

**STAFF REPORT
C68**

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PRC 8737.9
L. Pino

**TERMINATION OF A GENERAL LEASE – RIGHT-OF-WAY USE
AND ISSUANCE OF A GENERAL LEASE – OTHER USE**

APPLICANT:

Pacific Gas and Electric Company

PROPOSED LEASE:

AREA, LAND TYPE, AND LOCATION:

Approximately 66 acres of sovereign land adjacent to and in the Colorado River, near Needles, San Bernardino County.

AUTHORIZED USE:

Installation, use, and maintenance of a 12-inch-diameter water pipeline on the old Topock Highway bridge crossing over the Colorado River, groundwater mitigation monitoring wells, and appurtenant structures necessary to facilitate the Topock Compressor Station Groundwater Remediation Project.

LEASE TERM:

49 years, beginning June 21, 2018.

CONSIDERATION:

Public health and human safety.

SPECIFIC LEASE PROVISIONS:

- Within 90 days following completion of initial construction, Lessee shall submit as-built drawings and a written narrative report describing Project construction.
- Lessee shall prepare annual summary reports of all activities conducted within the Lease Premises and plans for the next year.

STAFF REPORT NO. C68 (CONT'D)

- Insurance: Liability insurance in an amount no less than \$2,000,000 per occurrence, or equivalent staff-approved self-insurance program.
- Bond: \$25,000.

BACKGROUND:

Pacific Gas & Electric Company's (PG&E) Topock Compressor Station (Station or Site) began operations in 1951. The Station compresses natural gas for transport via pipeline from the southwestern United States to PG&E's central and northern California service territory. The gas temperature increases during the compression process, and cooling towers are used to cool the gas before it continues through the pipelines. From 1951 through 1985, PG&E used a chromium-based additive to prevent corrosion in its cooling towers. From 1951 to 1964, wastewater containing chromium was discharged into percolation beds in Bat Cave Wash and East Ravine, normally dry creeks adjacent to the Station. Beginning in 1964, PG&E began treating the wastewater to remove the chromium. In 1985 PG&E stopped using the chromium-based additive and switched to a phosphate-based solution.

Investigation and remediation activities at the station and surrounding area are being conducted under the Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. 6901 et seq.) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, also known as Superfund) (42 U.S.C. 4601 et seq.). The RCRA corrective action activities at the Project site were initiated in 1987 with the completion of the RCRA facility assessment conducted by the U.S. Environmental Protection Agency (USEPA).

Closure activities of the former hazardous waste management facilities at the Station were performed from 1988 to 1993. Environmental investigations and remediation activities near the Site began in 1996 when PG&E and the California Environmental Protection Agency's Department of Toxic Substances Control (DTSC) entered into a Corrective Action Consent Agreement to investigate and clean up contamination near the Station.

In 2004, DTSC determined that immediate action was necessary as a precautionary measure to prevent groundwater contaminated with hexavalent chromium, commonly referred to as the plume, from reaching the Colorado River 0.5 mile east of the Station. DTSC directed PG&E to implement interim measures to ensure the plume did not reach the

STAFF REPORT NO. **C68** (CONT'D)

Colorado River before the Final Groundwater Remedy Project (described below) could be implemented.

Because the release of hazardous substances impacted lands managed by the various federal agencies, PG&E entered into an Administrative Consent Agreement with the U.S. Department of the Interior (DOI), U.S. Bureau of Land Management (BLM), U.S. Fish and Wildlife Service (USFWS), and U.S. Bureau of Reclamation (BOR) to implement investigations at the Site in July 2005. DTSC is overseeing the corrective action under state law and federally delegated RCRA authority.

To facilitate investigation and cleanup, the Site was divided into two operable units, one addressing chromium-contaminated groundwater and the other addressing potentially contaminated soil. During the groundwater investigation, PG&E found groundwater samples taken at the Site to be contaminated with hexavalent chromium. PG&E documented the affected groundwater plume, measuring 1,300 feet wide and extending north from the Station toward the Colorado River approximately 2,300 feet at approximately 80 to 175 feet below the ground surface.

To implement the interim measures, on December 14, 2006, the Commission approved the issuance of Lease No. PRC 8737.1, a 20-year General Lease – Right-of-Way Use to PG&E for the installation of two groundwater mitigation monitoring wells extending from the adjacent Havasu National Wildlife Refuge into the bed of the Colorado River ([Item C41, December 14, 2006](#)).

The Lease has subsequently been amended twice. On February 5, 2007, the Commission approved an amendment to the Lease, authorizing the installation, use, and maintenance of up to two additional wells within the lease premises, as a contingency measure required by DTSC ([Item C36, February 5, 2007](#)). On June 28, 2007, the Commission approved an amendment to the Lease authorizing the installation, use, and maintenance of up to three additional monitoring wells to be drilled from the Arizona side of the Colorado River ([Item C51, June 28, 2007](#)). The lease currently authorizes up to seven monitoring wells.

Based on plans provided by PG&E, staff identified a total of 42 wells within the lease premises. The 35 existing wells that were not previously authorized by the Commission were installed by PG&E under DOI authorization. There is currently a dispute between the Commission and DOI as to the exact extent of State ownership within the Project area. DOI authorized placement of the wells under the belief that they were on lands

STAFF REPORT NO. **C68** (CONT'D)

managed by the BLM, not the State. Because of the importance of the Project as a priority for all parties, and the potential delays that resolving the boundary dispute could have on the Project, the lease area described in Exhibit A and shown on Exhibit B includes the lands in dispute, but the lease provides that it will not be used by the parties in any proceedings related to the disputed ownership and is therefore non-prejudicial regarding the extent of State title and jurisdiction within the lease premises.

In 2013, PG&E and the DOI, on behalf of the United States, entered into a Consent Decree that required groundwater remediation project design, construction, and operation. The 2013 DOI Consent Decree governs only the remedial action addressing contaminated groundwater; the terms of the 2005 Administrative Consent Agreement remain in effect for response actions associated with the release of hazardous substances at or from the Station other than the remedial action addressing contaminated groundwater. The design selected as the Final Groundwater Remedy Project (Project) by DTSC and DOI in 2011 is an In-Place Treatment with Fresh Water Flushing system (In-Situ). However, because the associated Project activities would result in direct or indirect changes in the physical environment, DTSC prepared, and on April 24, 2018, certified a Subsequent Environmental Impact Report (EIR) (State Clearinghouse No. 2008051003). The Subsequent EIR addressed the Project's potentially significant adverse effects on the physical environment by evaluating, at a project level, the Project's environmental effects associated with construction, operation and maintenance, and decommissioning based on the Final Groundwater Remedy design described in the Subsequent EIR, relative to the program-level impact analysis in the original Groundwater EIR certified by DTSC in 2011.

PG&E submitted an application requesting the termination of its current Lease authorizing up to seven groundwater monitoring wells, and the issuance of a General Lease – Other to authorize the continued use and maintenance of the 42 already existing wells; the installation, use, and maintenance of a 12-inch-diameter water conveyance line crossing the Colorado River (to convey fresh water from Arizona for use at the Project site); and all future modifications to the lease premises required to complete the Project substantially in the form described in the 2018 Subsequent EIR certified by DTSC.

The Project goal is to protect the Colorado River and restore groundwater quality to natural background (pre-contaminated) conditions. As an interim measure, PG&E is currently pumping the contaminated groundwater away

STAFF REPORT NO. C68 (CONT'D)

from the Colorado River and into a treatment system located near the Site. This interim measure was successful in helping to remove hexavalent chromium from the groundwater and prevent plume migration and will continue to be used until the In-Situ treatment system is operational.

Some of the Project's key objectives include:

- Ensuring that the contaminated groundwater plume does not permanently expand following Project completion
- Preventing groundwater ingestion from use as a drinking source that has chromium above regional background concentrations
- Preventing or minimizing the chromium migration in groundwater to the Colorado River

STAFF ANALYSIS AND RECOMMENDATION:

Authority:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

Public Trust Analysis and State's Best Interests:

State and federal regulatory agencies have selected an In-Situ treatment system using freshwater flushing as The Final Groundwater Remedy Project design after extensive consideration of various technical designs, and input from public comment and locally affected tribes. As explained in the Project's 2011 EIR and 2018 Subsequent EIR, In-Situ groundwater treatment refers to hexavalent chromium plume concentration reductions using treatment technologies that treat groundwater in place, as opposed to pumping and circulating water through a separate above-ground treatment plant. In-Situ treatment would be performed by placing a degradable food-grade organic compound (carbon amendment) in the groundwater to convert hexavalent chromium (a carcinogen) dissolved in groundwater into more insoluble trivalent chromium, which is relatively benign to the human body. The trivalent chromium would precipitate or become adsorbed onto soils below the aquifer. The organic carbon amendment would be released into the aquifer by injection after mixing on-site with treated groundwater or clean water.

The proposed Project includes the following primary components:

- Develop an In-Situ reactive zone along National Trails Highway (NTH IRZ) using a line of injection and extraction wells to distribute groundwater amended with carbon for plume treatment

STAFF REPORT NO. C68 (CONT'D)

- Implement an Inner Recirculation Loop (IRL) composed of injection wells and extraction wells along the Colorado River that would induce groundwater flow through the treatment zone
- Install freshwater injection wells west and south of the NTH IRZ treatment zone to further induce groundwater flow through the treatment zone and prevent westward plume migration
- Install extraction and injection wells around the Topock Compressor Station, referred to as the Topock Compressor Station Recirculation Loop (TCS RL), to capture contaminated groundwater, amend it with a carbon substrate, and circulate the amended groundwater to create an In-Situ reactive zone for chromium treatment
- Install a Clean-In-Place system for routine Treatment Zone water conveyance pipeline maintenance

The freshwater flushing system also includes:

- A Contingent Freshwater Pre-Injection Treatment System to reduce arsenic concentrations, if needed
- Monitoring well construction as needed to augment the existing monitoring well network, further evaluate site conditions, monitor contaminant levels, and assess the Project performance as it progresses
- Fluid conveyance, utilities, buildings, roadway, and other appurtenant improvement construction to support the Final Groundwater Remedy Project
- Institutional control implementation, such as fencing, to restrict surface land uses and prevent groundwater use until the Project objectives are achieved

Final long-term remediation construction is expected to begin in mid-to-late 2018.

In addition to the Project features described above, there may be a need for additional facilities and associated activities beyond the parameters set forth in the Final Groundwater Remedy Project design. A Future Activity Allowance was included in the Project Description and the Subsequent EIR to ensure that a comprehensive environmental analysis had been conducted should additional activities be warranted due to unforeseeable circumstances over the Project's decades-long implementation.

The Final Groundwater Remedy Project is a long-term remediation project anticipated to last 60 or more years (approximately 30 years of active

STAFF REPORT NO. **C68** (CONT'D)

remediation, followed by approximately 10 years of long-term monitoring, and concurrent arsenic monitoring for up to 20 years). Project construction is estimated to occur over a 5-year period, following DTSC and DOI approval of the Final Groundwater Remedy Design and Construction/Remedial Action Work Plan. Construction will occur in two phases: the first phase will construct the NTH IRZ and infrastructure, and the second phase will construct the remaining systems (IRL, TCS RL, and freshwater injection). Operation and maintenance would begin following the start-up of the various remedy systems. Decommissioning and restoration would begin following cleanup objectives attainment or the determination by DOI and DTSC that the remedial facilities are no longer needed.

For the duration of the Project, worker and community health and safety will be key priorities during all work. Long-term and continued monitoring activities will help ensure that the river and sensitive plants, animals, and cultural resources are protected in a manner that is consistent with all applicable regulatory requirements.

The Project would be implemented near the Topock Compressor Station, located in the Mojave Desert approximately 12 miles southeast of the city of Needles, California and approximately 4 miles south of the community of Golden Shores, Arizona. The Station is located within a 66.8-acre parcel of land owned by PG&E located approximately 1,500 feet west of the Colorado River and less than 1 mile south of Interstate 40. In addition to lands owned by PG&E and the Commission, property adjoining the Station and within the Project Area is owned or managed by several government agencies and private entities, including the USFWS which manages the adjacent Havasu National Wildlife Refuge; other federal lands owned by the BLM, and BOR under BLM management; the Burlington Northern Santa Fe Railway; California Department of Transportation; Arizona Department of Transportation; lands owned by the Fort Mojave Indian Tribe; lands owned by San Bernardino County (and managed by BLM); and other lands owned by private individuals.

Of the 762-acre Project area, approximately 66 acres along the Colorado River are within the Commission's jurisdiction and subject to lease (pending resolution of the dispute with DOI described above). The Project activities that involve State-owned land are primarily the installation, use, and maintenance of various treatment, monitoring, and extraction wells, and associated infrastructure to support those systems along the Colorado River; and installation, use, and maintenance of a 12-inch-diameter

STAFF REPORT NO. **C68** (CONT'D)

waterline for transporting fresh water from Arizona along the Old Topock Highway Bridge to be used for the In-Situ treatment system.

The proposed lease would authorize PG&E to access and conduct all necessary Project activities on those State lands within the Project area. These activities include, but are not limited to, the installation, use, and maintenance of a 12-inch-diameter fresh water conveyance pipeline along the Old Topock Highway Bridge to transport fresh water from Arizona to the Site, and installation, use, and maintenance of additional monitoring, treatment, extraction, and remediation wells and appurtenant facilities as needed to complete the Project substantially in the form described in the 2011 Groundwater EIR and 2018 Subsequent EIR as adopted and certified by DTSC.

The Project site includes areas identified by Native American Tribes as having traditional and cultural importance. Nine federally recognized Native American tribes have ancestral ties to the area and have expressed interest in the Project. BLM has determined that a Traditional Cultural Property, or property of traditional religious and cultural significance that is eligible for listing on the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR), exists in the remediation project area. Other identified historic areas include portions of historic Route 66. DOI and the other agencies involved are working together to preserve the Site's historic and cultural aspects.

Project components within the Commission's jurisdiction (in or adjacent to the Colorado River) could have significant environmental effects on eight resource areas:

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise

In certifying the Final Subsequent EIR and approving the Project, the DTSC imposed various mitigation measures (See Exhibit C-1) for Project-related significant effects on the environment as conditions of Project approval and concluded that Project-related impacts would be

STAFF REPORT NO. **C68** (CONT'D)

substantially lessened with implementation of these mitigation measures. However, even with the integration of all feasible mitigation, the DTSC concluded in the Subsequent EIR that some of the identified impacts would remain significant. As a result, the DTSC adopted a Statement of Overriding Considerations to support its approval of the Project despite the significant and unavoidable impacts. The DTSC determined that, after mitigation, the Project may still have significant impacts on cultural resources and noise. In addition, several cumulative impacts also remained significant. These significant and unavoidable impacts are outlined below.

Impact CUL-1. Substantially and adversely change the significance of a historical resource as defined in CEQA Guidelines section 15064.5. Construction, operation and maintenance, and decommissioning activities of the proposed Project could result in substantial adverse changes to historical resources in the Project Area. Adverse changes to historical resources in the Project area could occur through ground disturbance and other Project-related activities or through the introduction of out-of-character visual or auditory intrusions to historical resources that gain their significance in part because historical associations or aesthetic values. The proposed mitigation measures would avoid, minimize, reduce, or compensate for potential impacts to historical resources in the event of inadvertent discovery; however, even with the implementation of these measures, impacts to historical resources would remain significant and unavoidable.

Impact CUL-2. Substantially and adversely change the significance of a unique archaeological resource. Many of the cultural resources within the Project area may meet the CEQA criteria for a unique archaeological resource. The proposed mitigation measures would avoid, minimize, reduce, or compensate for potential impacts to historical resources in the event of inadvertent discovery and would reduce the severity of the impact, although not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.

Impact CUL-4. Disturbance of human remains, including those interred outside of formal cemeteries. Ground-disturbing activities required for all Project phases may disturb as-yet undiscovered human remains, including Native American burial remains (i.e., human remains and grave goods). While no human remains were known to exist or had been documented in the Project Area, the density of cultural resources in the Project Area suggest that there may be the potential to encounter human remains during ground disturbance. The proposed mitigation will require that the

STAFF REPORT NO. C68 (CONT'D)

determination of whether remains are human or non-human will be made by qualified personnel, such as a physical or forensic anthropologist and ensure that the appropriate tribes are notified, thereby reducing the severity of the impact, but not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.

Impact NOISE-1. Construction activities associated with the additional activity allowance could occur during long-term operation and maintenance. While implementation of the proposed mitigation measure would reduce noise impacts to sensitive receptors during construction activities that could occur during operation and maintenance, impacts would not necessarily be reduced to a less than significant level, as due to the nature of the Project, it is impossible to ensure that nearby receptors would not be impacted by construction activities. Therefore, the impact would remain significant and unavoidable.

Impact NOISE-3. Project-Generated Construction-Related Noise Levels Could Impact Sensitive Resources. Construction activities could potentially expose sensitive receptors to noise levels in excess of the applicable noise standards or result in a substantial increase in ambient noise levels. Implementation of proposed mitigation measure, which would reduce noise levels, has been incorporated into the Project and would reduce the severity of the impact, although not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.

Impact NOISE-4. Land Use Compatibility of Future Project Noise Levels with the Topock Traditional Cultural Property. Implementation of the proposed Project could result in future noise that could result in conflicts with land use compatibility. Impacts associated with conflicts with land use compatibility that exceed San Bernardino County standards for Places of Worship or conflict with Native American values associated with the Topock Traditional Cultural Property, which is considered highly sensitive. Changes in the noise environment would adversely affect Native American participants. Although the proposed mitigation would reduce the impact, due to the heightened sensitivity and use of the area, impacts are considered significant and unavoidable.

Impact CUM-1. Cumulatively Considerable Impacts to Aesthetic Resources. Implementation of the proposed Project, in combination with other Projects in the geographic scope, could cause a substantial adverse change to scenic vistas, scenic resources, and the existing visual character and quality of the site and its surroundings. The proposed

STAFF REPORT NO. C68 (CONT'D)

Project would represent an incremental change that would substantially alter the composition or character of existing landscape views, when considered in addition to the anticipated impacts of other projects in the cumulative scenario, particularly the Soil Remediation and Potential Pilot Test Project. Mitigation includes design requirements to ensure that development and alterations along the Colorado River and the associated scenic corridor do not significantly affect views. These measures would reduce the Project's contribution to significant cumulative aesthetic impacts but not to a level of less than significant.

Impact CUM-2. Cumulatively Considerable Impacts to Cultural Resources. Implementation of the proposed Project, in combination with other projects in the geographic scope, could cause a substantial adverse change in the significance of the cultural resources within the Project area. Cultural resources that may be adversely affected within the Project area include the historical resource identified as the Topock Cultural Property, unknown historical or unique archaeological resources, unique paleontological resources, or unique geologic feature. The proposed Project may also disturb human remains, including those interred outside of formal cemeteries. Proposed mitigation would reduce the significance of the impacts to the degree feasible, the only method to fully mitigate these impacts would be complete avoidance of any future Project activity; therefore, no feasible mitigation exists that would reduce the Project's contribution to less than considerable.

Impact CUM-3. Cumulatively Considerable Impacts Related to Noise and Vibration. Implementation of the proposed Project, in combination with Soil Remediation Activities in the Project Area that are in the geographic scope, could cause a substantial adverse increase related to short-term construction-related noise and vibration, Noise generated from the proposed Project could be compounded when taken in context with most other noise-generating projects in the geographic and temporal scope. In particular, activities associated with the PG&E soil investigation activities (1E) and soil remediation activities (1F), the Pavement Enhancement Project (5A), and the I-40 Improvement Project (5B), which would all be in close proximity to the Project, are likely to be implemented during a similar timeframe. While these activities are only expected to overlap with the Project for a short period of time, the Project's incremental contribution to noise impacts could be cumulatively considerable and therefore significant considering the projects in the cumulative scenario.

Because of the significant and unavoidable impacts described above, the Commission must adopt a Statement of Overriding Considerations

STAFF REPORT NO. C68 (CONT'D)

describing how the economic, legal, social, technological, and other benefits of implementing the Project outweigh and override the significant and unavoidable adverse effects of the Project. The following listed considerations are described in the Statement of Overriding Considerations, attached as Exhibit D:

- The Final Groundwater Remedy Project will prevent and minimize migration of total chromium and hexavalent chromium in groundwater to ensure concentrations in surface waters do not exceed water quality standards that support the designated beneficial uses of the Colorado River, one of the most important water systems in the United States.
- The Final Groundwater Remedy Project will avoid and reduce the cumulative impacts on the environment and minimize risks to human health associated with contaminated groundwater by preventing and minimizing migration of total chromium and hexavalent chromium in groundwater.
- The Final Groundwater Remedy Project will result in the cleanup of groundwater contamination of a beneficial use drinking water supply as designated by the Regional Water Quality Control Board. The Final Groundwater Remedy Project will meet the substantive provisions of promulgated requirements that are applicable or relevant and appropriate requirements (ARARs), which were determined by the DOI, BLM, USFWS, and BOR. ARARs must be attained by the remedial action pursuant to Section 121(d) of CERCLA, which assures protection of human health and the environment, and requires attainment of “legally applicable or relevant and appropriate standard(s), requirement(s), criteria, or limitation(s).”
- The Final Groundwater Remedy Project would bring an economic benefit to Eastern San Bernardino County through the employment of additional workers and experts needed to implement the remedy and mitigation measures.

