Applied Earthworks report (2005).

No known paleontological or unique geologic features are present at or in proximity to the project.

Impacts

Approval of the renewal of the WDRs would allow for the continuation of injection operations. Continued injection will not involve any change from existing operations. Further, all IM No. 3 operations are currently subject to an existing Cultural Resources Management Plan that provides for the protection of Route 66, as well as other historic and archeological resources near the project. This plan will continue to apply to continued operations. No construction activity is proposed. Therefore, no potential for direct impacts to archeological sites, historic resources, or human remains is expected. Paleontological resources or unique geologic features do not occur at the project site. No impact to cultural resources would result from renewal of the WDRs.

VI. GEOLOGY AND SOILS -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
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"/>

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| 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"/> |

Setting

Geology in the vicinity of the project consists of recent and older river deposits progressing westward to older alluvial deposits associated with the local mountains. Sand, gravel, and cobblestone dominate these deposits, comprising the principal groundwater aquifer at the site. The landscape is considerably eroded by natural processes that include wind and water erosion. Land forms are characterized by alluvial terraces and incised drainage channels. One of the largest incised channels is Bat Cave Wash, which runs from the Chemehuevi Mountains in the south toward the Colorado River in the north. Terraces occurring nearby are homogeneous, comprising rocky soils with very sparse vegetation. Elevations in the project vicinity range from just over 800 feet msl south of the Topock Compressor Station to 450 feet msl at the Colorado River floodplain.

There are no known recent active faults identified by California Division of Mines and Geology (1994). Older faults greater than 10,000 years from the Late Quaternary or Tertiary age exist within 6 miles.

The project area varies topographically. Much of the area soils are unconsolidated sedimentary alluvium (sandy gravel and finer grained sand). The nearby floodplain of the Colorado River consists of a shifting sand-dune system. The project area does not consist of expansive soils. The design of the existing IM No. 3 facilities conforms to the County Building Code and Uniform Building Code standards, which serve to minimize potential geologic hazards.

Sewers are not available in the project area. Wastewater generated from existing IM No. 3 operations is managed with a sewage holding tank, in accordance with existing building and land use permits issued by San Bernardino County. The sewage holding tank is a zero-discharge facility that is regularly pumped-out for disposal at a permitted offsite facility.

The injection of treated groundwater is subject to existing WDRs Order No. R7-2004-0103 adopted by the Regional Board on October 13, 2004. The WDRs apply to the re-injection of treated groundwater into the injection well field. Brine waste and sludge produced as a by-product of the water treatment process are hauled off-site for disposal at permitted facilities. The injection of treated water has operated in full compliance with the WDR requirements since startup in July 2005.

Impacts

Renewal of the WDRs would allow for the continued injection of treated water from the IM No. 3 facilities. No new facilities would be constructed as a result of WDR renewal. Future operation of the IM No. 3 facilities would not differ from existing operations. Existing facilities, including those involving human occupancy, have been designed and constructed in accordance with County of San Bernardino building standards, which account for potential seismic activity in the project vicinity.

VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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| 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? | <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 result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

Setting

On-going operation of the existing IM No. 3 facilities involves the extraction, conveyance, and treatment of chromium in groundwater. Chromium levels in groundwater extracted for treatment do not typically exceed the toxicity characterization threshold concentrations for hazardous waste of 5.0 parts per million. The typical toxicity characteristics of sludge generated from the water treatment plant are not subject to regulation under the federal Resource Conservation and Recover Act (RCRA). However, the sludge is a state-regulated hazardous waste under Title 22 of the California Code of Regulations and, as such, is transported to a permitted, offsite, hazardous waste disposal facility. Reverse osmosis concentrate (brine) generated from the water treatment plant does not contain elevated levels of chromium but does contain dissolved solids at elevated concentrations. The brine is also transported offsite to a permitted disposal facility.

Operations at the IM No. 3 facilities involve the use, storage, and transport of relatively small amounts of regulated compounds, which are stored within containment structures and managed in accordance with federal, state, and local regulations. These compounds include ferrous chloride, sodium hydroxide, sulfuric acid, and various fuels, lubricants, and solvents. Any spill associated with IM No. 3 operations is subject to immediate cleanup and reporting in

accordance with the *Emergency Notification Binder* (CH2M HILL 2005b) and *Hazardous Materials Business Plan* (PG&E 2006).

No schools or other sensitive receptors are located within one-quarter mile of the project. The project site is not included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5. No private or municipal airports are located in the nearby vicinity of the project.

Impacts

Future operations resulting from renewal of the WDRs would not differ from existing operations. All hazardous chemicals are stored within containment structures and managed in accordance with federal, state, and local regulations. IM No. 3 operations are subject to the *Emergency Notification Binder* and *Hazardous Materials Business Plan*, which would serve to limit any impact resulting from the spill of a regulated compound. Sparse vegetation at the project area limits the potential for wildfires. Because no change in IM No. 3 operations would result from WDR renewal, no impacts are anticipated.