Because current projections anticipate that the Project will take over 60 years to complete, including removal of remediation infrastructure and restoration of the Project area, staff is recommending a maximum lease term of 49 years for the Project’s construction and active remediation phases. A new lease would be required to cover the remainder of the long-term monitoring phase that exceeds the proposed lease term and the Project’s decommissioning removal and restoration phases. The proposed lease will not alienate the State’s fee simple interest and will not grant the

STAFF REPORT NO. C68 (CONT'D)

lessee exclusive use of the lease premises; or permanently impact Public Trust uses such as navigation and recreation. Additionally, the lease requires the lessee to insure the lease premises and indemnify the State from any liability arising from lessee's activities thereon. Furthermore, because of the Project's importance and the need to reduce the potential threat to human health and safety posed by the chromium plume, the lease will be a rent-free lease.

Climate Change Analysis:

The lease area is not tidally influenced and, therefore, would not be subject to sea-level rise. However, as stated in *Safeguarding California* (California Natural Resources Agency 2014), climate change is projected to increase the frequency and severity of natural disasters related to flooding, drought, and storms. In rivers, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris. Conversely, prolonged droughts could dramatically reduce river flow and water levels, leading to loss of public access and navigability. Climate change will further influence riverine areas by changing erosion and sedimentation rates, and flooding and storm flow, as well as runoff, will likely increase scour, decreasing bank stability at a faster rate.

Project components within the lease area will include a 12-inch-diameter pipeline, wells, and appurtenant structures necessary to facilitate the Project. The pipeline will be attached to the Old Topock Highway Bridge (Arched Bridge) over the Colorado River, which will require the use of customized roller-type pipe supports bolted to the bridge deck. Due to the bridge's height, it is unlikely to be affected by variable water levels, increasing its resiliency to some climate change impacts. Additionally, although the bridge itself is not part of this lease, more frequent maintenance of the bridge footers may be necessary to ensure continued function during and after storm seasons. The extraction wells, monitoring wells, and access roads within the lease area could be affected by climate change through either flooding or drought conditions; however, the water level of the Colorado River near the proposed Project is regulated primarily by releases of the Davis Dam, located approximately 41 miles upstream.

Pursuant to the proposed lease, the lessee would acknowledge that the lease premises are located in an area that may be subject to the effects of climate change.

STAFF REPORT NO. C68 (CONT'D)

Conclusion:

For all the reasons above, staff believes the issuance of this lease will not substantially interfere with Public Trust needs at this location, at this time, and for the foreseeable term of the proposed lease; and is in the State's best interest.

OTHER PERTINENT INFORMATION:

1. This action is consistent with Strategy 1.1 of the Commission's Strategic Plan to deliver the highest levels of public health and safety in the protection, preservation and responsible economic use of the lands and resources under the Commission's jurisdiction.
2. Termination of the lease is not a project as defined by the California Environmental Quality Act (CEQA) because it is an administrative action that will not result in direct or indirect physical changes in the environment.

Authority: Public Resources Code section 21065 and California Code of Regulations, title 14, section 15378, subdivision (b)(5).

3. DTSC analyzed the environmental impacts associated with the Project in a final Environmental Impact Report (FEIR), an Addendum to the FEIR (Addendum No.1 for Alternative Freshwater Source Evaluation Activities), and a Subsequent EIR (State Clearinghouse [SCH] No. 2008051003). The FEIR was certified on January 31, 2011, the Addendum was certified on September 4, 2013, and DTSC certified the Subsequent EIR on April 24, 2018, and adopted a Mitigation Monitoring and Reporting Program, CEQA Findings of Fact, and Statement of Overriding Considerations. Staff has reviewed such documents prepared pursuant to the provisions of CEQA(Pub. Resources Code, § 21081.6) and adopted by the lead agency.
4. Findings and a Statement of Overriding Considerations made in conformance with the State CEQA Guidelines (Cal. Code Regs., tit. 14, §§ 15091, 15093, and 15096) are contained in Exhibit D, attached hereto.
5. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the CEQA review process, it is staff's opinion that the Project, as proposed, is consistent with its use classification.

STAFF REPORT NO. **C68** (CONT'D)

APPROVALS OBTAINED:

California Department of Fish and Wildlife
California Department of Toxic Substances Control
California Department of Transportation
U.S. Bureau of Land Management
U.S. Bureau of Reclamation
U.S. Department of the Interior
U.S. Fish and Wildlife Service

FURTHER APPROVALS REQUIRED:

County of San Bernardino
Regional Water Quality Control Board
U.S. Army Corps of Engineers

EXHIBITS:

- A. Land Description
- B. Site and Location Map
- C. Mitigation Monitoring Plan
- D. Findings and Statement of Overriding Considerations

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that an FEIR, Addendum, and Subsequent EIR, State Clearinghouse No. 2008051003, were prepared for this Project by the Department of Toxic Substances Control. The FEIR was certified on January 31, 2011, the Addendum was certified on September 4, 2013, and the Subsequent EIR was certified on April 24, 2018. The Commission has reviewed and considered the information contained therein.

Adopt the Mitigation Monitoring Program, as contained in Exhibit C, attached hereto.

Adopt the Findings and the Statement of Overriding Considerations, made in conformance with California Code of Regulations, title 14, sections 15091, 15093, and 15096, subdivision (h), as contained in Exhibit D, attached hereto.

STAFF REPORT NO. **C68** (CONT'D)

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the issuance of this lease for the proposed Project will not substantially interfere with Public Trust needs at this location at this time, and for the foreseeable term of the proposed lease; and is in the State's best interests.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

1. Authorize the termination of Lease No. PRC 8737.1, a 20-year General Lease – Right-of-Way Use as amended, to Pacific Gas and Electric Company, effective June 21, 2018.

2. Authorize the issuance of Lease No. PRC 8737.9, a 49-year General Lease – Other, to Pacific Gas and Electric Company beginning June 21, 2018, for the installation, use, and maintenance of a 12-inch-diameter water pipeline on the old Topock Highway bridge crossing over the Colorado River, groundwater mitigation monitoring wells, and appurtenant structures necessary to facilitate the Topock Compressor Station Groundwater Remediation Project, substantially in the manner described in the Subsequent EIR; as described in Exhibit A and shown on Exhibit B (for reference purposes only) attached and by this reference made a part hereof; consideration being public health and human safety; liability insurance in an amount no less than \$2,000,000 per occurrence, or equivalent staff-approved self-insurance program; and surety bond in the amount of \$25,000.

EXHIBIT A

PRC 8737.9

LAND DESCRIPTION

All that sovereign land lying in the historic bed of the Colorado River, as it existed prior to channelization, adjacent to Sections 5, 6, 8 and 9 of Township 7 North, Range 24 East, S.B.M., bound upstream by the northerly prolongation of a line parallel with and lying 650 feet westerly of the easterly line of said Section 6, and bound downstream by the northerly prolongation of a line parallel with and lying 1200 feet easterly of the easterly line of said Section 8, County of San Bernardino, State of California.

EXCEPTING THEREFROM any portion lying outside of the Groundwater SEIR Project Area as shown on Figure 3-2 of the Draft Subsequent Environmental Impact Report prepared for the Pacific Gas And Electric Company Topock Compressor Station, by ESA (SCH# 2008051003) dated January 2017 on file with the Sacramento Office of the California State Lands Commission.

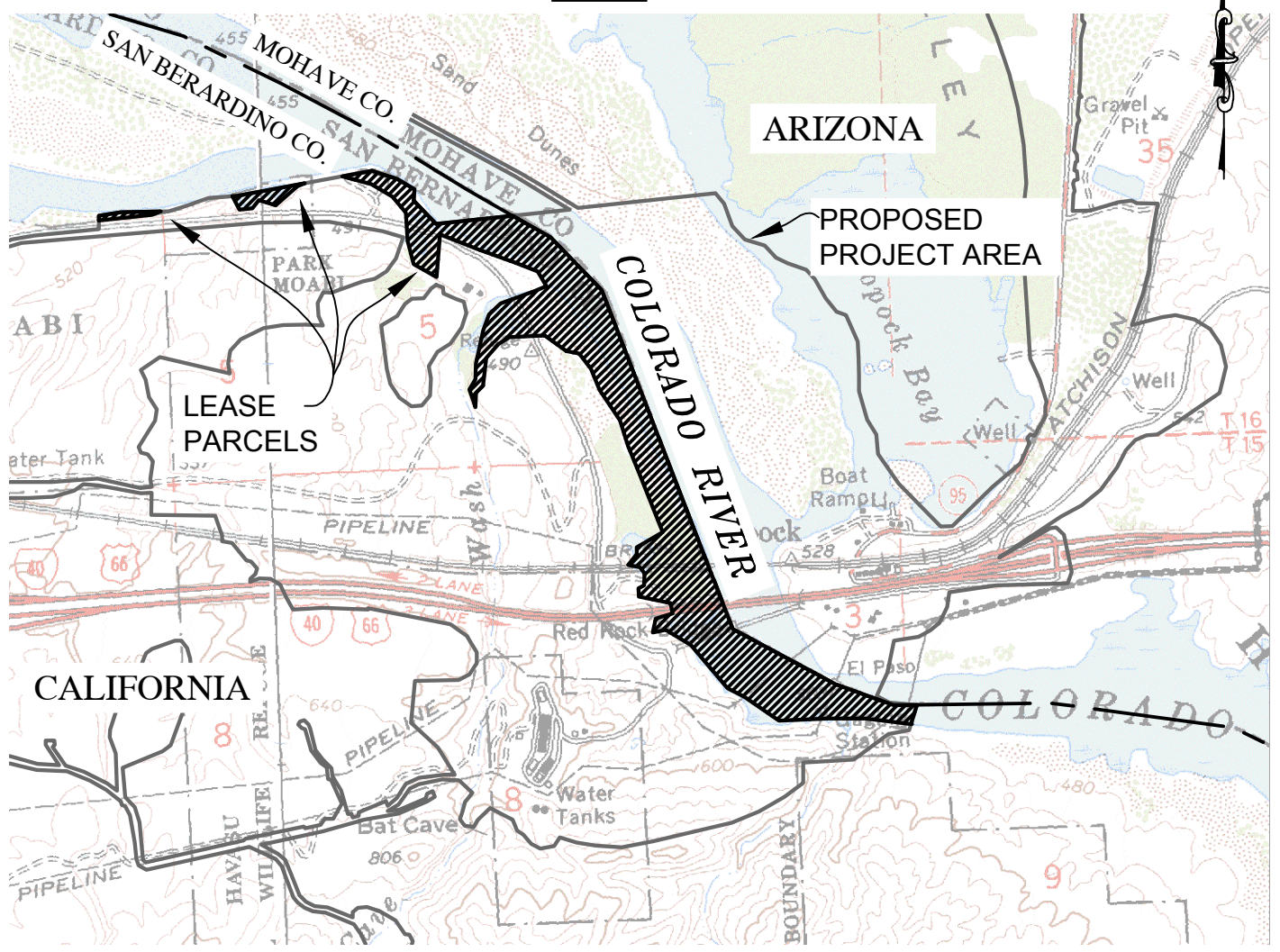
END OF DESCRIPTION

Prepared 12/26/2017 by the California State Lands Commission Boundary Unit.



NO SCALE

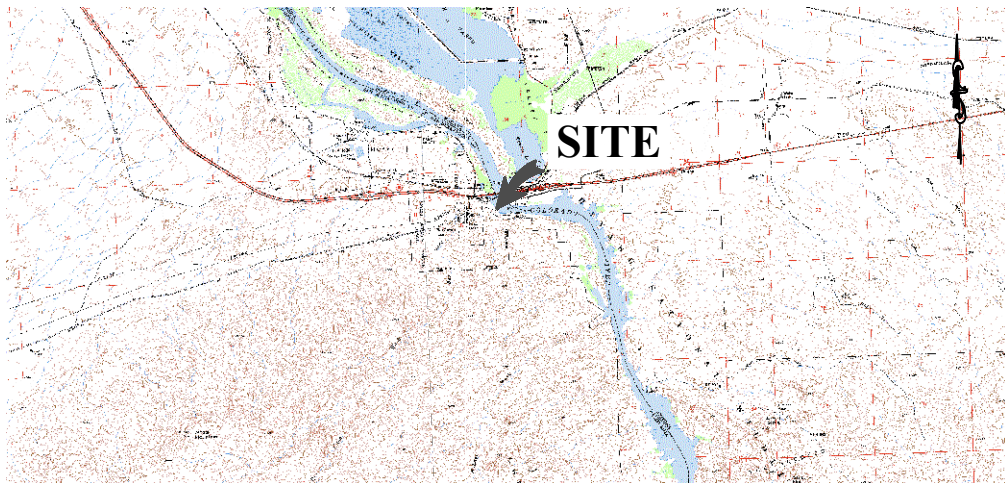
SITE



GROUNDWATER REMEDIATION PROJECT, NEAR NEEDLES

NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

Exhibit B

PRC 8737.9
 PG&E
 GENERAL LEASE -
 OTHER
 SAN BERNARDINO COUNTY



This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM
TOPOCK COMPRESSOR STATION FINAL GROUNDWATER
REMEDIATION PROJECT
(PRC 8737, State Clearinghouse No. 2008051003)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Topock Compressor Station Final Groundwater Remediation Project (Project). The CEQA lead agency for the Project is Department of Toxic Substances Control (DTSC).

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:¹

In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

DTSC certified a Final Environmental Impact Report (EIR), an Addendum to the Final EIR, and a Subsequent EIR, State Clearinghouse No. 2008051003, and adopted a Mitigation Monitoring and Reporting Program (MMRP) for the whole of the Project (see Exhibit C, Attachment C-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMRP prepared by the CEQA lead agency and listed in Table C-1, is incorporated by reference in this Exhibit C. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

- Additions to the text of the mitigation measure are underlined; and
- Deletions of the text of the mitigation measure are shown as ~~strikeout~~ or as otherwise noted.

¹ The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM) ²
AES-1: Substantial Adverse Effects on Scenic Vistas	AES-1
AES-2: Substantial Damage to Scenic Resources within a Scenic Corridor	AES-2
AIR-1: Short-term Construction-Related Emissions of Criteria Pollutants and Precursors	AIR-1, AIR-1a
BIO-1: Potential Fill of Wetlands and Other Waters of the United States/California, and Disturbance or Removal of Riparian Habitat	BIO-1a, BIO-1b
BIO-2: Direct Disturbance of and Loss of Habitat for Special-Status Birds, Desert Tortoise, Ring-Tailed Cat, Nelson's Bighorn Sheep, Special-Status Bats, and Special-Status Plants	BIO-2a, BIO-2b, BIO-2c, BIO-2d, BIO-2e, BIO-2f, BIO-2h
BIO-3: Fish Mortality, Interference with Spawning Habitat, and Other Adverse Aquatic Effects	HYDRO-1
BIO-4: Substantial Interference with Fish or Wildlife Movement Corridors or Nursery Sites	BIO-2f
CUL-1: Cause Substantial Adverse Change in the Significance of a Historical Resource as Defined in CEQA Guidelines Section 15064.5	CUL-1a-1, CUL-1a-2a, CUL-1a-3, CUL-1a-3a, CUL-1a-3c, CUL-1a-3d, CUL-1a-3e, CUL-1a-4, CUL-1a-5, CUL-1a-6, CUL-1a-7, CUL-1a-8q, CUL-1a-9, CUL-1a-10, CUL-1a-11, CUL-1a-12, CUL-1a-13a, CUL-1a-14, CUL-1a-15, CUL-1a-16, CUL-1a-17, CUL-1a-18, CUL-1a-19, CUL-1b/c-1, CUL-1b/c-3, CUL-1b/c-4, CUL-1b/c-4a, CUL-1b/c-4b (see addition below), CUL-1b/c-5, CUL-1b/c-6, CUL-1b/c-7
CUL-2: Cause a Substantial Adverse Change in the Significance of a Unique Archaeological Resource	CUL-1b/c-1, CUL-1b/c-3, CUL1b/c-4, CUL-1b/c-4a, CUL-1b/c-4b (see addition below), CUL1b/c-5, CUL-1b/c-6
CUL-3: Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature	CUL-3
CUL-4: Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries	CUL-4
GEO-1a: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils	GEO-1a
GEO-1b: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils	GEO-1b
HAZ-1: Spills or Releases of Contaminants during Construction, Operation and Maintenance, and Decommissioning Activities	HAZ-1a, HAZ-1b, HAZ-2, HAZ-3

² See Attachment C-1 for full text of each MM taken from the MMRP prepared by the CEQA lead agency.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM) ²
HYDRO-1: Exceedance of Water Quality Standards, Violation of Waste Discharge Requirements, or Degradation of Water Quality	HYDRO-1, HYDRO-1a/2a/3a, HYDRO-1b/2b/3b, HYDRO-4, HYDRO-5, -5a, -5b, -5c, -5d, HYDRO-6, -6a, -6b, -6c
HYDRO-2: Drainage Pattern Alterations	HYDRO-1, HYDRO-1a/2a/3a, HYDRO-1b/2b/3b
HYDRO-3: Polluted Stormwater Runoff	HYDRO-1, HYDRO-1a/2a/3a, HYDRO-1b/2b/3b
NOISE-1: Construction activities associated with the Additional Activity Allowance that could occur during long-term operation and maintenance	NOISE-2
NOISE-2: Groundborne Vibration Impacts Caused by Construction Activities	NOISE-1
NOISE-3: Project-Generated Construction-Related Noise Levels	NOISE-2
NOISE-4: Land Use Compatibility of Future Project Noise Levels with the Topock Traditional Cultural Property	NOISE-1, NOISE-2, CUL-1a-12
CUM-1: Cumulatively Considerable Impacts to Aesthetic Resources	AES-1, AES-2
CUM-2: Cumulatively Considerable Impacts to Cultural Resources	CUL-1a-2a, CUL-1a-3, CUL-1a-3c, CUL-1a-3d, CUL-1a-3e, CUL-1a-4, CUL-1a-5, CUL-1a-6, CUL-1a-7, CUL-1a-8q, CUL-1a-9, CUL-1a-10, CUL-1a-11, CUL-1a-12, CUL-1a-13a, CUL-1a-14, CUL-1a-15, CUL-1a-16, CUL-1a-17, CUL-1a-18, CUL-1a-19, CUL-1b/c-1, CUL-1b/c-3, CUL-1b/c-4, CUL-1b/c-4a, CUL-1b/c-4b (see addition below), CUL-1b/c-5, CUL-1b/c-6, CUL-1b/c-7, CUL-3, CUL-4, CUL-5
CUM-3: Cumulatively Considerable Impacts Related to Noise and Vibration	NOISE-3

CUL-1b/c-4b: Inadvertent Discoveries. During construction, operation and maintenance, and decommissioning phases of the Project, procedures for the treatment of inadvertent discoveries of resources potentially qualifying as historical resources under CEQA shall be implemented in a manner consistent with Section 2.2 “Protocols for the Appropriate Treatment of Archaeological Materials” of the CIMP, and Section 8 “Discoveries” and Appendix C “Discovery Plan” of the CHPMP, and Appendix D “Plan of Action” of the CHPMP. In addition to the parties listed in Section 2.15 of the CIMP as requiring consultation regarding discoveries and review of draft documents, DTSC shall also be included in these processes.

California State Lands Commission (Commission) staff shall be notified of any significant cultural resources or paleontological specimens discovered on lands under the jurisdiction of the Commission. The final disposition of archaeological and historical resources and paleontological specimens from such lands must be approved by the Commission.

If the human remains are Native American and are found on lands under the jurisdiction of the Commission, Commission staff shall also be notified to address any landowner responsibilities.

ATTACHMENT C-1

**Mitigation Monitoring and Reporting Program Adopted by the
Department of Toxic Substances Control**

TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDIATION PROJECT

Mitigation Monitoring and Reporting Program

The California Department of Toxic Substances Control (DTSC) has prepared a subsequent environmental impact report (SEIR) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code, Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.). The SEIR evaluates the reasonably foreseeable and potentially significant adverse environmental impacts associated with the Pacific Gas and Electric (PG&E) Topock Compressor Station (Station) Final Groundwater Remediation Project (Project). The Project involves consideration and potential approval by DTSC of the Final Groundwater Remedy for the treatment of contaminated groundwater at the Station. (Public Resources Code, Section 21166; CEQA Guidelines, Section 15162.)

This SEIR is tiered off a prior EIR, the Topock Compressor Station Groundwater Remediation Project Final Environmental Impact Report (Groundwater FEIR), which provided a programmatic and, in certain instances, a project-level analysis for the conceptual technical methods selected for the final remedy that would remediate contaminated groundwater in and around the Station. After certifying the Groundwater FEIR in January 2011, DTSC adopted the preferred remedy, identified as Alternative E—In Situ Treatment with Freshwater Flushing, and adopted findings, a statement of overriding considerations, and a Mitigation Monitoring Reporting Program (MMRP, herein referred to as the 2011 MMRP). The proposed Project would implement the chosen 2011 remedy through the Final Groundwater Remedy.

Mitigation measures that were approved by DTSC in the 2011 MMRP were related to the design, construction, operation, and decommissioning phases of the remedy. Through the development of this Final SEIR, many of the 2011 MMRP measures have been revised to reflect current conditions, changes to the Project, or otherwise new information. Some of the 2011 EIR mitigation measures have been fulfilled. Consequently, the mitigation measures presented in this MMRP reflect those revisions that have been made through the CEQA process.

Appendix GWMM to the Final SEIR includes the detailed strikeout/underline changes that have been made to the mitigation measures since 2011. Additionally, implementation of some of the mitigation measures in the 2011 MMRP had been undertaken in the years since its adoption, during the multiyear development of the Final Remedy Design which was completed in November 2015. PG&E has provided quarterly mitigation monitoring compliance reports documenting progress in compliance with the 2011 MMRP through the design process beginning in the first quarter of 2013. All mitigation monitoring compliance reports are on file at DTSC's Cypress Office. The 2011 MMRP measures that have been completed as of December 2017 have been indicated as such in this MMRP. These are primarily related to the preparation of various planning and resource studies that are now part of the Final Remedy Design.

CEQA requires a public agency to adopt a reporting or monitoring program at the time of project approval to ensure that all adopted mitigation measures are properly implemented (Public Resources Code, Section 21081.6; CEQA Guidelines, Section 15097). As a result, DTSC will adopt this updated MMRP for the Final SEIR if it also approves the Project. Accordingly, this MMRP resulting from the Final SEIR for the Final Groundwater Remediation Project supersedes and incorporates where appropriate the relevant measures from the 2011 MMRP. It is intended that this MMRP will serve as the enforcement document for all activities associated with the Final Groundwater Remediation Project to be undertaken by PG&E and its contractors, as overseen by DTSC moving forward.

The MMRP is presented in tabular format (Table 1). The table columns contain the following information:

Mitigation Number: Lists the mitigation measures by number, as designated in the Final SEIR, and by environmental resource issue area.

Mitigation Measure: Provides the text of the mitigation measures (by environmental resource issue area), as provided in the Final SEIR, each of which has been adopted and incorporated into the Project. Each mitigation measure indicates in its title whether it is a new mitigation measure since the 2011 Groundwater FEIR or a new mitigation measure that has been required by this Final SEIR. Those measures that have been completed since 2011 are indicated as such.

Timing/Schedule: Lists the trigger and/or time frame in which the mitigation is expected to take place.

Implementation Responsibility: Identifies the entity responsible for implementation of the mitigation measure, subject to DTSC oversight.

Completion of Implementation: DTSC is ultimately responsible for ensuring these mitigation measures are implemented. The “Action” column is to be used by DTSC to describe the action(s) taken to complete implementation. The “Date Completed” column is to be used to indicate when implementation of the mitigation measure has been completed. The DTSC, at their discretion, may delegate implementation responsibility or portions thereof to qualified consultants or contractors. However, DTSC still maintains overall responsibility for implementation of mitigation adopted or incorporated into the Project.

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
AES-1	<p>Substantial Adverse Effects on Scenic Vistas (Groundwater FEIR Measure with Revisions).</p> <p>The proposed Project, including the Future Activity Allowance, shall be designed and implemented to adhere to the design criteria presented below:</p> <ol style="list-style-type: none"> Existing mature plant specimens (i.e., medium- to large-sized trees, large or prominent shrubs, and tall predominately herbaceous) shall be protected in place during construction, operation, and decommissioning phases consistent with CUL-1a-5. The identification of plant specimens that are determined to be mature and retained shall occur as part of the design phase and mapped/identified by a qualified plant ecologist or biologist and integrated into the final design and project implementation consistent with CUL-1a-5. Revegetation of disturbed areas within the riparian vegetation along the Colorado River shall occur concurrently with construction operations. Plans and specifications for revegetation shall be developed by a qualified plant ecologist or biologist before any riparian vegetation is disturbed and shall be implemented consistent with CUL-1a-5. The revegetation plan shall include specification of maintenance and monitoring requirements, which shall be implemented for a period of 5 years after project construction or after the vegetation has successfully established, as determined by a qualified plant ecologist or biologist. Plant material shall be consistent with surrounding native vegetation. The color of the wells, pipelines, reagent storage tanks, control structures, and utilities shall consist of muted, earth-tone colors that are consistent with the surrounding natural color palette. Matte finishes shall be used to prevent reflectivity. Integral color concrete should be used in place of standard gray concrete. The final revegetation plans and specifications shall be reviewed and approved by an architect, landscape architect, or allied design professional licensed in the State of California to ensure that the aesthetic mitigation design objectives and criteria are being met. Planting associated with biological mitigation may contribute to, but may not fully satisfy, visual mitigation. The requirements of the <i>Aesthetics and Visual Resources Protection and Revegetation Plan</i> (C/RAWP Appendix N) shall be implemented throughout the construction, operation and maintenance, and decommissioning phases of the Project, including but not limited to replacement planting procedures (see Section 4.3), maintenance and adaptive management (see Section 5.2), and photo-monitoring (see Section 5.3). These measures apply to new Project components added as part of the Future Activity Allowance, should 	<p>During project construction and operation and maintenance. Maintenance and monitoring plan will be implemented for 5 years after construction or until vegetation has successfully established, as determined by a qualified plant ecologist or biologist</p>	<p>PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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AES-2	<p>they be visible from Key View 5 or any of the other key views identified in the SEIR.</p> <p>Substantial Damage to Scenic Resources Within a Scenic Corridor (Groundwater FEIR Measure with Revisions).</p> <p>The proposed Project shall be implemented to adhere to the design criteria presented below and the Future Activity Allowance, if needed, shall be designed and implemented to adhere to the design criteria below and the Future Activity Allowance, if needed, shall be designed and implemented to adhere to the design criteria below:</p> <ol style="list-style-type: none"> a. A minimum setback requirement of 20 feet from the water (ordinary high water mark or OHWM) shall be enforced, except with regard to any required river intake facilities, to prevent substantial vegetation removal along the river bank. b. Existing mature plant specimens (i.e. medium- to large-sized trees, large or prominent shrubs, and tall predominately herbaceous plants) shall be protected in place during construction, operation, and decommissioning phases. The identification of plant specimens that are determined to be mature and retained shall occur as part of the design phase and mapped/identified by a qualified plant ecologist or biologist and integrated into the final design and project implementation consistent with CUL 1a-5. c. Revegetation of disturbed areas within the riparian vegetation along the Colorado River shall occur concurrently with construction operations. Plans and specifications for revegetation shall be developed by a qualified plant ecologist or biologist before any riparian vegetation is disturbed. The revegetation plan shall include specification of maintenance and monitoring requirements, which shall be implemented for a period of 5 years after project construction or after the vegetation has successfully established, as determined by a qualified plant ecologist or biologist. d. Plant material shall be consistent with surrounding native vegetation. e. The color of the wells, pipelines, reagent storage tanks, control structures, and utilities shall consist of muted, earth-tone colors that are consistent with the surrounding natural color palette. Matte finishes shall be used to prevent reflectivity. Integral color concrete should be used in place of standard gray concrete. f. The final revegetation plans and specifications shall be reviewed and approved by an architect, landscape architect, or allied design professional licensed in the State of California to ensure that the aesthetic mitigation design objectives and criteria are being met. Planting associated with biological mitigation may contribute to, but may not fully satisfy, visual mitigation. 	<p>During project construction and operation and maintenance. Maintenance and monitoring plan will be implemented for 5 years after construction or until vegetation has successfully established, as determined by a qualified plant ecologist or biologist</p>	<p>PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	g. The requirements of the <i>Aesthetics and Visual Resources Protection and Revegetation Plan</i> (C/RAWP Appendix N) shall be implemented throughout the construction, operation and maintenance, and decommissioning phases of the Project, including but not limited to replacement planting procedures (see Section 4.3), maintenance and adaptive management (see Section 5.2), and photo-monitoring (see Section 5.3). These measures apply to new Project components added as part of the Future Activity Allowance, should they be visible from Key View 11 or any of the other key views identified in the SEIR.				
AIR-1	<p>Short Term-Construction Related Emissions of Criteria Air Pollutants (Groundwater FEIR Measure).</p> <p>PG&E shall implement the fugitive dust control measures below for any construction and/or demolition activities:</p> <ul style="list-style-type: none"> • Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions during dust episodes. Use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient; • Cover loaded haul vehicles while operating on publicly maintained paved surfaces; • Stabilize (using soil binders or establish vegetative cover) graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than 30 days, except when such delay is caused by precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions; • Cleanup project-related track out or spills on publicly maintained paved surfaces within twenty-four hours; and • Curtail nonessential earth-moving activity under high wind conditions (greater than 25 miles per hour) or develop a plan to control dust during high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance. 	During all construction, operation and maintenance, and demolition activities	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
AIR-1a	<p>Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors (New Measure).</p> <p>PG&E's construction contractor shall ensure that all off-road equipment with a horsepower greater than 50 horsepower have USEPA certified Tier 4 interim engines or engines that are certified to meet or exceed the NO_x emission ratings for USEPA Tier 4 engines. This measure excludes specialty construction</p>	At a minimum during Phase 1 and Phase 2 construction activities and during Decommissioning of IM-3 Facility when the	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	equipment where Tier 4 interim engines cannot currently be obtained within the industry, or older equipment cannot be retrofitted to meet Tier 4 emissions standards. During construction and decommissioning, the construction contractor shall maintain a list of all operating equipment in use on the Project site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site. For specialty equipment where Tier 4 interim engines are not available, documentation supporting this conclusion shall be included in the equipment files. Once Tier 4 equipment is available for a piece of specialty equipment, it shall be incorporated into the construction fleet, replacing the existing non-Tier 4 piece of equipment. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449	decommissioning phase overlaps with Phase 2 construction			
BIO-1	Potential Fill of Wetlands and Other Waters of the United States and Disturbance or Removal of Riparian Habitat (Measure Completed – no longer applicable).	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>Preparation of CH2M Hill 2013, PG&E 2014a</i>	<i>2013, 2014</i>
BIO-1a	No-net-loss of Jurisdictional Wetlands/Waters Function or Value (New Measure). Unavoidable direct impacts to jurisdictional areas shall be documented by a wetland specialists or Field Contact Representative (FCR) during implementation of the proposed Project. To document unavoidable direct impacts, the extent of work areas near jurisdictional areas shall be delineated in the field using GPS technology and pre- and post-impact conditions of jurisdictional areas documented with photographs. The nature of construction within work areas shall also be described, including the Project facilities installed, equipment utilized, and duration of construction activities. Documentation of unavoidable impacts shall be submitted to CDFW and DTSC to ensure adequate mitigation is provided consistent with the requirements below. Unavoidable direct impacts to non-disturbed jurisdictional ephemeral waters (estimated at up to approximately 1.61 acres including direct impacts resulting from planned facilities and additional facilities constructed under the Future Activity Allowance) shall be mitigated to ensure no-net-loss of function or value. Mitigation shall include both (a) and (b) detailed below. Mitigation for ground disturbance associated with restoration and enhancement activities shall not be required. a) In-place restoration of jurisdictional areas directly impacted by construction at a 1:1 ratio (i.e., 1 acre of restoration for each acre of	Implementation of habitat restoration plans shall occur during construction and operation and maintenance. Compensation for unavoidable impacts shall occur prior to unavoidable impacts occurring	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>direct impact to non-disturbed jurisdictional area) shall occur in accordance with the <i>Havasu National Wildlife Refuge Habitat Restoration Plan</i> (Appendix G to the C/RAWP (CH2M Hill 2015b)) and <i>Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats</i> (Appendix O to the C/RAWP (CH2M Hill 2015b)). In-place restoration of areas directly impacted during construction will occur in two phases. The first phase will involve restoration within the areas directly impacted by construction where it will not interfere with continued operation and maintenance of the proposed Project (e.g., restoration of temporary construction work areas). The first phase of restoration shall begin within 1 year of completing construction. The second phase will involve restoration of areas that will be occupied by Project facilities to occur following decommissioning of the proposed Project. Restoration of jurisdictional areas following decommissioning of the proposed Project will be guided by a Final Habitat Restoration Plan (refer to Mitigation Measure BIO-1b).</p> <p>b) To address temporal loss of jurisdictional areas directly impacted by construction, PG&E shall provide compensatory mitigation at a minimum 2:1 ratio (2 acres of compensation for each acre of direct impacts to non-disturbed jurisdictional area). Compensatory mitigation to address temporal loss shall be agreed upon with CDFW prior to the start of construction, involve the same amount and quality of jurisdictional area(s) disturbed, and include one or more of the following approaches: 1) acquisition and preservation in perpetuity; 2) restoration; and/or 3) enhancement. Acquisition and preservation may include establishment of a conservation easement or purchase of credits from a CDFW- and/or USACE -approved mitigation banking program, or compliance with an applicable CDFW and/or USACE-approved in-lieu fee program. Restoration may include conversion of non-wetland habitat to functioning wetland habitat. Enhancement may include removal of non-native species in existing wetland habitat. As summarized in the technical memorandum, <i>Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts</i>, included as Appendix V to the C/RAWP (CH2M Hill 2015b), PG&E has identified restoration areas within the historical floodplain of the Colorado River. The historical floodplain no longer functions as a riparian habitat with hydrologic connectivity to the river; therefore, restoration in the historical floodplain may qualify as compensatory mitigation to address temporal loss if hydrologic function can be restored. PG&E shall prepare a mitigation plan prior to the start of construction to specify methodology, criteria for meeting the 2:1 mitigation requirement, and monitoring and reporting for compensatory mitigation. The plan shall be subject to CDFW approval and in conformance with the identified performance standards, and submitted</p>				