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"/>

Setting

Precipitation in the project area averages less than 5 inches per year. Precipitation at the project site evaporates, soaks into the surface soils, or drains to the Colorado River, Bat Cave Wash, and other unnamed washes to the west end at the Colorado River. These ephemeral desert washes are dry most of the year, but during heavy precipitation events the washes can have surface flow. Storm water facilities are primarily limited to roadway culverts and ditches. Recent improvements along the existing IM No. 3 access routes included the installation of additional and/or expanded culverts and ditches to minimize roadway erosion. Groundwater at the

project site is part of an alluvial aquifer at depths of 40 to 350 feet below ground surface. Depth to groundwater is controlled topographically.

The 100-year floodplain at the project site is limited to portions of the floodplain adjacent to the channel of the Colorado River. The PE-1 extraction well facilities are partially located in the potential 100-year flood area but have been designed to avoid any adverse effect resulting from flooding of the facilities. No housing or other occupied structures are located within the 100-year floodplain at the project site.

The project is located within the jurisdiction of the Colorado River Basin Regional Board. Water quality objectives for groundwater and surface water in the region are contained in the *Water Quality Control Plan, Colorado River Basin – Region 7* (including amendments adopted through October 2005). WDR Order No. R7-2004-103 was adopted by the Regional Board on October 13, 2004 and applies to the re-injection of treated water from the IM No. 3 water treatment plant into the groundwater aquifer. These WDRs contain effluent limitations for Cr(VI), total chromium, and pH. Additionally, IM No. 3 effluent must not contain heavy metals, chemicals, pesticides, or other constituents in concentrations toxic to human health.

Impacts

Continued injection of treated water from the IM No. 3 facilities is subject to the renewal of WDR Order No. R7-2004-0103, which expires on January 31, 2007. Future IM No. 3 operations are expected to be subject to requirements substantially similar to those in the existing WDRs. These requirements include effluent limitations, regular sampling of treated water, and monitoring of groundwater in the vicinity of the injection field. To date, no violation of the parameters provided in the WDRs has occurred. Continued IM No. 3 operations are not expected to result in any violation of the anticipated water quality standards applied by the Regional Board.

No new facilities are proposed for construction as a result of the renewal of the WDRs. Existing drainage patterns would not change. No occupied structures would be subject to flooding or other water-related hazards. No adverse impact to hydrology and water quality would occur as a result of renewal of the WDRs.

IX. LAND USE AND PLANNING --

Would the project:

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

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"/>

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| 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*.
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- 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.
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- 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.
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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

Karen T. Baker, CHG, CEG,

Chief, Geology, Permitting, and Corrective
Action Branch

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

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Lake Havasu Field Office

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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
Acting District Manager

9/17/2004
Date

Glenn Y. 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.

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5 **MEMORANDUM OF AGREEMENT**
6 **BETWEEN**
7 **THE BUREAU OF LAND MANAGEMENT, LAKE HAVASU FIELD OFFICE**
8 **AND**
9 **THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER**
10 **REGARDING**
11 **THE PACIFIC GAS & ELECTRIC TOPOCK INTERIM MEASURES NO. 3,**
12 **EXPANDED GROUNDWATER EXTRACTION AND TREATMENT PROJECT**
13 **SAN BERNARDINO COUNTY, CALIFORNIA**
14
15

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
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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.

B. Resolving Objections.

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

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

2. Should the ACHP not exercise one of the above options within thirty (30) days after receipt of all pertinent documentation, the BLM may assume the ACHP's concurrence in its proposed response to the objection.

3. The BLM shall take into account any ACHP recommendation or comment provided in accordance with this stipulation with reference only to the subject of the objection. The BLM's responsibility to carry out all actions under this MOA that are not the subjects of the objection will remain unchanged.

4. At any time during implementation of the measures stipulated in this MOA, should an objection pertaining to such implementation be raised by a Tribe, the BLM shall notify the other parties to the MOA in writing of the objection and take the objection into consideration. The BLM shall consult with the objecting party and, if the objecting party so requests, with the other parties to this MOA for no more than fifteen (15) days. Within ten (10) days following closure of this consultation period, the BLM will render a decision regarding the objection and notify all consulting parties hereunder of its decision in writing. In reaching its 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 reinstitute 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.
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44

RECEIVED LAKE
HAVASU FIELD OFFICE

2004 SEP 16 A 11: 22

LAKE HAVASU CITY, AZ

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. Diers Date: SEPT. 14, 2004

Title: PRINCIPAL ENGINEER, ENVIRONMENTAL AFFAIRS