TABLE 1
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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>to DTSC, BLM, BOR, USFWS, DOI, Interested Tribes, and other appropriate landowners for review and comment within 60 days prior to finalization, as appropriate based on location of impacts.</p> <p>Restoration of jurisdictional areas within the Project Area shall be guided by the <i>Havasu National Wildlife Refuge Habitat Restoration Plan</i> (Appendix G to the C/RAWP (CH2M Hill 2015b)) and <i>Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats</i> (Appendix O to the C/RAWP (CH2M Hill 2015b)), as approved by CDFW, USFWS, and DOI. Implementation of these plans will be informed by the technical memorandum, <i>Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts</i>, included as Appendix V to the C/RAWP (CH2M Hill 2015b), which provides preliminary information on the condition within fourteen proposed mitigation planting areas.</p> <p>The habitat restoration plans also specify on-site restoration success criteria, monitoring and reporting requirements, and adaptive management guidelines for salvage and replanting of trees, shrubs, and perennial species. In accordance with the habitat restoration plans, removal of riparian trees (e.g., palo verde trees) shall be replaced at a 3:1 ratio (i.e., planting three trees in restoration areas for each tree removed during construction). The success criteria for mitigation plantings shall be a final minimum plant replacement ratio of 2.25:1 (75% overall survival rate) of mitigation plantings at the end of a minimum 5-year monitoring period. Adaptive management guidelines outline modifications to restoration approaches, as appropriate, to ensure successful establishment of native vegetation and desired density of cover of plants. As required by the plans, the following adaptive management actions shall be implemented if success criteria are not being met: weed control, irrigation modification, herbivory protection, and additional plantings. Reporting to DTSC, CDFW, and USFWS shall be completed within 90 days of completing each monitoring year.</p> <p>The habitat restoration plans also specify design and construction avoidance and minimization measures, including:</p> <ul style="list-style-type: none"> • Locating pipelines, wells, and staging and storage areas along roadways, pipeline rights-of-way, and other previously disturbed areas to avoid impacts to vegetation to the extent feasible. • Performing pre-activity surveys prior to ground disturbance to identify and demark with flagging, fencing, and/or signage areas of native vegetation and sensitive habitats in the immediate vicinity of the construction areas. • Providing construction workers with environmental awareness training regarding biological resources including sensitive species and habitats. 				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
BIO-1b	<p>Final Remedy Restoration Plan (New Measure).</p> <p>A Final Remedy Restoration Plan shall be developed and implemented following decommissioning of the proposed Project. The Final Remedy Restoration Plan will address restoration of areas that were impacted during construction, operation and maintenance, and decommissioning of the proposed Project, specifying salvage/replanting measures, as well as success criteria, monitoring, and adaptive management requirements for restored areas. Success criteria for restoration areas will be similar to that identified in the existing habitat restoration plans (i.e., 75% overall survival rate of mitigation plantings at the end of a minimum 5-year monitoring period). Adaptive management actions to ensure successful establishment of native vegetation and desired density of cover of plants will include weed control, irrigation modification, herbivory protection, and additional plantings. The plan shall be submitted to DTSC, CDFW, BLM, BOR, USFWS, DOI, and other appropriate landowners for review. The Final Remedy Restoration Plan shall also be provided to Interested Tribes for review and comment, consistent with Mitigation Measure CUL-1a-16.</p>	Following decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
BIO-2a	<p>Disturbance of Special-Status Birds and Loss of Habitat (Groundwater FEIR Measure with Revisions).</p> <p>The proposed Project has been designed to minimize removal of habitat for special-status birds. Impact avoidance and minimization measures required by the BIAMP shall be implemented (refer to Appendix S of the C/RAWP (CH2M Hill 2015b)). Avoidance and minimization measures required by the BIAMP include prohibiting construction near or in special-status bird habitat; limiting construction during the breeding seasons; requiring an on-site biological monitoring during field activities; implementing buffers around active nests to the extent practical and feasible to limit noise and visual disturbances; and conducting worker awareness training and monitoring to assess the activity effect, ambient activities, site conditions, and bird behavior to determine the efficacy of nest avoidance buffers.</p>	Before and during ground-disturbing construction, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
BIO-2b	<p>Disturbance of Desert Tortoise and Loss of Habitat (Groundwater FEIR Measure with Revisions).</p> <p>To the extent feasible, project construction (including planned facilities and those potentially constructed as part of the Future Activity Allowance) shall be designed to minimize removal of habitat for the desert tortoise. Before any ground-disturbing project activities begin, a qualified desert tortoise biologist shall identify potential desert tortoise habitat in areas that could be affected. Through coordination with the designated qualified biologist, PG&E shall ensure that the footprints of Project elements and construction zones, staging areas, and access routes are designed to avoid direct or indirect effects on potential desert tortoise habitat to the extent feasible. Through coordination with the designated qualified biologist, PG&E shall ensure that the footprints of Project facilities and construction zones, staging areas, and access routes are designed</p>	Before and during ground-disturbing activities, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>to avoid direct or indirect effects on potential desert tortoise habitat to the extent feasible. In areas where impacts to potential desert tortoise habitat are unavoidable, measures outlined in the PBA and in the USFWS letter concurring with the PBA, shall be implemented, as described below.</p> <p>A qualified desert tortoise biologist shall conduct pre-activity desert tortoise clearance surveys immediately prior to activities that would result in unavoidable impacts to tortoise habitat. The pre-activity survey will occur immediately prior to ground-disturbance. If feasible, the preconstruction desert tortoise surveys would coincide with one of the two peak periods of desert tortoise activity (i.e., if feasible, the surveys should be conducted in either the period from April through May, or from September through October). Otherwise, pre-activity clearance surveys shall be in full accordance with the substantive requirements of USFWS protocols. Any desert tortoise burrows and pallets outside of, but near, work areas shall be flagged so that they may be avoided during work activities. At conclusion of work activities, all flagging shall be removed. Should any live tortoises be found during the clearance survey, or if a tortoise moves into the work area, all work shall stop immediately and the animal shall be left to move out of the work area on its own accord. To the extent feasible, tortoises shall not be handled. PG&E will have a USFWS-approved desert tortoise handler available if and when a tortoise requires active relocation. USFWS shall be contacted prior to handling any live tortoises. All encounters of desert live tortoises shall be reported to USFWS, BLM, CDFW, and DTSC. Information to be reported will include for each individual: the location (narrative, vegetation type, and maps) and date of observation; general conditions and health; any apparent injuries and state of healing; and diagnostic markings.</p> <p>PG&E shall designate a field contact representative (FCR) who will be responsible for overseeing compliance with proper execution of the mitigation measures. The FCR will be on-site during implementation of all ground disturbing activities. The FCR shall be trained by the qualified desert tortoise biologist and have authority to halt activities that are in violation of the mitigation measures/or pose a danger to listed species. The FCR will have a copy of the mitigation measures and may be a project manager, PG&E representative, or qualified biologist. All employees and contractors shall be required to attend a worker awareness training prior to working on the proposed Project. The FCR shall maintain record of all employees and contractors who have completed the worker awareness training.</p> <p>USFWS may identify additional conservation measures should Project plans change, or if new information regarding the distribution or abundance of desert tortoise becomes available. PG&E shall implement any additional conservation measures identified by USFWS through the Section 7 consultation process.</p>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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BIO-2c	<p>Disturbance of Special-Status Species and Loss of Habitat Caused by Decommissioning (Groundwater FEIR Measure with Revisions).</p> <p>To avoid impacts on special-status species that may occur within the project area as a result of decommissioning activities, an Avoidance and Minimization Plan shall be developed and implemented through consultation with CDFW, BLM, and USFWS. The Avoidance and Minimization Plan will specify species-specific measures, including seasonal restrictions for decommissioning activities (i.e., avoidance of the avian breeding season and maternity roosting season for bats where habitat exists) as needed, as well as avoidance buffers around known locations of special-status species or their habitats. Avoidance and minimization measures identified in the plan shall be based on surveys conducted prior to decommissioning, and during the breeding season (as previously defined in the Groundwater FEIR for each species or suite of species). To the extent appropriate, the Avoidance and Minimization Plan for decommissioning activities will include applicable measures identified in the existing BIAMP and PBA. Restoration of any disturbed areas shall include measures to achieve no net loss of habitat functions and values existing before project implementation. These measures shall be achieved by developing and implementing a Final Remedy Restoration Plan (refer to Mitigation Measure BIO-1b). The plan shall include a revegetation seed mix or plantings design, a site grading concept plan, success criteria for restoration, a monitoring plan for achieving no net loss of habitat values and functions, and an adaptive management plan. Success criteria for restoration areas will be similar to that identified in the existing habitat restoration plans (i.e., 75% overall survival rate of mitigation plantings at the end of a minimum 5-year monitoring period). Adaptive management actions to ensure successful establishment of native vegetation and desired density of cover of plants will include weed control, irrigation modification, herbivory protection, and additional plantings. The Final Remedy Restoration Plan shall be submitted to DTSC, CDFW, BLM, BOR, USFWS, DOI, and other appropriate landowners for review. The Final Remedy Restoration Plan shall also be provided to Interested Tribes for review and comment, consistent with Mitigation Measure CUL-1a-16.</p>	Prior to the start of decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
BIO-2d	<p>Disturbance to Ring-Tailed Cat Individuals and Habitat (New Measure).</p> <p>The following measures shall be implemented to avoid and minimize impacts to ring-tailed cat:</p> <ol style="list-style-type: none"> i. Pre-activity surveys for ring-tailed cats shall be conducted by a qualified biologist with species-specific experience prior to the start of ground disturbing activities (including during construction, operation and maintenance, and decommissioning phases) where suitable denning habitat is present. No activities that will result in disturbance to dens or individual ring-tailed cats will proceed prior to completion of the surveys. If no active dens are found, no further action is needed. If a ring-tailed cat den is present, additional measures shall be 	Before and during ground-disturbing construction and operation and maintenance activities, and prior to the start of decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>implemented as outlined below, and the CDFW shall be notified of any active dens within the proposed disturbance area.</p> <p>ii. If an active ring-tailed cat den is found during pre-activity surveys, Project facilities that may result in direct impacts to the active den shall be reconfigured to avoid the loss of the den if feasible. If Project facilities cannot be modified to avoid a den, activities with the potential to disturb the den shall cease and CDFW shall be contacted immediately. If approved by CDFW, demolition of the den site shall commence only outside of the breeding season (February 1 to August 30) when the den has been confirmed to be vacated. If an occupied non-breeding den is found in an area scheduled to be impacted, prior to disturbance, the CDFW shall be notified to review and approve the proposed procedures to ensure that no take of the species occurs as a result of the action. Areas with unoccupied dens that need to be removed shall first be disturbed at dusk, just prior to removal that same evening, to allow adult ring-tailed cats to escape during the darker hours.</p>				
BIO-2e	<p>Disturbance of Nelson's Bighorn Sheep (New Measure).</p> <p>If a Nelson's bighorn sheep is observed during ground-disturbing activities (including during construction, operation and maintenance, and decommissioning phases), work within 125 feet of individuals shall be halted (CDFW 2016). Project activities can recommence after the bighorn sheep moves more than 125 feet away on its own. If proximity of Nelson's bighorn sheep to a proposed construction area may result in construction delays, PG&E shall contact CDFW prior to proceeding with ground disturbing activities to determine an appropriate course of action.</p>	During ground-disturbing construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
BIO-2f	<p>Disturbance or Loss of Special-status Bat Species (New Measure).</p> <p>Bats occupying Roost 9 (refer to Figure 4.3-7) shall be safely excluded after the maternity season (which ends August 31) and before bats go into hibernation or torpor (which begins October 31) through the use of a one-way door. Exclusion of bats shall be performed by a biologist holding a Memorandum of Understanding from CDFW to handle bats in California or a biologist otherwise licensed by the State of California to do so. After bats are safely excluded, fast drying foam shall be used to fill the void to prevent bats from re-entering the cavity.</p> <p>To the extent possible, ground disturbance within proximity of suitable maternity roosting habitat for special-status bat species as shown in Figure 4.3-7 should occur outside the maternity season (March 15 through August 31). If activities critical to meeting the Project objectives are determined necessary during the maternity season, measures (i) through (v) below will be implemented. Measures</p>	Before and during ground-disturbing construction, operation, and maintenance activities, and prior to the start of decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	(i) through (v) are not required for activities implemented outside the maternity season.				
	<p>i. High- and low-frequency noise disturbance shall be minimized by establishing avoidance buffers around known roost locations. Required buffer distance will vary by roost site and noise source. Table 4.3-5 provides buffer requirements for known roosting sites and noise source. Note, vehicles and heavy equipment may travel under the railroad bridges on National Trails Highway as these vehicles are generally moving quickly and are not expected to create much frequency noise while passing under the bridges.</p> <p>ii. To minimize potential effects to bats during nighttime activities, the Project must reduce or eliminate light levels at night. If artificial lighting at night is needed, floodlights shall be adjusted so that the angle of the beam is less than 70 degrees and directed away from roost sites. All nighttime lights shall be directed downward if possible. If lighting is required for minimum safety and security purposes, light barriers shall be used to reduce the potential for light to reach roosts. For example, if lights are needed to ensure safety of a work area, the light could be positioned so that a hillside blocks the light reaching the roosts sites. Smaller barriers, such as plywood sheeting, can be used, but lighting shall not surround a roost within the given buffer zones. Lights with high blue-white or ultraviolet content shall be avoided. When using nighttime lighting a buffer of 250 feet shall be maintained between every light source near roost sites 2 through 9, and a buffer of 400 feet shall be maintained near roost sites 1 and 10 (Table 4.3-5).</p> <p>iii. To minimize effects of increased human activities, pedestrians shall not approach active roosts during the maternity season, and a 65-foot buffer shall be maintained between roosts and foot traffic.</p> <p>iv. To minimize air quality degradation near roosts, stationary heavy equipment vehicles, large generators, and large idling trucks producing diesel exhaust shall not operate for more than 2 minutes within 250 feet of a bat roost (Table 4.3-5). Vehicles shall not idle their engine while under a bridge.</p> <p>v. A biological monitor shall be on-site during ground disturbing activities within proximity of roosts to ensure avoidance and minimization measures (including avoidance buffers) are properly implemented.</p>				

Table 4.3-5 Bat Roost Buffer Distances Per Equipment Category¹

Roost Site	Buffer Distance (feet) by Equipment Category ²					
	Construction Trucks and Heavy Equipment	Small Vehicles	Drilling, Trenching, and Light Equipment	Light Source	Pedestrian Traffic and Water Sampling Equipment	Stationary Diesel Sources > 2 minutes
1	120	90	150	400	65	250
2	90	65	150	250	65	250
3	90	65	150	250	65	250
4	90	65	150	250	65	250
5	90	65	150	250	65	250
6	90	65	150	250	65	250
7	90	65	150	250	65	250
8	90	65	150	250	65	250
9	90	65	150	250	65	250
10	90	65	150	250	65	250
Hypothetical Townsend's big-eared bat roost	400	200	200	400	200	250

¹ Roost buffers shall be implemented when ground disturbing activities are scheduled to occur during the maternity season (March 15 through August 31). Roost buffers are not needed for activities occurring outside the maternity season.

² Equipment Categories (see Appendix BOD for more detail):

Construction Trucks and Heavy Equipment/Stationary Diesel Exhaust Sources: e.g., dump trucks, 18-wheeled flatbed trucks, front-end loaders, water trucks.

Small Vehicles: e.g., pick-up trucks, UTVs.

Drilling, Trenching, and Light Equipment: e.g., excavators, backhoes, road graders, drill rigs, trenching machines.

Pedestrian Traffic and Water Sampling Equipment: e.g., hand tools, water quality instruments.

Source: H.T. Harvey & Associates 2016

Because roosting bats, including maternity colonies, switch roosts especially on a season-by-season basis, roost locations shall be identified by a qualified biologist specializing in bats at least once each for the spring and summer periods of the maternity season once every 3 years. Additionally, because western red bats could potentially breed in the large tamarisk groves located in Arizona, acoustic surveys for a minimum of three consecutive nights during fair weather (above 50 degrees Fahrenheit, no rain or high winds) during the summer maternity season shall occur once every 3 years. If western red bats are recorded acoustically, an attempt to locate active roost sites shall occur to establish appropriate buffer zones around each roost. If known roost sites do not change locations after three sets of surveys (over the course of 9 years) roosts shall be surveyed for spring and summer periods once every 5 years thereafter. Avoidance and minimization measures described (i) through (v) shall be implemented when activities are planned near newly discovered roosting locations between March 15 and August 31.

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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BIO-2g	<p>Disturbance of Northern Mexican Gartersnake (New Measure).</p> <p>The following measures, as detailed in the USFWS Concurrence Letter (USFWS 2017), shall be implemented for activities undertaken within 600 feet of potential northern Mexican gartersnake habitat at the southern end of Topock Marsh in Arizona. These measures are additional to the general measures required by Section 3.4 of the PBA (included as Appendix U to the C/RAWP).</p> <ol style="list-style-type: none"> Workers shall exercise caution when traveling near potential gartersnake habitat along the southern margin of Topock Marsh. During the most-active season for northern Mexican gartersnakes (February 1st to November 30th), workers will not exceed 10 mph when traveling off-road to maximize the likelihood that gartersnakes would be seen and avoided by drivers. During the inactive season (December 1st to January 31st) workers will not exceed 25 mph when traveling off-road. Construction personnel will abide by the posted speed limit while traveling on the Oatman-Topock Highway. Work will stop if a gartersnake is found within the immediate area to be disturbed and the gartersnake will be allowed to leave the site on its own volition. A qualified biologist shall perform preconstruction surveys prior to ground disturbing activities with the intention of identifying potential microhabitat sites (artificial or natural cover such as debris, wood, or rock piles, wildcat dump sites, high rodent burrow densities, etc.) favorable to gartersnakes in the disturbance area to focus search effort for potential gartersnakes. When possible, ground disturbing activities should be avoided when snakes may be inactive and underground, in order to avoid injury to snakes. Construction will be completed when the northern Mexican gartersnake is active (February 1st through November 30th). Material stockpiles located near the southern margin of Topock Marsh shall be limited to designated storage areas that are more than 600 feet from potentially suitable northern Mexican gartersnake habitat or on the opposite side of the Oatman Highway. All open holes and trenches shall be inspected for trapped gartersnakes at the beginning, middle, and end of the work day, at a minimum. During excavation of trenches and to the extent possible, earthen ramps or wooden planks shall be provided to facilitate the escape of any wildlife species that may inadvertently become entrapped and to leave the site on its own volition (adapted from General Project Management Measure Number 17 of the PBA [Appendix U to the C/RAWP (CH2M Hill 2015b)]). 	During ground-disturbing construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

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BIO-2h	<p>Disturbance of Special-Status Plants (New Measure).</p> <p>To reduce potential construction-related impacts to populations of mousetail suncup and other potentially occurring special-status plant species, at least one pre-construction survey shall be conducted prior to the start of any ground-disturbing activities in areas of suitable habitat. The survey shall be conducted in areas where construction is planned and during the blooming period of those species which are either known to occur or likely to occur in the area (i.e., generally March through May but dependent on rainfall patterns). The survey shall be conducted by a qualified botanist skilled at identification of the plant species in the region. The qualified botanist shall determine where pre-construction surveys are required based on existing habitat conditions. The locations of identified special-status plants shall be flagged and mapped using GPS, and a construction avoidance buffer of at least 50 feet where possible shall be established at identified locations to ensure no direct or indirect impacts occur. If the work cannot be conducted outside of the 50-foot buffer, the qualified botanist will identify construction limits and access routes that avoid impacts to known plants. PG&E shall not proceed with ground-disturbing activities that may adversely impact areas within 50 feet of special-status plants without first conferring with CDFW.</p> <p>To the maximum extent feasible, additional Project facilities to be constructed under the Potential Future Activity Allowance shall be sited to avoid suitable habitat for special-status plant species. If additional Project facilities to be constructed under the Potential Future Activity Allowance cannot be sited to avoid suitable habitat, one of the following measures shall apply.</p> <ul style="list-style-type: none"> • Assume suitable habitat is occupied by special-status plant species and provide mitigation (as prescribed in (i) through (iii) below); or • Verify absence or avoidance of individuals by performing focused presence/absence surveys within the suitable habitat to be impacted. Verification of presence/absence shall require data from at least 2 years of focused surveys within the previous 5 years. Focused presence/absence surveys shall be performed by a qualified botanist during the blooming period of potentially occurring species (i.e., generally March through May but dependent on rainfall patterns). If special-status plant species are observed and avoidance cannot be achieved, mitigation shall be provided (as prescribed in (i) through (iii) below). <p>Results of all surveys performed following construction of the Proposed Project shall be incorporated onto a comprehensive map of suitable habitat and known rare plant populations within the Project Area.</p> <p>As noted above, if disturbance within 50 feet of a special-status plant species cannot be avoided, PG&E shall contact CDFW to determine appropriate minimization and mitigation measures. Such measures may include, but may not</p>	Before ground-disturbing construction, operation and maintenance activities, and prior to decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	<p>be limited to, the approaches listed below. PG&E shall not proceed with ground disturbing activities that may directly or indirectly impact areas within 50 feet of special-status plants without first conferring with CDFW. The appropriate means to mitigate unavoidable impacts shall be determined based on coordination with CDFW while taking into account the nature and extent of unavoidable impacts and the species' rarity and known distribution within the Project Area. Mitigation may include a combination of the approaches outlined below, or other approaches determined by CDFW to sufficiently mitigate the impact. To the extent possible, mitigation of unavoidable impacts to special-status plants may occur in conjunction with mitigation for temporal loss of jurisdictional wetlands and waters.</p> <p>i. <i>Seed Collection for Restoration:</i> Seed from individuals to be impacted would be collected prior to ground-disturbing activities. The seed would be collected following the protocols set forth by the Center for Plant Conservation and, if long-term storage is necessary, placed in a secure seed bank facility such as the Agricultural Research Service National Center for Genetic Resources Preservation in Fort Collins, Colorado. Collected seed would be applied to restoration areas within the Project Area. Restoration plans developed for the proposed Project would be revised to include success criteria for restoration of the special-status plant species to ensure successful re-establishment of the impacted species. Success criteria for impacted special-status plants would be developed through coordination with CDFW.</p> <p>ii. <i>Enhancement of Known Populations:</i> Known populations of the species to be impacted would be enhanced by undertaking actions to increase the size of the known population. Such actions may include improving the quality of occupied habitat (e.g., invasive species removal) and/or seeding to facilitate population expansion. Enhancement of known populations may occur at off-site populations that are currently conserved or within the occupied portions of the Project Area that can be conserved. An enhancement plan for impacted special-status plants would be developed through coordination with CDFW. The plan shall be approved by CDFW and submitted to DTSC, BLM, BOR, USFWS, DOI, and Interested Tribes for review and comment prior to finalization.</p> <p>iii. <i>Preservation of Occupied Habitat:</i> Habitat occupied by the species to be impacted would be permanently protected by establishing a conservation easement. PG&E would coordinate with CDFW to determine the conditions of the conservation easement, including the required acreage of occupied habitat to be conserved and requirement monitoring and management of the conserved population. The agreed upon conditions would be detailed in a mitigation plan for impacted special-status plants. The plan shall be</p>				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	approved by CDFW and submitted to DTSC, BLM, BOR, USFWS, DOI, Interested Tribes, and other appropriate landowners for review and comment prior to finalization.				
CUL-1a-1	<p>Avoidance and Preservation in Place (Groundwater FEIR Measure with Revisions).</p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, PG&E shall carry out all Project activities, and shall require all subcontractors to implement established protocols regarding Project activities, in ways that avoid, minimize, and mitigate significant impacts to resources associated with the Topock TCP, consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7.1 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&E, Interested Tribes, and respective landowners.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-2	<p>Develop Tribal Access Plan (Measured Completed – Tribal Access Plan attached as Appendix P of the C/RAWP)</p>	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>Tribal Access Plan (Appendix P of C/RAWP)</i>	<i>November 2015</i>
CUL-1a-2a	<p>Implement Tribal Access Plans (New Measure).</p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, on non-federal land, Tribal access shall be permitted in a manner consistent with Section 2.1 “Protocols for Continued Tribal Coordination” of the CIMP (as described below in Mitigation Measure CUL-1a-8q) and “Protocol to Preserve Tribal Member’s Access to, and Use of, the Project Area” as included in Appendix P of the C/RAWP, and on federal land, Tribal access will be governed by the provisions of Appendix B “Tribal Access Plan” of the CHPMP.</p> <p>Procedures required by Appendix P of the C/RAWP include protocols and timelines for requesting access to PG&E property for religious, spiritual, or other cultural purposes and notification procedures (for additional details on requirements of the CIMP see below Mitigation Measure CUL-1a-8q, Section 2.11).</p> <p>Procedures required by Appendix B of the CHPMP include allowing Interested Tribes to access federal lands without specific authorization for the purposes of collecting materials (such as plants and minerals) or for traditional or ceremonial noncommercial uses; protocols for obtaining access permission for other purposes (such as larger or overnight gatherings); privacy measures that prohibit</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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CUL-1a-3	<p>recording Tribal activities; and closure of some areas and roads to public access.</p> <p>Site Security (Groundwater FEIR Measures with Revisions). During construction, operation and maintenance, and decommissioning of the Project, PG&E shall enhance existing measures to prevent and reduce incursions from recreational and/or other outside users from affecting unique archeological and historically significant resources, including resources within the Topock TCP, by implementing Measures CUL-1a-3a, -3c, -3d, and -3e:</p>	<p>Prior to and during construction, operation and maintenance, and decommissioning activities</p>	<p>PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.</p>		
	<p>CUL-1a-3a: Professional Qualifications and Site Condition Assessment (Groundwater FEIR Measure with Revisions). PG&E's approved Qualified Cultural Resource Consultant shall carry out all cultural resources work associated with the Project and implement the Mitigation Monitoring and Reporting Program (MMRP). Cultural resources consulting staff shall meet, or be under the direct supervision of individuals meeting, the minimum professional qualifications standards set forth by the Secretary of the Interior (codified in 36 CFR Part 61; 48 FR 44739), as provided in Stipulation XI.A of the PA. In the event that PG&E needs to retain a new Qualified Cultural Resource Consultant, or additional cultural consultants, DTSC shall have approval authority over PG&E's selection of cultural resources consultants.</p> <p>During construction, operation and maintenance, and decommissioning of the Project, the Qualified Cultural Resources Consultant shall conduct yearly site condition assessments of documented historical resources (as identified in Table 4.4-2 of this SEIR, as well as any future resources identified within the Project Area, and any additional resources that the BLM requests be included in the annual site condition assessments), including site condition assessments of the Topock TCP, to determine if substantial adverse changes have occurred relative to the condition of the historical resources during the past year. Site condition assessments may occur less frequently or may be limited in geographic scope upon approval by DTSC and in coordination with PG&E, Interested Tribes, and BLM. PG&E shall offer to retain a Tribal monitor at historic rates of compensation or Tribal representatives designated by the Tribal Council or chairperson, if so requested, to accompany the Qualified Cultural Resources Consultant during the site condition assessments. Annual site condition assessment reports in the established format shall be prepared documenting the results of the site condition assessments. PG&E shall provide reports to DTSC and the Interested Tribes for review and comment in accordance with CIMP Section 2.3 "<i>Protocols for the Review of Cultural Resource-Related Documents</i>" and Section 6.6.5 "<i>Periodic Site Monitoring</i>" of the CHPMP. Based on the results of the report, DTSC may request that PG&E initiate a meeting with agencies and</p>				

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	Interested Tribes to discuss the findings within 30 days of submittal of the reports.				
	CUL-1a-3b: Develop Site Security Plan (Measure Completed – Site Security Plan attached as Appendix Q of the C/RAWP).	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>Site Security Plan (Appendix Q of the C/RAWP)</i>	<i>November 2015</i>
	CUL-1a-3c: Coordination with BLM and San Bernardino County (Groundwater FEIR Measure with Revisions).				
	<p>PG&E shall continue to coordinate with BLM and San Bernardino County to facilitate outreach to the staff at Moabi Regional Park, requesting that they communicate to visitors the parts of the Project Area that are off limits to off-road vehicle usage because of health and safety concerns, public lands management plans, or landowner requests. PG&E shall make a good faith effort to involve Interested Tribes in this outreach effort, providing Interested Tribes with the opportunity to comment on outreach materials or provide a Tribal representative the opportunity to participate in the outreach activities. As part of this outreach effort, PG&E shall work with Moabi Regional Park and offer to design, develop, and fund the installation of an informational display (e.g., bulletin board, kiosk) within Moabi Regional Park that informs visitors of the work being done in connection with the Project.</p> <p>As provided in Appendix P of the C/RAWP, PG&E shall use information gathered during previous meetings with BLM, San Bernardino Regional Parks Department, Moabi Regional Park concessionaires, and Interested Tribes to facilitate the execution of visitor outreach materials. PG&E shall develop draft visitor outreach materials; develop a draft training session for Moabi Regional Park visitor-contact employees; develop display design concepts and draft informational content; and develop a draft plan for executing other outreach ideas identified during meetings. Once initial materials and plans are drafted, PG&E shall consult with the BLM, San Bernardino Regional Parks Department, Moabi Regional Park concessionaires, and Interested Tribes and provide these stakeholders an opportunity to review and comment on any outreach plan prior to its implementation. PG&E shall initiate conversations with key stakeholders (i.e., BLM, San Bernardino County, Moabi Regional Park, and Interested Tribes) within six months of approval of the Final Remedy Design.</p> <p>In addition to Appendix P of the C/RAWP, PG&E shall complete and implement outreach materials and plans prior to the start of construction. Materials shall be reviewed by PG&E at each phase of the Project and may be updated with input from Interested Tribes and with approval by DTSC, as the Project progresses.</p>				
	CUL-1a-3d: Signage (Groundwater FEIR Measure with Revisions).				

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>PG&E shall post signage to indicate those parts of the Project Area that are off limits to off-road vehicle usage due to possible health and safety concerns and to reduce potential damage to environmental resources. If agreed to by land owners and/or local, state, or federal management entities within the Project Area, PG&E shall work with the relevant land owner or land management entity to develop, design, and fund the installation of easily visible and clear signage. This may include coordination with BLM to install signage noting the designation of the area as an Area of Critical Environmental Concern owing to its biological and cultural resources, while ensuring that signs are placed in a way that does not draw unwanted attention to specific resources.</p> <p>As provided in Appendix P of the C/RAWP, PG&E shall initiate conversations with key stakeholders (i.e., BLM, San Bernardino County, Park Moabi) within six months of the final approval of the Final Remedy Design. In addition to the key stakeholders listed in Appendix P of the C/RAWP, the FMIT shall be included as a land owner in the Project Area.</p> <p>In addition to requirements set forth in Appendix P of the C/RAWP, PG&E shall include Interested Tribes as key stakeholders in the design and installation of signage, and shall install signage prior to the start of construction, if possible, dependent on cooperation and input from land owners and land management entities.</p> <p>CUL-1a-3e: Site Security (New Measure).</p> <p>Site security procedures shall be implemented in a manner consistent with the Site Security Plan (C/RAWP Appendix Q). The Site Security Plan includes, but is not limited to, protocols for regular inspections of the Project Area during working and non-working hours; ensuring construction zones and protective measures are being maintained; ensuring personnel use designated travel routes and parking areas; notification and reporting of outside disturbances to the environment; worker cultural resources sensitivity training; and visitor access controls.</p>				
CUL-1a-4	<p>Technical Review Committee (Groundwater FEIR Measure with Revisions).</p> <p>PG&E shall work with representative members of the Interested Tribes to convene and retain a multidisciplinary panel of independent scientific and engineering experts as part of a Technical Review Committee (TRC). TRC may be called upon by the Interested Tribes to review Project-related documents and attend Project-related meetings. TRC efforts must be specific to that person's area of expertise and with the objective of advising interested tribal members on technical matters relating to the remedy design and its construction. The TRC shall be made up of not more than five multidisciplinary experts. The TRC shall include only persons with technical expertise limited to geology, hydrology, water quality, engineering, paleontology, toxicology, chemistry, or biology. TRC members shall be retained at rates comparable to those paid historically to tribal</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	experts by PG&E. TRC members shall be selected by majority vote amongst participants from the Interested Tribes. For the purposes of contracting, this grant may be awarded to one tribal government to manage or, alternatively, PG&E may reimburse the tribe or TRC members directly. The entirety of the monies shall be used to fund the scientific and engineering team exclusively, and shall not be used to fund other tribal government expenses or used to support legal counsel. Activities shall be reported to DTSC for review and to ensure PG&E is in compliance at least annually. Funding for the TRC shall continue until DTSC has determined that the remedy is operating properly and successfully, at which time the necessity of the TRC shall be assessed by DTSC and the provision of the TRC may be extended, reduced, or terminated. During the operation and maintenance and decommissioning phases, the necessity of the TRC shall be periodically evaluated by DTSC. This is the same committee referenced by CR-1e-8 in the Topock Soil Investigation Project EIR and MMRP.				
CUL-1a-5	<p>Avoidance of Indigenous Plants of Biological and Cultural Significance (Groundwater FEIR Measure with Revisions).</p> <p>During construction, operation and maintenance, and decommissioning of the Project, should any indigenous plants of traditional cultural significance and listed in Appendix PLA of the Groundwater FEIR be identified within the Project Area, PG&E shall avoid, protect, and encourage the natural regeneration of the identified plants. In the event that impacts to the identified plants cannot be avoided and such plants are displaced, provisions included in the <i>Plan for Culturally Significant Plants</i> (Appendix A of the CIMP) shall be implemented. This mitigation measure is not meant to replace or subsume any actions required by state or federal entities with regard to the protection of species listed as rare, threatened, or endangered. Appendix A of the CIMP requires preconstruction surveys of works areas, staging areas, and access routes to identify and demarcate culturally significant plants; protocols for transplanting culturally significant trees and plants; protocols for salvaging topsoil for re-use during site rehabilitation to encourage regrowth of desert annuals; collecting seeds for future planting; protocols for replacement planting by container grown plants/trees; and future monitoring of transplanted trees and shrubs.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-6	<p>Noise (Groundwater FEIR Measure with Revisions).</p> <p>During construction, operation and maintenance, and decommissioning of the Project, all phone calls and alarms associated with remediation activities or facilities shall not be routed through PG&E's existing alarm system utilized at the Station. The notification system for remediation-related alerts and/or phone calls shall not introduce additional noise to the Project Area, to the maximum extent feasible, provided there is ongoing compliance with applicable safety regulations or standards of the Federal Energy Regulatory Commission, Occupational Safety and Health Administration, and other agencies.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-7	<p>Nighttime Lighting (Groundwater FEIR Measure with Revisions).</p>	Prior to and during construction,	PG&E would be responsible for the		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	During construction, operation and maintenance, and decommissioning of the Project, nighttime construction-related activities shall be limited to circumstances that require the continuation of work into the nighttime periods because it cannot be disrupted or suspended (including but not limited to conditions during drilling or concrete pouring) or work may require an early morning start to ensure completion within 1 day or because of heat constraints including with regard to personnel health and safety. To minimize lighting impacts, lighting shall include shrouding or shielding for portable lights, the use of the lowest allowable height and fewest feasible numbers of lights consisting of downward-facing fixtures fitted with cutoff shields to reduce light diffusion. No permanent light poles shall be installed. However, lighting would also be required to comply with the minimum county, state, and federal security and safety standards (as described in Appendix P – Cultural Resources Protocols).	operation and maintenance, and decommissioning activities	implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-8 (a through p)	Develop Cultural Impact Mitigation Program (CIMP) (Measure Completed – Cultural Impact Mitigation Program attached as Appendix H of the C/RAWP)	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>CIMP (Appendix H of C/RAWP)</i>	<i>November 2015</i>
CUL-1a-8q	Implement Cultural Impact Mitigation Program (New Mitigation Measure). All activities related to the Final Remedy Design, as well as implementing the Future Activity Allowance, long-term operation and maintenance, and future decommissioning activities, shall be implemented consistent with provisions of the Cultural Impact Mitigation Program (CIMP). In addition to the parties listed in Section 2.15 of the CIMP as requiring consultation regarding discoveries and review of draft documents, DTSC shall also be included in these processes. PG&E, in consultation with the Interested Tribes, may amend the CIMP if protocols or procedures require modification due to unforeseen circumstances, as deemed necessary by DTSC. The CIMP, which is based upon Groundwater FEIR measures CUL-1a-8 (a through p), is summarized below. The text below is intended to provide a brief summary of the primary impact-reducing components of the CIMP, some of which reference the federal requirements of the PA and CHPMP (the CIMP, PA, and CHPMP may be amended or revised from time to time). Where this summary text differs from the CIMP (or the PA or CHPMP) or subsequent revision, the language of the CIMP (or PA or CHPMP) shall govern. Section 2.1- Protocols for Continued Tribal Communication: This provides methods for facilitating open communication with Interested Tribes; documenting the Interested Tribes' preferences for method of open communication; and reporting Tribal outreach to DTSC. This protocol incorporates reference to Section 6.7 "Protocols for Tribal Notification and Consultation in Advance of Certain Activities" of the CHPMP, which requires the BLM to establish email and mail distribution lists for all Points of Contact (POCs) and distribution of documents in accordance with Appendix B of the PA.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

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	<p>Section 2.2 - Protocols for Appropriate Treatment of Archaeological Materials: This describes how PG&E will continue to collaborate with Interested Tribes, respecting their preferences for avoidance and other treatment of archaeological discoveries; pre-construction field verifications; implementing procedures in Section IX of the PA and Section 8.1 and Appendix C of the CHPMP (i.e., cease work measures, notification protocols, inspecting and evaluating significance of discoveries, avoiding discoveries if possible and establishing protective measures, and treatment of discoveries that cannot be avoided). This section also outlines collection and curation protocols and data recovery procedures.</p> <p>Section 2.3 - Protocols for the Review of Cultural Resource-Related Documents: This describes the dissemination and review of cultural resource-related documents; outlines types of documents available for review and comment; provides a timeframe for review and comment; and provides an opportunity for Interested Tribes to present their unique perspectives on cultural significance of the area, including natural and cultural resources, Tribal beliefs, religions, customs, and current practices. This protocol incorporates reference to Section XI of the PA.</p> <p>Section 2.4 - Protocols for the Review of Project Design Documents: This documents the procedures for dissemination and Tribal review and comment on the completed groundwater remedy design documents prior to the beginning of construction. The Final Remedy Design document was completed and submitted to DTSC on November 18, 2015.</p> <p>Section 2.5 - Protocols for Restoring the Environment to Its Preconstruction Conditions Upon Decommissioning: This protocol includes a description of the general approach to restoring areas affected by the Final Remedy Design (e.g., backfill and compaction; grading and contouring; habitat restoration and revegetation; and consideration/accommodating requests for Tribal ceremonies); completion of a restoration plan within 120 days of the Department of the Interior's (DOI's) certification of the completion of the remedy; development of the restoration plan in consultation with land owners and managers; and consultation with Signatories, Interested Tribes, and Invited Signatories to the PA. (Mitigation Measure CUL-1a-17, described below, requires implementation of the restoration plan.)</p> <p>Section 2.6 - IM-3 Decommissioning Plan (Appendix B of the CIMP): The IM-3 Decommissioning Plan includes procedures for IM-3 system lay-up; procedures for decommissioning and removing the IM-3 system; waste management procedures; best management practices and mitigation measures compliance; soil confirmation sampling; a general approach for restoring areas originally affected by IM-3 operations; approvals and reporting requirements during the phases of IM-3 system closure; and a proposed work schedule.</p> <p>Section 2.7 - Protocols for Repatriation of Clean Soils During Construction: The approach and management to soil displacement was documented in</p>				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	<p>“Revised Management Protocol for Handling and Disposition of Displaced Site Material” (Appendix B of the Soil Management Plan) and outlines the procedures and measures to minimize the amount of displaced material that leaves the Project Area and to provide for the eventual return, reuse, or restoration of the material onto the lands from which it was displaced. The management protocol was incorporated into the Soil Management Plan (Appendix L of the C/RAWP) – see Mitigation Measure CUL-1a-18 below for additional details on the procedures in the Soil Management Plan.</p> <p>Section 2.8 - Noise Protocol: This protocol includes establishing a disturbance coordinator for Project-related noise concerns; implementing engineering controls to minimize construction-related noise (e.g., install temporary noise barriers such as berms, stockpiles, dumpsters, bins, and/or engineered acoustical barriers) within identified noise buffers; selecting noise monitoring locations in coordination with Interested Tribes; maintaining all construction equipment according to manufacturer guidelines and fitting equipment with the best available noise suppression devices; shrouding or shielding impact tools; muffling or shielding exhaust ports on power equipment; limiting idling of construction equipment; procedures for addressing Project-related noise concerns; and communication/notification with Interested Tribes.</p> <p>Section 2.9 - Protocols for the Appropriate Methods, Consistent with Mitigation Measures AES-1 and AES-2, to Reduce Visual Intrusions: This protocol includes the measures listed in SEIR Mitigation Measures AES-1 and AES-2, including a minimum setback of 20 feet from the water to prevent substantial vegetation removal along the riverbank; protecting mature plants; revegetation of disturbed areas within the riparian vegetation along the Colorado River; using plant material consistent with surrounding native vegetation; construction wells, pipeline, and utilities in muted, earth-tone colors consistent with the surrounding natural color palette. The protocol also summarizes the design concepts that PG&E incorporated into the Project, including locating final aboveground facilities within existing facilities when appropriate; building designs that are harmonious with existing buildings and nearby landforms; flush-mount or below-ground installations whenever feasible; construction within existing transportation corridors; working within previously disturbed sites whenever possible; placing aboveground facilities away from traffic where feasible; and designing lighting to minimize glare. The protocol also describes the opportunities afforded to agencies, Interested Tribes, and other stakeholders to provide their input on visual aspects of the Project design, such as providing visuals in design packages and allowing reviewing parties to request additional visualizations or key views. The protocol also provides notification procedures to address temporary visual intrusions during Project implementation.</p> <p>Section 2.10 - Protocols for Tribal Notification in Advance of Project-Related Activities: Whenever possible, PG&E will notify Interested Tribes at least two weeks in advance of project-related ground-disturbing activities (such</p>				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

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	<p>as grading, trenching, boring, drilling, or other excavation) whenever possible. Methods of notification may include, but are not limited to: through workplans and Project schedules; formal presentation or announcements at meetings; posting schedules online; email; telephone when advance notification was not possible; monthly schedules of field activities; weekly look-ahead schedules; and/or daily information sheets during times of intensive Project activity.</p> <p>Section 2.11 - Protocols to Accommodate Tribal Ceremonies or Activities Involving Topock Cultural Area: Key Tribal ceremonies involving the Topock Cultural Area [Topock TCP] will be accommodated if feasible as determined by DTSC. Any Tribe(s) wishing to perform such a ceremony may contact PG&E's Site Manager by telephone, email, or in writing to discuss the specific request. For the purposes of this protocol, key Tribal ceremonies will include any ceremonies or activities for which the Tribes choose to notify and/or ask for assistance. PG&E will consider the request and decide if the request can be accommodated as is, with modifications, or not at all, and will notify the requestor by phone or in person as soon as possible. PG&E staff, consultants, contractors or subcontractors will conduct themselves appropriately and, if invited to participate, will be respectful, turn off cell phones, and refrain from photography without permission. PG&E will maintain confidentiality of documents and sensitive information to the maximum extent allowed by the law. The Tribal representative will be responsible for further discussion of ceremonial activities with other identified impacted landowners, if necessary. Access to the Project area by Tribal religious practitioners for the purpose of conducting Tribal ceremonies will be consistent with Federal and state laws, regulations, and agreements governing the property within the Project area. Such access will also be consistent with the Tribal Access Plan prepared in response to 2011 Groundwater FEIR Mitigation Measure CUL-1a-2, "Protocol to Preserve Tribal Member's Access to, and Use of, the Project Area" as included in Appendix P of the C/RAWP, General Principle I.C of the BLM's PA, and Appendix B "Tribal Access Plan" of the CHPMP.</p> <p>Section 2.12 - Protocols for Tribal Monitors to Observe Ground-Disturbing Activities: PG&E will notify Interested Tribes of planned ground-disturbing activities and other scientific surveying within a minimum of one week and in the event of schedule changes. Tribal monitors will prepare and submit Daily Monitoring Logs. This protocol references Section 6.6.4 "Construction Monitoring" of the CHPMP, which requires advance notification and inviting Tribal monitors to observe ground-disturbing activities in accordance with Appendix C of the PA.</p> <p>Section 2.13 - Provision of Reasonable Compensation for Tribal Monitors: PG&E will provide reasonable compensation for Tribal monitors who work on the Project consistent with historic rates.</p> <p>Section 2.14 - Protocols for Protective Measures for Archaeological/Historical Sites During Construction: This protocol provides</p>				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>for identifying protective measures cultural sites, to the extent feasible, prior to construction; modifying construction zones to avoid discoveries identified during construction; implementing protective measures (such as covering, flagging, or fencing); if needed, modifying exclusion zones in consultation with the parties in the field; providing for archaeological and Tribal monitoring of implementation and removal of protective measures; periodic inspection of protective measures during construction; inspection, documentation, evaluation, and protection of discoveries; notification to Tribal monitors of discoveries; and restoration of areas to pre-constructions conditions after removal protective measures.</p> <p>Section 2.15 - Protocols for Reporting Discoveries of Cultural Importance: This protocol outlines how PG&E will notify DTSC and BLM of discoveries of previously unidentified or suspected historic or archaeological resources (including human remains and/or associated funerary objects or graves), as well as Interested Tribes if the resource is Native American in origin; will cease work within the vicinity of the discovery until the discovery has been evaluated and treatment developed; implement protective measures, if necessary; choose avoidance as the preferred method for the treatment of cultural resources, particularly for human remains, items of cultural patrimony, or funerary objects; and document discoveries in a culturally sensitive manner, and invite Interested Tribes to assist with documentation to identify Tribal cultural values. If further studies are required for any discovery, PG&E will consult with BLM, who will consult with Interested Tribes. Documentation will be provided to BLM and Interested Tribes (for Native American resources) for review and comment and final documents will be distributed to DTSC, BLM, Interested Tribes, and PG&E, and to ASM or CHRIS as appropriate.</p> <p>Section 2.16 - Protocols for Inspecting Remediation Facilities and/or Staging Areas During Construction: The locations of remediation facilities and staging area will be examined for cultural resources throughout the construction phase. Interested Tribes will receive notice at least 2 weeks in advance whenever possible. Previously impacted land will be selected wherever feasible for re-use as staging areas and/or the siting of remediation facilities and direct physical impacts to the Topock Maze as it is manifested archaeologically will be completely avoided when siting any staging area or remediation facility. Any resources present will be avoided to the extent feasible. This protocol also provides for archaeological and Tribal monitoring of earth-disturbing activities at remediation facilities and/or staging areas during construction, and states that these monitors will at all times comply with Project-wide and job site-specific safety requirements.</p>				
CUL-1a-9	<p>Preference for Previously Disturbed Areas (Groundwater FEIR Measure with Revisions).</p> <p>During the design of areas to be used as part of the Future Activity Allowance, PG&E shall, in communication with the Interested Tribes (and subject to their review), and to the maximum extent feasible, as determined by DTSC, give: (1)</p>	Prior to and during construction, operation and maintenance, and	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	priority to previously disturbed areas for the placement of new physical improvements; and (2) priority to re-use of existing physical improvements, such as but not limited to wells and pipelines, but not including the IM-3 Facility. "Disturbed" areas in this context means those areas outside of documented archaeological site boundaries that have experienced ground disturbance in the last 50 years.	decommissioning activities	for ensuring compliance.		
CUL-1a-10	Avoidance of Topock Maze (Groundwater FEIR Measure with Revisions). During construction, and operation and maintenance, and decommissioning activities, as well as activities associated with the Future Activity Allowance, PG&E shall consider the location of Loci A, B, and C of the Topock Maze during the design of Project components and is prohibited from creating any direct physical impact on the Topock Maze, as it is manifested archaeologically. The design of facilities as part of the Future Activity Allowance shall also prevent all indirect (e.g. noise, aesthetics) impacts on the Topock Maze, to the maximum extent feasible as determined by DTSC.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-11	Open Grant Funding (Groundwater FEIR Measure with Revisions). During the construction phase of the Project, PG&E shall provide an open grant for one part-time cultural resource specialist/project manager position for each of these four Interested Tribes: Chemehuevi, Cocopah, CRIT, and Hualapai. Additionally, the FMIT shall receive one full-time cultural resource specialist/project manager position in light of their ownership of land in the Project Area and historical involvement in the remediation process. The award of the grants is for the timely review of Project documents, participating in project-related meetings, coordinating and managing input and interests for the Tribe on the Project, and to act as a Tribal liaison with PG&E and regulatory agencies. The cultural resources specialist/project manager shall be compensated at rates of historic compensation with provisions for escalation of rates tied to the U.S. Department of Labor, Bureau of Labor Statistics Employment Cost Index. The payment of grant monies shall be timed to the awarded tribes' fiscal cycles so that the tribes are not forced to front funds for long periods of time. These positions shall act as cultural resources contacts and project managers for interactions between the tribes, PG&E, and DTSC to ensure coordination during construction of the remedy to avoid, reduce, or otherwise mitigate impacts on resources qualifying as historical resources under CEQA. This funding is separate from provisions for tribal monitor positions and shall not be used for routine tribal business or legal counsel. For review and approval, PG&E shall provide DTSC with the names of the selected grant recipients and a report that summarizes activities associated with the grant program, at least annually. Funding for these positions shall continue until DTSC has determined that the remedy is operating properly and successfully, at which time the necessity of the cultural resource specialist/project manager positions shall be assessed by DTSC and the positions shall be extended, reduced, or terminated. During the	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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CUL-1a-12	<p>operation and maintenance and decommissioning phases, the necessity of the positions shall be periodically evaluated by DTSC. These positions shall be inclusive of those referenced by CR-1e-9 in the Topock Soil Investigation Project EIR and MMRP and not additive.</p> <p>Tribal Ceremonies (Groundwater FEIR Measure with Revisions). PG&E shall provide reasonable opportunity, as determined by DTSC, for Interested Tribes to conduct a traditional healing/cleansing ceremony (or ceremonies) before and after the construction phase. Accommodations for Tribal ceremonies shall be implemented consistent with Section 2.11 "Protocols to Accommodate Tribal Ceremonies or Activities Involving Topock TCP" of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and Section 7.2 "Accommodation of Tribal Activities and Ceremonies Involving the Topock Maze/TCP" (see below) and Appendix B of the CHPMP (as described above in Mitigation Measure CUL-1a-2a).</p> <p>As described in Section 7.2 of the CHPMP, the BLM will continue to work with the Interested Tribes to identify Tribal activities and ceremonies that are associated with the Topock TCP and to consult with the Interested Tribes and PG&E to develop treatment measures to accommodate them.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-13	<p>Develop Worker Education Training Program (Measure Completed – Worker Education Training Program is attached in Appendix P of the C/RAWP).</p>	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>Worker Education Training Program (Appendix P of C/RAWP)</i>	<i>November 2015</i>
CUL-1a-13a	<p>Implement Worker Education Training (New Measure). During construction, operation and maintenance, and decommissioning of the Project, worker education training procedures shall be implemented consistent with the protocols identified in Appendix P of the C/RAWP. The following provides a summary of the worker education training procedures as identified in Appendix P of the C/RAWP. The worker education program will be implemented prior to commencement of any ground-disturbing activities and as personnel are added. The program includes, but is not limited to: mandatory training for PG&E employees, consultants, contractors, and subcontractors who are involved with construction or ground disturbing activities (including decommissioning and restoration); cultural sensitivity training to familiarize personnel with the sacred nature of the area; providing for participation of Interested Tribes, Tribal monitors, archaeological monitors, and Federal agency staff as appropriate; and non-tolerance of any disrespectful behavior in the field and removal of any staff, workers, or contractors who do not comply. Personnel engaged in field activities will be trained prior to conducting fieldwork and personnel engaged in design work will be trained as soon as practicable after being assigned to the Project.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	Training will be conducted at each Field Project Orientation meeting prior to each substantial Project work phase and at additional opportunities as identified by PG&E in collaboration with the Interested Tribes. Training will include, but is not limited to discussion topics such as: the significance and sensitivity of the Topock TCP; appropriate on-site behavior; protection of significant cultural resources; worker responsibilities (avoidance of sensitive areas, staying on designated routes and work areas, etc.); and consequences of noncompliance. Presentation materials that may be developed will be shared with Interested Tribes for their input. PG&E will maintain training records that will be dated and signed by the trainee and trainer.				
CUL-1a-14	<p>Tribal Notification of Potential Future Activities (New Measure).</p> <p>For any potential Future Activity Allowance that requires preparation of a work request, work plan, or technical memorandum, PG&E shall submit the subject documentation to DTSC, which will contain a description of the proposed activities, any available information regarding current conditions, and tracking information regarding how much of the Future Activity Allowance would be used by the particular activity, should it be authorized by DTSC. DTSC shall then provide the documentation to Interested Tribes (and other stakeholders) for review and comment. Timeline for review and consideration of Tribal comments shall be made by DTSC on a case-by-case basis, dependent on the known resources present on the subject location and the urgency of the Future Activity Allowance to ensure the proper and successful operation of the Remedy. Following Tribal review of the documentation, next steps could include modifications to the work plan, additional correspondence (i.e., site walk, meetings), or authorization by DTSC of the necessary Future Activity Allowance. If the Future Activity Allowance is ultimately approved by DTSC, all the applicable mitigation measures defined in this SEIR will apply.</p>	Prior to and during construction, operation and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-15	<p>Future Activity Allowance Cultural Resources Survey (New Measure).</p> <p>During the planning phase of any Future Activity Allowance activities, all areas that may be subject to construction or operation and maintenance activities as part of the Future Activity Allowance, plus a 50-foot buffer, and have not been surveyed in the past 5 years, shall be subject to archaeological resources survey prior to any ground disturbing activity. The survey shall be conducted by the Qualified Cultural Resources Consultant and shall document resources potentially qualifying as historical resources under CEQA (both as contributors to the Topock TCP and as individual historical resources). Tribal monitors shall be invited to participate in the survey. PG&E's Qualified Cultural Resources Consultant shall document the results of the survey in a <i>Future Activity Allowance Cultural Resources Survey Report</i> that follows the "Archaeological Resource Management Reports guidelines and Department of Parks and Recreation" guidelines. PG&E's Qualified Cultural Resources Consultant shall also prepare Department of Parks and Recreation 523 forms and file them with the South Central Coastal Information Center (for resources in California) and</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>Arizona State Museum site cards shall be prepared and filed with the Arizona State Museum (for resources in Arizona). PG&E shall distribute draft reports to DTSC, BLM, and the Interested Tribes for review and comment consistent with Section 2.3 “<i>Protocols for the Review of Cultural Resources-Related Documents</i>” of the CIMP and Section 6.7 “<i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). PG&E shall submit final reports to DTSC, BLM, and the Interested Tribes no less than 2 weeks prior to the start of ground disturbance in an area.</p> <p>In the event that resources potentially qualifying as historical resources under CEQA (either as contributors to the Topock TCP or as individual historical resources) are identified during the survey, avoidance and preservation in place shall be the preferred manner of mitigating impacts to the resources. If avoidance of the identified resources is determined by DTSC, in coordination with respective landowners, Interested Tribes, and PG&E, to be infeasible, procedures provided in Section 2.2 “<i>Protocols for the Appropriate Treatment of Archaeological Materials</i>” of the CIMP, Section 8 “<i>Discoveries</i>” and Appendix C “<i>Discovery Plan</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q), and Appendix D “<i>Plan of Action</i>” of the CHPMP (as described below in Mitigation Measure CUL-4) shall be implemented.</p> <p>If DTSC determines that an expedited action is necessary in order to respond to the changing site condition, pre-construction inspection protocols identified in Section 2.16, “<i>Protocols for Inspecting Remediation Facilities and or Staging Areas During Construction</i>” of the CIMP shall then be followed. This section requires tribal notification in advance of the pre-construction inspection, archaeological and tribal inspection of the area, avoidance of identified resources if possible, or treatment if necessary, and monitoring of any ground disturbance.</p> <p>In instances where Future Activity Allowance activities are proposed in the field due to an immediate need as a result of unforeseen circumstances, PG&E shall conduct the activity in consultation with an archaeological monitor and Tribal Monitor on the ground, and notify DTSC and the appropriate DOI agency of the activity within 24 hours.</p>				
CUL-1a-16	<p>Implement Restoration Plan (New Measure).</p> <p>Restoration following decommissioning of the Project shall be implemented in a manner consistent with Section 2.5 “<i>Protocols for Restoring the Environment to its Preconstruction Conditions Upon Decommissioning</i>” of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and the Havasu National Wildlife Refuge Restoration Plan (C/RAWP Appendix G; see Mitigation Measure BIO-1a in this SEIR). Additionally, consistent with requirements of Section 6.3 “<i>Environmental Restoration</i>” of the CHPMP, a Remedy Decommissioning Plan will be submitted by PG&E to DOI within 120 days of DOI’s certification of</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	completion of the CERCLA Remedial Action and determination by DOI that removal of such facilities is protective of human health and the environment. The Remedy Restoration Plan shall be provided to DTSC and Interested Tribes for review and comment, consistent with Mitigation Measure BIO-1b.				
CUL-1a-17	<p>Displaced Soil Procedures (New Measure).</p> <p>Procedures for the management and handling of displaced soils resulting from activities associated with construction, operation and maintenance, and decommissioning of the Project shall be treated in a manner consistent Section 2.7 "Protocols for Repatriation of Clean Soils Cuttings Generated During Construction" of the CIMP (as described above in Mitigation Measure CUL-1a-8q) and the Soil Management Plan (C/RAWP Appendix L). The following provides a summary of the Soil Management Plan procedures as identified in Appendix L of the C/RAWP. Where this summary text differs from the Soil Management Plan or subsequent revision, the language of the Soil Management Plan shall govern. As indicated in the Soil Management Plan, clean soil (material that is determined to have a representative concentration that is equal to or less than the interim screening level or project-specific cleanup goal) will be labeled and stored on-site in 55-gallon drums/small containers, roll-off bins, and/or stockpiles for return, re-use, and/or restoration. Soil classified as RCRA and non-RCRA hazardous waste, and non-hazardous soil that is unsuitable for final disposition on-site because contaminants are present above the interim screening level or Project-specific cleanup goal, will be labeled and stored temporarily on-site and transported off-site for disposal. Options for return, re-use, and/or restoration on-site that have been identified include: replacement of original material into original or other borings, trenches, or excavations; creation of topographical or landscape barriers to protect sensitive areas; creation of berms or other structures to prevent erosion; on-site road maintenance; and stockpiling in designated areas</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-18	<p>Aesthetics (New Measure).</p> <p>During construction, operation and maintenance, and decommissioning, protocols for the protection of visual resources shall be implemented in a manner consistent with Section 2.9 "Protocols for the Appropriate Methods, Consistent with Measures AES-1 and AES-2 [of the Groundwater FEIR] to Reduce Visual Intrusions" of the CIMP (see also Mitigation Measures AES-1 and AES-2 of this SEIR).</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1a-19	<p>Implement Treatment Plan for the Topock TCP (New Measure).</p> <p>All activities associated with construction, operation and maintenance, and decommissioning of the Final Remedy Design shall be implemented consistent with provisions of the <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> (Hanes and Price <i>in progress</i>), which is being prepared pursuant to requirements of the Stipulation VII.B and Appendix B of the</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	PA and mitigation measure CUL-1b/c-3 of the Groundwater FEIR. The Treatment Plan shall address treatment to the Topock TCP and its contributors, in addition to historical resources other than the Topock TCP (this is the same Treatment Plan referenced in Section 7 “ <i>Cultural Property-Specific Treatment Measures</i> ” of the CHPMP, which can be used to satisfy the requirements of this mitigation measure). PG&E shall distribute the draft Treatment Plan and any future amendments to the Interested Tribes for tribal review consistent with Section 2.3 “ <i>Protocols for the Review of Cultural Resources-Related Documents</i> ” of the CIMP and Section 6.7 “ <i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i> ” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). As such, the Treatment Plan is subject to revision prior to finalization. Once consultation is complete, PG&E shall submit the final Treatment Plan to DTSC for final review and approval prior to the start of construction. DTSC has included specific measures outlined in the draft Treatment Plan (March 26, 2018 version) that reduce impacts to historical resources, beyond those already outlined in the PA, CHPMP, CIMP, and Final SEIR MMRP, as conditions of approval on the Project. When the final Treatment Plan is approved, those final measures will replace and/or supplement those identified in DTSC’s conditions of approval for the Project. The Treatment Plan may be amended in the future in the event of new discoveries or greater than anticipated impacts. Treatment Plan amendments shall be required in instances where the current content of the Treatment Plan is insufficient to address necessary treatment measures and shall be determined in coordination amongst PG&E, BLM, DTSC, and Interested Tribes.		for ensuring compliance.		
CUL-1b/c-1	Consider Locations of Historical Resources during Design (Groundwater FEIR Measure with revisions). PG&E shall consider the locations of the identified historical resources during the design of the physical improvements necessary for the proposed Project and avoid, minimize, or mitigate impacts on historical and archaeological resources to the maximum extent feasible, as determined by DTSC. Future design plans for the Project, in relation to known cultural resources, shall be submitted to DTSC for review and approval.	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-2	Prepare a Cultural Resources Study (Measure Completed – several cultural resources studies were completed, including “Geoarchaeological Assessment for the Topock Remediation Project” [Appendix T of the C/RAWP] and “Results of Pre-Construction Field Verification Inspections for the Topock Compressor Station Groundwater Remedy” [Moloney and Price 2014, confidential report on file at DTSC]).	<i>Measure completed during design development</i>	<i>PG&E completed, DTSC ensured compliance</i>	<i>Geoarchaeological Assessment (Appendix T of C/RAWP); Moloney and Price, 2014)</i>	<i>2014; November 2015</i>

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
CUL-1b/c-3	<p>Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP (Groundwater FEIR Measure with Revisions).</p> <p>All activities associated with construction, operation and maintenance, and decommissioning of the Final Groundwater Remedy Project shall be implemented consistent with provisions of the <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> (Hanes and Price <i>in progress</i>), which is being prepared pursuant to requirements of the Stipulation VII.B and Appendix B of the PA and mitigation measure CUL-1b/c-3 of the Groundwater FEIR. The Treatment Plan shall identify measures to lessen impacts to historical resources other than the Topock TCP that cannot be avoided by the Project and that will be subject to significant impacts (this is the same Treatment Plan - <i>Cultural and Historical Property Treatment Plan for the Topock Compressor Station</i> [Hanes and Price <i>in progress</i>] - described above in Mitigation Measure CUL-1a-19 and is currently being prepared). The Treatment Plan shall identify which criteria for listing on the NRHP/CRHR contribute to the affected resource's significance and which aspects of significance would be materially altered by construction, operation and maintenance, or decommissioning and shall provide for reasonable efforts to be made to permit the resource to be preserved in place or left in an undisturbed state consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&E, Interested Tribes, and respective landowners. PG&E shall distribute the draft Treatment Plan and any future amendments to the Interested Tribes for tribal review consistent with Section 2.3 "<i>Protocols for the Review of Cultural Resources-Related Documents</i>" of the CIMP and Section 6.7 "<i>Protocols for Tribal Notification and Consultation in Advance of Certain Activities</i>" of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). As such, the Treatment Plan <u>is subject to revision prior to finalization</u>. Once consultation is complete, PG&E shall submit the final Treatment Plan to DTSC for final review and approval prior to the start of construction. DTSC has included specific measures outlined in the draft Treatment Plan (March 26, 2018 version) that reduce impacts to historical resources, beyond those already outlined in the PA, CHPMP, CIMP, and Final SEIR MMRP, as conditions of approval on the Project). When the final Treatment Plan is approved, those final measures will replace and/or supplement those identified in DTSC's conditions of approval for the Project. The Treatment Plan may be amended in the future in the event of new discoveries or greater than anticipated impacts. Treatment Plan amendments shall be required in instances where the current content of the Treatment Plan is insufficient to address necessary treatment measures and shall be determined in coordination amongst PG&E, BLM, DTSC, and Interested Tribes.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-4	<p>Cultural Resources Monitoring Program and Inadvertent Discovery Measures (Groundwater FEIR Measure with Revisions).</p>	Prior to and during construction,	PG&E would be responsible for the		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>CUL-1b/c-4a: Cultural Resources Monitoring Program. All ground-disturbing activities associated with construction, operation and maintenance, and decommissioning phases of the Project, including the Potential Future Activities, shall require archaeological monitoring and PG&E shall invite Tribal monitors to participate. The Cultural Resources Monitoring Program shall be implemented in a manner consistent with Sections 2.10 “<i>Protocols for Tribal Notification in Advance of Project-Related Activities</i>” and 2.12 “<i>Protocols for Tribal Monitors to Observe Ground Disturbing Activities</i>” of the CIMP, Appendix C “<i>Topock Remediation Project Programmatic Agreement Tribal and Archaeological Monitoring Protocol</i>” of the PA, and Section 6.6.4, “<i>Construction Monitoring</i>,” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q). In addition to the parties that require notification and coordination as listed in Appendix C of the PA, PG&E shall also notify DTSC.</p> <p>During construction, PG&E shall document monitoring activities in the monthly progress reports or quarterly compliance reports, meeting at a minimum those requirements described in Section 2.6.3.3 “<i>Additional Reporting During Remedy Construction</i>” and Table 2.3-1 “<i>Communication Framework During Construction and Startup</i>” of the C/RAWP, and incorporate any additional communication requirements directed by DTSC and DOI. During operation and maintenance, PG&E shall document monitoring activities in the quarterly progress reports or annual compliance reports described in Section L2.2 “<i>Summary of Communication Procedures and Protocols</i>” and Table L2.2-1 “<i>Communication Framework During Operation and Maintenance</i>.” During decommissioning, PG&E shall document monitoring activities in monthly progress reports or quarterly monitoring compliance reports consistent with those described in Section 2.6.3.3 “<i>Additional Reporting During Remedy Construction</i>” and Table 2.3-1 “<i>Communication Framework During Construction and Startup</i>” of the C/RAWP. Documentation of monitoring shall generally include dates of monitoring, monitoring participants, activities observed, and descriptions of any archaeological resources encountered (resource location information shall be kept separate and confidential). Department of Parks and Recreation 523 forms, following the Office of Historic Preservation’s <i>Instructions for Recording Historical Resources</i>, shall be prepared by the Qualified Cultural Resources Consultant and filed with the South Central Coastal Information Center (for archaeological resources in California) and Arizona State Museum site cards shall be prepared by the Qualified Cultural Resources Consultant and filed with the Arizona State Museum (for archaeological resources in Arizona) for all newly identified and updated archaeological resources, and shall be compiled and provided to DTSC as they become available. Interested Tribes shall be afforded an opportunity to provide input on archaeological discoveries site forms and updates in accordance with measures outlined in the Treatment Plan (Mitigation Measure CUL-1a-19) and BLM policies and practices pertaining to information sharing.</p>	operation and maintenance, and decommissioning activities	implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>CUL-1b/c-4b: Inadvertent Discoveries.</p> <p>During construction, operation and maintenance, and decommissioning phases of the Project, procedures for the treatment of inadvertent discoveries of resources potentially qualifying as historical resources under CEQA shall be implemented in a manner consistent with Section 2.2 “<i>Protocols for the Appropriate Treatment of Archaeological Materials</i>” of the CIMP, and Section 8 “<i>Discoveries</i>” and Appendix C “<i>Discovery Plan</i>” of the CHPMP (as described above in Mitigation Measure CUL-1a-8q), and Appendix D “<i>Plan of Action</i>” of the CHPMP (as described below in Mitigation Measure CUL-4). In addition to the parties listed in Section 2.15 of the CIMP as requiring consultation regarding discoveries and review of draft documents, DTSC shall also be included in these processes.</p>				
CUL-1b/c-5	<p>Avoidance and Preservation in Place (New Measure).</p> <p>During the construction, operation and maintenance, and decommissioning phases of the Project, PG&E shall carry out all Project activities, and shall require all subcontractors to implement established protocols regarding Project Activities, in ways that avoid, minimize, and mitigate significant impacts to historical resources other than the Topock TCP and unique archaeological resources consistent with the CEQA Guidelines and with Stipulation I.B of the PA and Section 7.3 of the CHPMP, and to the maximum extent feasible as determined by DTSC, in coordination with PG&E, Interested Tribes, and respective landowners.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-6	<p>Implementation of Additional Protective Measures (New Measure).</p> <p>Mitigation Measures CUL-1a-3 (Site Security); CUL-1a-3a (Professional Qualifications and Annual Site Condition Assessment); CUL-1a-3c (Coordination with BLM and San Bernardino County); CUL-1a-3d (Signage) CUL-1a-3e (Site Security); CUL-1a-8q (Implement Cultural Impact Mitigation Program); CUL-1a-9 (Preference for Previously Disturbed Areas); CUL-1a-13a (Implement Worker Education Training Program); and CUL-1a-15 (Future Activity Allowance Cultural Resources Survey) shall be implemented to further reduce impacts to historical resources other than the Topock TCP and/or unique archaeological resources prior to and during construction, operation and maintenance, and decommissioning, as prescribed in each measure which are described in detail above.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
CUL-1b/c-7	<p>Compliance with SOI Standards (New Measure).</p> <p>Prior to the start of decommissioning activities, PG&E shall retain a qualified architectural historian who meets the Secretary of the Interior’s professional qualification standards for architectural history. The qualified architectural historian shall review the decommissioning plan to ensure that removal of the pipeline from the Old Trails Arch Bridge (36-027678), if proposed, would not materially impair the bridge. The architectural historian shall prepare a technical</p>	Prior to the start of decommissioning activities	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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CUL-3	<p>memorandum documenting the results of the review, and provide any recommendations to reduce impacts to less than significant, if necessary, prior to start of decommissioning activities.</p> <p>Implement the Paleontological Resources Management Plan (PRMP) and Paleontological Monitoring (Groundwater FEIR Measure with Revisions). PG&E shall comply with all requirements of the <i>Paleontological Resources Management Plan</i> (Arcadis 2015) related to paleontological resources prior to and during construction, operation and maintenance, and decommissioning. The following is a summary of the procedures in the PRMP, which includes: retention of a Principal Paleontologist to oversee paleontological monitoring and to be on-call in the event of discovery; paleontological resources awareness training; future survey of any areas ranked PYFC 3a or above if additional work is planned and they were not previously surveyed; paleontological monitoring of grading and trenching in known sensitive areas and also in the event that sensitive sediments are encountered elsewhere (monitoring of borings, regardless of depth or diameter, is not required); cease work measures and notification protocols in the event of a discovery; recovery of discovered fossils; documentation, preparation, identification, and analysis of recovered fossils; reporting; and curation of paleontological resources of scientific value at an accredited repository. Treatment and disposition of recovered fossils shall be conducted in coordination with the respective landowner.</p>	Prior to and during construction, operation and maintenance, and decommissioning activities			
CUL-4	<p>Mitigation Measure CUL-4: Discovery of Human Remains (Groundwater FEIR Measure with Revisions). In the event of the discovery of human remains, PG&E shall implement the requirements of Section 2.2 “<i>Protocols for Appropriate Treatment of Archaeological Materials</i>” and Section 2.15 “<i>Protocols for Reporting Discoveries of Cultural Importance</i>” the CIMP (as described above in Mitigation Measure CUL-1a-8q) and Section 8.2 “<i>Treatment of Any Human Remains, Funerary Objects, Ceremonial Objects, and Items of Cultural Patrimony</i>” and Appendix D “<i>Plan of Action</i>” of the CHPMP (see below). Consistent with Section D.4 of the CHPMP, the determination of whether remains are human or non-human will be made by qualified personnel, such as a physical or forensic anthropologist. In accordance with the CHPMP Appendix D (D.3.3), the BLM is responsible for notifying the appropriate Interested Tribes regardless of land ownership. Discoveries on federal land shall follow the procedures outlined in sections D.3.3.1 and D.3.9.1 of Appendix D of the CHPMP. Discoveries on non-federal land in Arizona shall follow the procedures outlined in Sections D.3.3.2 and D.3.9.2 of Appendix D CHPMP. Discoveries on non-federal land in California shall follow the procedures outlined in Sections D.3.3.3 and D.3.9.3 of Appendix D of the CHPMP. The following provides a summary of the plans, procedures, and requirements that govern actions to be taken in the event of the discovery of human remains. CHPMP Section 8.2:</p>	Prior to and during construction, operation and maintenance, and decommissioning activities			

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	<ul style="list-style-type: none"> Section VII.H of the PA stipulates that the CHPMP will include a Plan of Action to be implemented if human remains are discovered within the APE, and that the Plan of Action will address the roles of the PA Signatories, Tribes, and Invited Signatories; The PA stipulates further that the BLM will be the lead Federal Agency responsible for seeing that the terms of the Plan of Action are executed, and that human remains and funerary objects must be treated in a culturally appropriate and respectful manner. <p>CHPMP Appendix D – Section D.3.3: This section requires that, in the event that human remains are discovered within the Project Area and without respect to land ownership, PG&E will cease work and establish a protective buffer; ensure that the remains are not disturbed further and are treated with appropriate respect and cultural sensitivity; notify BLM within 24 hours; and cooperate with parties responsible for responsible for carrying out the treatment measures described in CHPMP Subsections D.3.3.1-D.3.3.3 (see below).</p> <p>CHPMP Appendix D – Sections D.3.3.1 and D.3.9.1 (discoveries on Federal land): Additional requirements of this section include:</p> <ul style="list-style-type: none"> Complying with the Native American Graves Protection and Repatriation Act (NAGPRA) and its Federal implementing regulations outlined in 43 Code of Federal Regulations (CFR) Part 10, which requires establishing a chain of command for the remains, identifying and notifying lineal descendants, and consultation with the appropriate Tribe(s) to identify and implement appropriate treatment. Following California Health and Safety Code 7050.5 et seq., which includes notifying the San Bernardino County coroner for discoveries in California and contacting the California Native American Heritage Commission (NAHC). Following Public Resources Code 5097.98, which includes designation of a Most Likely Descendant by the NAHC and consultation with the MLD. <p>CHPMP Appendix D - Sections D.3.3.2 and D.3.9.2 (discoveries on non-Federal land in Arizona): Additional requirements of this section include:</p> <ul style="list-style-type: none"> Contacting the Director of the Arizona State Museum (ASM) for discoveries in Arizona on "lands, other than lands owned or controlled by this state, any agency or institution of this state or any county or municipal corporations within this state." Complying with ARS 41-865, which includes consultation with the ASM, identifying the group with cultural affinity for the remains and/or objects, and consultation with the governing body of the group with cultural affinity to determine appropriate treatment and disposition of the remains and/or objects. <p>CHPMP Appendix D - Sections D.3.3.3 and D.3.9.3 (discoveries on non-Federal land in California): Additional requirements of this section include:</p>				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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GEO-1a	<ul style="list-style-type: none"> • Complying with California Health and Safety Code 7050.5 et seq., which requires notifying the San Bernardino County coroner for discoveries in California and contacting the NAHC. • Complying with Public Resources Code 5097.98, which includes designation of a MLD by the NAHC and consultation between the landowner and MLD to identify and implement appropriate treatment. 				
	Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils (Groundwater FEIR Measure).				
	a) A DTSC-approved grading and erosion control plan, prepared by a California Registered Civil Engineer, shall be completed prior to implementation of any grading in areas of the site where there is a potential for substantial erosion or loss of top soils. The plan shall outline specific procedures for controlling erosion or loss of topsoil during construction, operation and maintenance, and decommissioning.	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
	b) To ensure soils do not directly or indirectly discharge sediments into surface waters as a result of construction, operation and maintenance, or decommission activities, PG&E developed a SWPPP as discussed in mitigation measure HYDRO-1. The SWPPP identifies best management practices (BMPs) that would be used to protect stormwater runoff and minimize erosion during construction. PG&E shall prepare plans to control erosion and sediment, prepare preliminary and final grading plans, and shall prepare plans to control urban runoff from the project site during construction, consistent with the substantive requirements of the San Bernardino County Building and Land Use Services Department for erosion control.				
	c) During road preparation activities, loose sediment shall be uniformly compacted consistent with the substantive San Bernardino County Building and Land Use Services Department requirements to aid in reducing wind erosion. Ongoing road maintenance including visual inspection to identify areas of erosion and performing localized road repair and regrading, installation and maintenance of erosion control features such as berms, silt fences, or straw wattles, and grading for road smoothness shall be performed as needed to reduce potential for erosion.				
d) Regarding the potential for contaminated soils to be eroded and contribute contamination into receiving waters, Mitigation Measures GEO-1a and HAZ-2 shall be implemented. Mitigation Measure GEO-2 provides the provisions for mitigating erosion through BMPs which shall be implemented. Mitigation Measure					

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GEO-1b	HAZ-2 provides the provisions for safe work practices and handling of contaminated soils as investigation derived wastes.				
	Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils (Groundwater FEIR Measure).	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
	a) BMPs shall be implemented during construction, operation and maintenance, and decommissioning activities to minimize impacts on the affected areas. Such BMPs could include, but would not be limited to, the following: uniform compaction of roadways created for accessing the project area as per San Bernardino County Building and Land Use Services Department requirements, returning areas adversely affected by differential compaction to preexisting conditions when these areas are no longer needed, and continuing maintenance of access roads, wellhead areas, and the treatment facility areas.				
b) Work area footprints shall be minimized to the greatest extent feasible to limit the areas exposed to differential compaction. Where possible, existing unpaved access roads and staging/working areas shall be reused and maintained for different stages of the construction. New graded areas for staging or for access roads shall be compacted to a uniform specification, typically on the order of 90 to 95% compaction and consistent with substantive San Bernardino County Building and Land Use Services Department requirements to reduce differential compaction and subsequent erosion of site soils.					
	c) After the completion of the operation and maintenance phase, the disturbed areas which result in increased potential for compaction shall be returned to their respective preexisting condition by regrading consistent with the preconstruction slopes as documented through surveys that may include topographic surveys or photo surveys. The areas will be returned to the surrounding natural surface topography and compacted consistent with unaltered areas near the access roads or staging areas in question. The habitat restoration plan prepared in compliance with Mitigation Measure BIO-1 includes restoration of native vegetation or other erosion control measures where revegetation would be infeasible or inadequate, for purposes of soil stabilization and erosion control of the project area.				
HAZ-1a	Spills or Releases of Contaminants during Operation and Maintenance Activities (Groundwater FEIR Measure with Revisions).	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible		
	a) PG&E shall store, handle, and transport hazardous materials in compliance with applicable local, state, and federal laws.				

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>b) All chemical storage and loading areas shall be equipped with proper containment and spill response equipment. BMPs to be implemented may include, but are not limited to, use of secondary containment in mixing and storage areas; availability of spill kits and spill containment booms, and appropriate storage containers for containment of the materials generated during the spill response. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D, specifications in Appendix E, and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p> <p>c) A project-specific Hazardous Materials Business Plan (HMBP), chemical standard operating procedure (SOP) protocols and contingency plans shall be developed to ensure that proper response procedures would be implemented in the event of spills or releases. Specifically, the HMBPs and SOPs shall describe the procedures for properly storing and handling fuel on-site, the required equipment and procedures for spill containment, required personal protective equipment, and the measures to be used to reduce the likelihood of releases or spills during fueling or vehicle maintenance activities. BMPs to be implemented may include, but are not limited to, use of secondary containment in mixing and storage areas; availability of spill kits and spill containment booms, and appropriate storage containers for containment of the materials generated during the spill response. The field manager in charge of operations and maintenance activities shall be responsible for ensuring that these procedures are followed at all times. SOPs are provided in Appendix B to the C/RAWP (CH2M Hill 2015b); the HMBP in Appendix L to the Final Remedy Design (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p>		for ensuring compliance.		
HAZ-1b	<p>Spill or Release of Contaminants during Construction and Decommissioning Activities (Groundwater FEIR Measure with Revisions).</p> <p>a) Fueling areas and maintenance areas would be supplied with proper secondary containment and spill response equipment. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D, specifications in Appendix E, and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented</p>	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>during construction, operation and maintenance, and decommissioning of the Project.</p> <p>b) PG&E shall develop fueling SOP protocols and a contingency plan that would be implemented at all fueling areas on-site. The SOPs shall describe the procedures for properly storing and handling fuel on-site, the required equipment and procedures for spill containment, required PPE, and the measures to be used to reduce the likelihood of releases or spills during fueling or vehicle maintenance activities. Potential measures include but are not limited to, fuel storage in bermed areas, performing vehicle maintenance in paved and bermed areas, and availability of spill kits for containment and cleanup of petroleum releases. The field manager in charge of construction and decommissioning activities shall be responsible for ensuring that these procedures are followed at all times. SOPs are provided in Appendix B (CH2M Hill 2015b); the HMBP in Appendix L (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p> <p>c) PG&E shall comply with local, state, and federal regulations related to the bulk storage and management of fuels. The Final Remedy Design provides engineering drawings of chemical storage and loading areas in Appendix D; specifications in Appendix E (Operation and Maintenance Manual), Volume 3; the HMBP in Appendix L (Operation and Maintenance Manual), Volume 1, Appendix E; and the Contingency Plan in Appendix L (Operation and Maintenance Manual), Volume 3 (CH2M Hill 2015a), which shall all be implemented during construction, operation and maintenance, and decommissioning of the Project.</p>				
HAZ-2	<p>Reasonably Foreseeable Releases of Chemicals from Excavated or Disturbed Soil (Groundwater FEIR Measure with Revisions)</p> <p>Subsequent to the Groundwater FEIR and in compliance with Groundwater FEIR Mitigation Measure HAZ-2, PG&E developed a Final Construction Health and Safety Plan provided in C/RAWP, Appendix D, and a Draft Operation and Maintenance Health and Safety Plan in the Final Remedy Design, Appendix L, Volume 5. A final Operation and Maintenance Health and Safety Plan will be submitted to DTSC and DOI during the start-up phase of the remedy, and should include any separate plans provided by contractors. The health and safety plans include procedures to mitigate potential hazards, which include the use of PPE, measures that provide protection from physical and chemical hazards that may be present at the site, decontamination procedures, and worker and health and safety monitoring criteria to be implemented during construction. The worker health and safety plans includes protective measures and PPE that are specific</p>	Begin at the start of construction and continue for life of project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>to the conditions of concern and meet the requirements of the U.S. Occupational Safety and Health Administration's (OSHA's) construction safety requirements and Hazardous Waste Operations and Emergency Response Standard (29 CFR 1910.120). In accordance with OSHA requirements, appropriate training and recordkeeping shall also be a part of the health and safety program. The health and safety plans shall be certified by a Certified Industrial Hygienist in accordance with OSHA regulations. The worker health and safety plan shall be provided to the construction workers for review and all workers shall be required to sign the plan, which will be kept on the construction site at all times. Contractors and subcontractors may also provide their own health and safety plans, providing the contractors and subcontractors health and safety plans are compliant with OSHA requirements and have been provided to PG&E and DTSC for review.</p> <p>Worker safety training shall occur prior to initiation of ground- disturbing activities. Training shall include the review of all health and safety measures and procedures. All workers and engineering inspectors at the site shall provide written acknowledgement that the soils management plan (discussed below), worker health and safety plan, and any existing community health and safety plan were reviewed and training was received prior to commencement of construction activities.</p> <p>The following are specific elements and directives that shall be included in the health and safety plan and implemented by PG&E during construction, operation and maintenance, and decommissioning of this project:</p> <ul style="list-style-type: none"> a) Vehicles traveling on unpaved roadways or surfaces would be directed to avoid traveling in areas where contaminated soils are known to be present; vehicle speeds shall be controlled (e.g., limited to 15 mph or slower) to limit generation of dust; measures, such as wetting of surfaces, will be employed to prevent dust generation by vehicular traffic or other dust-generating work activities. b) Pre-mobilization planning shall occur during which the likelihood of encountering contaminated soils shall be reviewed along with the Hazardous Materials Business Plan, site-specific health and safety plan, and SOPs so that the procedures are followed and the contingencies for handling contaminated soils are in-place prior to implementing the field operations. c) Should evidence of contaminated soil be identified during ground-disturbing activities (e.g., noxious odors, discolored soil), work in this area will immediately cease until soil samples can be collected and analyzed for the presence of contaminants as directed by the site supervisor or the site safety officer. Contaminated soil shall be managed and disposed of in accordance with the Project-specific health and safety plan and soil management plan. The health and safety plan and soil management plan shall be reviewed by DTSC 				

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	<p>before beginning any ground-disturbing activities. While the Project is exempt from the requirements of the San Bernardino County Division of Environmental Health, the health and safety plan shall be prepared in general accordance with the substantive requirements of this agency.</p> <p>d) In the event that drilling sites must be located within areas of suspected soil contamination, the appropriate PPE shall be worn by all personnel working in these areas and methods specified in the health and safety plan used to control the generation of dust. When working in these areas, personnel shall be required to follow all guidance presented in the site-specific health and safety plan and soil management plan. The site-specific health and safety plan shall include provisions for site control such as, but not limited to, delineation of the exclusion, contaminant reduction and support zones for each work area, decontamination procedures, and procedures for the handling of contaminated soils and other investigation derived wastes. Soil that is excavated shall be loaded directly into containers such as roll-off bins; dust suppression methods shall be used prior to and during loading of soils into the bins. Suspected contaminated soils shall be segregated from suspected uncontaminated soils.</p> <p>e) Personnel working at the site shall be trained in Hazardous Waste Operations.</p> <p>f) All soil excavated and placed in roll-off bins or trucks for transportation off-site shall be covered with a tarp or rigid closure before transporting, and personnel working in the area shall be positioned upwind of the loading location, as practicable.</p>				
HAZ-3	<p>Final Groundwater Remedy Decommissioning Plan (New Measure).</p> <p>Upon achieving the Remedial Action Objectives for the groundwater remedy, PG&E shall provide a written request with documentation to the DTSC and DOI requesting approval for decommissioning the groundwater remedy. Upon approval from DTSC and DOI, PG&E shall then prepare and submit a Final Groundwater Remedy Decommissioning Plan within 120 days to DTSC and DOI for their review and approval. This plan shall comply with the requirements in the Programmatic Agreement (BLM 2010), the Cultural and Historic Properties Management Plan (BLM 2012), the Consent Decree and Appendix C, Scope of Work, to Consent Decree (DOI 2013) (or functional equivalent if those document names change in the future), and the mitigation measures included within this SEIR. This plan shall include the decommissioning specifications and procedures currently described in the Final Remedy Design, but shall be updated to incorporate technology and regulatory changes, if any. In particular, the updated Final Groundwater Remedy Decommissioning Plan shall check for updates to waste disposal acceptance criteria to identify the appropriate disposal or recycling facilities for the Final Groundwater Remedy infrastructure to be</p>	After approval for decommissioning is received from the DTSC with concurrence from the DOI	PG&E shall be responsible for the preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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HYDRO-1	removed, and for changes in well abandonment procedures by regulatory agencies (the States of California and Arizona, and the Counties of San Bernardino [California] and Mohave [Arizona]). Groundwater FEIR Mitigation Measure HYDRO-1, Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).				
HYDRO-1a/2a/3a	Construction Best Management Practices Plan (Groundwater FEIR Measure with Revisions). Subsequent to the Groundwater FEIR and as noted in the Regulatory Background, the Construction General Permits were updated for California (2014) and Arizona (2013). In compliance with the Groundwater FEIR Mitigation Measures HYDRO-1, HYDRO-2, and HYDRO-3, and incorporating the construction general permit updates, PG&E prepared a BMP Plan for construction activities (C/RAWP, Appendix M; CH2M 2015b). The BMP Plan complies with the substantive requirements of the California and Arizona Construction General Permits, as well as all other applicable federal, state, and local permit and regulatory requirements, even if a permit is not required pursuant to CERCLA, for purposes of ensuring the protection of receiving water quality. Details of the BMPs are provided in the BMP Plan and are summarized below. Site workers shall be trained in the implementation of these BMPs. Erosion Control BMPs: The following measures shall be used to reduce erosion and control sediment: <ul style="list-style-type: none"> • Preservation of Existing Vegetation – Existing vegetation will be preserved to the maximum extent practicable to facilitate protection of surfaces from erosion and help control sediments. To the extent practical, remedy facilities have been located on previously disturbed areas. In the event that existing vegetation needs to be disturbed, areas that need to be preserved will be identified by a qualified biologist and marked with temporary fencing. Site workers will be informed of the limits of disturbance within the construction site and will be instructed to keep clear of delineated areas. • Geotextiles and Mats – Natural (e.g., excelsior, straw, coconut) or synthetic (usually polyethylene) materials will be used to reduce soil erosion by wind or water. • Road Preparation and Maintenance – During road preparation activities, loose sediment will be uniformly compacted, consistent with the substantive San Bernardino County Building and Land Use Services Department requirements, to aid in reducing wind erosion. Ongoing road maintenance will include: (1) visual inspections to identify areas of erosion, (2) localized road repair and regrading, installation, and maintenance of erosion control features such as berms, silt fences, or straw wattles, (3) grading for road smoothness, 	Before and during ground-disturbing activities, operation and maintenance activities, and prior to the start of decommissioning	PG&E shall be responsible for the preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.		

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	<p>and (4) measures to reduce water erosion, such as clearing ditches and culverts of debris.</p> <p>Sediment Control BMPs – The following materials would be used to retain sediment in place where soil is being disturbed by construction processes, to intercept runoff and reduce flow velocity, and to allow sediment to settle from runoff before water leaves the construction site.</p> <ul style="list-style-type: none"> • Silt Fences – Silt fences are typically used in combination with sediment basins and sediment traps as erosion control measures. • Fiber Rolls/Sediment Wattles – These consist of aspen wood excelsior, straw, flax, or other similar materials rolled and bound into tight tubular rolls and placed on the face of slopes at regular intervals, depending on steepness of slopes. Fiber rolls/sediment wattles will be inspected prior to a forecasted rain event and after rain events to ensure the fiber rolls are working properly. Sediment accumulated by the fiber rolls will be removed to maintain the effectiveness of the fiber rolls. • Gravel Bag Berms – Gravel bag berms can be used as an alternative to fiber rolls and sediment wattles. If used, they will be installed prior to rain events to form a barrier to intercept runoff or reduce its velocity. Gravel bags will also be used, if necessary, during trenching activities when stockpiles are on-site. In the event that gravel bag berms are used as perimeter erosion control, bags will be stacked, one on top of the other (two high). When used to anchor stockpiles, the bags will be placed one high. • Sandbag Berms – Sandbag berms can also be used as an alternative to fiber rolls and sediment wattles. If used, they will be installed prior to rain events to form a barrier to intercept runoff or reduce its velocity. Sandbags will also be used, if necessary, during trenching activities when stockpiles are left overnight. In the event that sandbag berms are needed, they will be placed around the staging area and trenching area. • Straw-Bale Barriers – Straw-bale barriers can also be used as an alternative to fiber rolls, gravel bag berms, and sandbag berms. <p>Material Delivery and Storage – Proper management practices for delivery and storage of materials will be implemented to ensure minimal discharge or elimination of discharge of these materials to the storm drain systems or waterways. Construction materials and equipment will be parked and stored in the staging area. Materials subject to erosion from rain events within the storage area will be covered during nonworking days and prior to and during rain events. Storage and transfer of toxic or hazardous materials (e.g., ethanol, acids for well cleaning) will be on impervious surfaces appropriate to the stored materials.</p>				

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	<p>Material Use – Proper use of materials will be implemented to ensure minimal or complete elimination of discharge to the storm drain systems or waterways. Spill cleanup materials will be kept near the construction and staging areas. Leaks and spills will be cleaned up immediately using proper absorbent materials, which will then be disposed of as hazardous waste, unless determined to be non-hazardous waste.</p> <p>Stockpile Management – Stockpile management was discussed above in “Runoff from Soil Stockpile at Soil Processing Area.”</p> <p>Spill Prevention and Control – Spill prevention and control procedures and practices will be implemented in conjunction with the Waste Management Plan to prevent and control spills anytime chemicals and/or hazardous materials are stored on the construction site. Leaks and spills will be immediately cleaned up to the extent possible using absorbent materials, which will then be disposed of properly. Leaks and spills shall not be covered and/or buried or washed with water. Kits with appropriate spill response equipment will be kept near the construction and staging areas. The materials used for cleaning will not be allowed to enter storm drains or watercourses and will be collected and disposed of in accordance with BMPs. In particular, absorbents used to clean up spills of hazardous materials or waste must be managed as hazardous waste unless characterized as non-hazardous.</p> <p>Solid Waste Management – Solid waste management procedures and practices will be implemented at the beginning and throughout the Project. Solid waste, consisting primarily of asphalt concrete waste, shall be loaded directly onto trucks for off-site disposal. Loose debris will be picked up daily. Trash and scrap receptacles shall be placed at convenient locations to promote proper disposal of solid wastes. Receptacles shall be provided with lids or covers to prevent windblown litter. Hazardous wastes shall be accumulated at appropriate collection locations following appropriate labeling and management requirements pursuant to Title 22, California Code of Regulations.</p> <p>Concrete Waste Management – Concrete waste management procedures will be implemented where concrete is used as a construction material or where concrete dust and debris result from demolition activities. The concrete waste containers will be placed a minimum 50 feet from any drainage ways. Washouts will include secondary containment so that there is no discharge into the underlying soil and onto the surrounding areas. Watertight containers with lids and secondary containment, manufactured for the expressed purpose of containing waste concrete and its liquid residue, may be used. Containers will be emptied or removed from the project site when 75 percent of the full capacity has been reached.</p> <p>Sanitary/Septic Waste Management – Sanitary/septic waste management procedures and practices are implemented at construction sites when a temporary or portable sanitary/septic waste system exists. Sanitary facilities will be located away from Staging Areas 6 and 7 (due to proximity to culturally</p>				

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	<p>sensitive areas), drainage facilities, waterways, and from traffic circulation. In the event of high winds or a risk of high winds, temporary sanitary facilities will be secured with spikes or weighed down to prevent overturning. The sanitation subcontractor will monitor on-site sanitary/septic waste storage and disposal procedures on a weekly basis in accordance with the sanitary/septic waste management BMPs. Wastewater will not be discharged or buried. Waste will be removed and disposed off-site. Regular waste collection should be arranged before facilities overflow. The sanitary facility will be located a minimum of 50 feet away from drainage facilities and away from waterways and traffic circulation.</p> <p>Liquid Waste Management – Liquid waste management procedures will be employed to prevent the discharge of pollutants from liquid waste to the storm drain systems or watercourses. Liquid waste management will be applied if non-hazardous residuals or wastes are generated by construction activities.</p> <p>Tracking Control BMPs – A temporary construction entrance is defined as a stabilized point of entrance/exit to a construction site to reduce the tracking of mud and dirt onto private or public paved roads by construction vehicles. A temporary construction entrance will be established at applicable paved intersections and entry points to prevent sediment tracking. The temporary construction entrance will be inspected routinely.</p> <p>Good Housekeeping BMPs – Good housekeeping measures will be implemented on-site for the duration of the project and include the following:</p> <ul style="list-style-type: none"> • Store chemicals in watertight containers (with appropriate secondary containment) in a completely enclosed storage cabinet, trailer, or sealed drums shed to prevent spillage and leakage. • Minimize exposure of construction materials to precipitation. • Cover waste disposal containers at the end of every business day and during rain events. • Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water. • Prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters. • Immediately clean up leaked material and dispose of properly. • Establish and maintain effective perimeter controls and stabilize construction entrances and exits to control erosion and sediment discharges from the site. • Conduct regular stormwater tailgate meetings with the workforce when the project is staffed and work is under way. 				
HYDRO-1b/2b/3b	O&M SWPPP (Groundwater FEIR Measure with Revisions).	Before and during ground-disturbing	PG&E shall be responsible for the		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

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	<p>Subsequent to the Groundwater FEIR and in compliance with the Groundwater FEIR Mitigation Measures HYDRO-1, HYDRO-2, and HYDRO-3, PG&E prepared a SWPPP for operation and maintenance activities (O&M SWPPP; Final Remedy Design, Appendix L, Volume 1, Appendix D; CH2M Hill 2015a) to comply with the substantive requirements of the 2015 California General Industrial Storm Water Permit. The O&M SWPPP requires the BMPs summarized below. Site workers shall be trained in the implementation of these BMPs.</p> <p>Good Housekeeping, including:</p> <ul style="list-style-type: none"> Observe all outdoor areas associated with industrial activity; including storm water discharge locations, drainage areas, conveyance systems, waste handling/disposal areas, and perimeter areas impacted by off-facility materials or storm water run-on to determine housekeeping needs. Clean and dispose of properly any identified debris, waste, spills, tracked materials, or leaked materials Minimize or prevent material tracking Minimize dust generated from industrial materials or activities Ensure that all facility areas impacted by rinse/wash waters are cleaned as soon as possible Cover all stored industrial materials that can be readily mobilized by contact with storm water Contain all stored non-solid industrial materials or wastes that can be transported or dispersed by the wind or contact with storm water Prevent disposal of any rinse/wash waters or materials into the storm water conveyance system Minimize stormwater discharges from non-industrial areas (e.g., stormwater flows from employee parking area) that contact industrial areas of the facility Minimize authorized non-storm water discharges from non-industrial areas (e.g., potable water, fire hydrant testing) that contact industrial areas of the facility <p>Preventive Maintenance, including:</p> <ul style="list-style-type: none"> Identify all equipment and systems used outdoors that may spill or leak pollutants Observe the identified equipment and systems to detect leaks, or identify conditions that may result in the development of leaks Establish inspection schedule and maintenance schedule of identified equipment and systems 	activities, operation and maintenance activities, and prior to the start of decommissioning	preparation and implementation of this measure. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

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	<ul style="list-style-type: none"> • Establish procedures for prompt maintenance and repair of equipment, and maintenance of systems when conditions exist that may result in the development of spills or leaks <p>Material Handling and Waste Management, including:</p> <ul style="list-style-type: none"> • Prevent or minimize handling of industrial materials or wastes that can be readily mobilized by contact with stormwater during a storm event • Contain all stored non-solid industrial materials or wastes that can be transported or dispersed by the wind, erosion or contact with stormwater during handling • Cover industrial waste disposal containers and industrial material storage containers that contain industrial materials when not in use • Divert run-on and stormwater generated from within the facility away from all stockpiled materials • Clean all spills of industrial materials and/or wastes that occur during handling • Observe and clean as appropriate, any outdoor material/ or waste handling equipment or containers that can be contaminated by contact with industrial materials or wastes <p>Erosion and Sediment Controls, including:</p> <ul style="list-style-type: none"> • Implement effective wind erosion controls • Provide effective stabilization for inactive areas, finished slopes, and other erodible areas prior to a forecasted storm event • Maintain effective perimeter controls and stabilize all site entrances and exits to sufficiently control discharges of erodible materials from discharging or being tracked off the site • Divert run-on and storm water generated from within the facility away from all erodible materials <p>The Industrial General Permit requires that the site, to the extent feasible, implement and maintain any advanced BMPs necessary to reduce or prevent discharges of pollutants in its stormwater discharge in a manner that reflects best industry practice considering technological availability and economic practicability and achievability. Advanced BMPs may include:</p> <ul style="list-style-type: none"> • Exposure Minimization BMPs (such as storm resistant shelters that prevent the contact of stormwater with the industrial materials or areas of industrial activity) • Storm Water Containment and Discharge Reduction BMPs that divert, infiltrate, reuse, contain, retain, or reduce the volume of stormwater runoff 				

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	<ul style="list-style-type: none"> • Treatment Control BMPs (the implementation of one or more mechanical, chemical, biologic, or any other treatment technology) • Storm resistant shelters (i.e., buildings) for Operations at the TW Bench, Hazardous Materials storage at the TCS, and Carbon Amendment facilities at the MW-20 Bench • Storm water drainage at the TW Bench to divert stormwater run on and reduce the volume of stormwater runoff • Features in access roads to reduce erosion and divert storm water from remedy facilities such as wells and associated control equipment 				
HYDRO-4	<p>Manganese Treatment System (New Measure).</p> <p>Sampling as described in the Final Remedy Design, specifically in the Sampling and Monitoring Plan provided in the Operation and Maintenance Manual (CH2M Hill 2015a, Appendix L), shall be implemented throughout the duration of the groundwater remedy and shall include groundwater monitoring for manganese. If manganese exceeds concentrations as specifically identified in Table 2.2-1 of Appendix L, O&M Volume 2 (e.g., 1 to 2.5 mg/L at California wells downgradient of the IRZ, or above baseline concentrations in Arizona wells), then PG&E shall evaluate and implement operational modifications to control the manganese in accordance with Section 2, O&M Volume 2. If operational modifications are unsuccessful at decreasing manganese concentrations to below the action levels cited on the above-referenced Table 2.2-1 and as determined by DTSC, then the contingency measure of manganese treatment shall be implemented. As described in the Project Description (Section 3.6.3.1) of this SEIR and in Appendix J of the Final Remedy Design, PG&E shall implement manganese treatment using the Dissolved Metals Removal System in the Remedy-Produced Water Conditioning Plant if capacity is available or install an adsorptive or greensand filtration treatment system (or equivalent) preferentially located at the Remedy-Produced Water Conditioning Plant if space is available. If capacity and space are not available at the Remedy-Produced Water Conditioning Plant, the manganese treatment system could be located at the TW Bench or the MW-20 Bench (after the IM-3 system is decommissioned/removed). A manganese treatment system shall remain operational until the manganese concentrations remain below concentrations identified in Table 2.2-1 and DTSC approves of the cessation of the system.</p>	Commence if elevated manganese concentrations remain above anticipated concentrations identified in Table 2.2-1 of the O&M Volume 2, Appendix L after operational modifications prove to be ineffective. Manganese treatment would continue until concentrations decrease to below objectives and with the approval of the DTSC.	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-5	<p>Contingent Freshwater Pre-Injection Treatment (New Measure).</p> <p>To implement the Final Groundwater Remedy such that PG&E will be able to respond to the triggering conditions described below, PG&E shall implement the following measures.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
HYDRO-5a	<p>Incorporate Arsenic Monitoring of Freshwater Injection into the Sampling and Monitoring Plan (New Measure).</p> <p>Sampling as described in the Final Remedy Design, specifically in the Sampling and Monitoring Plan provided in the Operation and Maintenance Manual (CH2M Hill 2015a, Appendix L), shall be implemented throughout the duration of the groundwater remedy, even after injection ceases. Wells used to monitor freshwater supply injection shall be sampled and analyzed in accordance with the Project monitoring program for arsenic and other chemicals as described in the Sampling and Monitoring Plan. PG&E shall install and monitor wells designated in the Final Remedy Design for arsenic monitoring located approximately 150 feet and 225 feet from each freshwater injection well to comply with the SWRCB's requirements for freshwater injection with arsenic concentrations above the California MCL. Monitoring shall commence prior to freshwater injection and continue until observed arsenic concentrations return to pre-injection levels pursuant to Mitigation Measure HYDRO 5d. Monitoring wells for the freshwater injection area shall initially be sampled monthly for the first two quarters, then quarterly thereafter, unless the monitoring interval is modified with prior DTSC approval. The results of this monitoring shall determine whether Mitigation Measures HYDRO-5b and 5c are implemented</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-5b	<p>Assessment and Implementation of Interim Action if the California MCL is Exceeded 150 Feet Radially from Freshwater Injection Point (New Measure).</p> <p>If, as a result of the monitoring required in Mitigation Measure HYDRO-5a, the concentration of arsenic at the leading edge of the arsenic plume is found to exceed the arsenic water quality objective (California MCL) 150 feet radially from the freshwater injection point, PG&E shall immediately reassess their groundwater modeling and identify interim actions to limit the migration of the arsenic plume. PG&E shall submit the assessment and proposed action to DTSC within 60 days (or other timeframe directed by DTSC) of confirmed detections above water quality objectives.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-5c	<p>Implementation of Alternatives if California MCL is Exceeded for Arsenic 225 feet from any Freshwater Injection Point (New Measure).</p> <p>If the concentration of arsenic at the leading edge of the plume migrates and exceeds the water quality objective (California MCL) at 225 feet radially from the freshwater injection point, PG&E shall promptly notify DTSC and resample within 30 days. If the expedited resample confirms the exceedance, PG&E shall immediately cease fresh water injection. The injection shall not recommence until PG&E either blends the water source to below the California MCL at the point of injection; constructs and re-routes any contingent freshwater supply lines and appurtenances to the Contingent Freshwater Pre-Injection Treatment System to pre-treat the water and remove arsenic before injection; or proposes a</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
HYDRO-5d	<p>new water source that will comply with the California water quality objectives for injection. PG&E shall obtain approval from DTSC prior to implementation of the options identified above. Pre-injection treatment of the freshwater shall continue until further monitoring indicates that pre-treatment is no longer needed and DTSC approves of cessation of pre-treatment.</p> <p>Post-Remedy Arsenic Monitoring (New Measure). The SWRCB provided remedy requirements associated with injection of groundwater containing naturally occurring arsenic in a 2013 position letter (SWRCB 2013). To ensure that water quality objectives are not exceeded in groundwater within freshwater injection areas after completion of the remedy, sampling of the arsenic monitoring wells and possibly other wells (as directed by DTSC) would continue under the Sampling and Monitoring Plan for an estimated 20 years and possibly longer after completion of active treatment to ensure that arsenic concentrations are within and remain at pre-remedy background levels. The sampling would cease after results demonstrate that the concentrations of arsenic remain within water quality objectives and DTSC approves of ceasing the monitoring for arsenic.</p>	Commence at construction and continue for life of the project	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-6	<p>Protection of Non-Project Water Supply Wells (New Measure).</p> <p>To minimize any potential impacts to non-Project water supply wells associated with the long-term operation and maintenance of the Final Groundwater Remedy Project, PG&E shall implement the mitigation measure described below.</p>	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		
HYDRO-6a	<p>Incorporate Non-Project Water Supply Wells and/or Additional Monitoring Wells into the Monitoring Program (New Measure).</p> <ul style="list-style-type: none"> For water supply wells located within about one mile of HNWR-1A (currently Topock-2, Topock 3, Marina-1, Sanders, Smith, PGE-9N, PGE-9S, MTS-1, MTS-2, and GSRV-2), PG&E shall request well construction information and access to sample, test and assess current well conditions. If access is granted, PG&E shall add the non-Project water supply wells to the monitoring program (Appendix L, O&M Volume 2, Sampling and Monitoring Plan, Section 5.4). If access is denied, PG&E will alert DTSC of such response in a timely manner and provide associated documentation. If the well owner does not otherwise respond within 60 days, PG&E shall initiate a second request. If the well owner still does not respond, PG&E will alert DTSC of such response in a timely manner and provide documentation of both attempts to contact the owner. If new water supply non-Project wells are installed or discovered in the general area in the future, DTSC may direct PG&E to take additional action for access and add them to the wells listed above at any time. 	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> PG&E shall submit a well installation work plan to DTSC describing installation of a new nested monitoring well located between HNWR-1 and wells Topock-2/Topock-3 since wells Topock-2/Topock-3 are currently the largest producing non-Project supply wells in the area. The work plan shall also propose the installation of any additional monitoring wells that are needed to ensure protection of the water resource in the vicinity of the non-Project water supply wells. PG&E shall submit the well installation work plan to DTSC within twelve months of DTSC's approval of the remedy design and would be implemented only after DTSC's review and approval. Up to ten well locations from the total borehole count evaluated in this SEIR can be allocated for the monitoring of water quality to protect non-Project water supply wells. Overtime, wells may be added to or removed from the monitoring program (with prior DTSC approval) based on accumulated data or lack thereof. Monitoring of wells identified in this mitigation measure shall initially be quarterly for the first two years of operation and include groundwater levels and chemical constituents to establish baseline conditions and assess seasonal variations in the area of the non-Project water supply wells and monitoring wells. Pressure transducers shall be fitted to monitoring wells, Well HNWR-1, Site B, and the above-listed non-Project water supply wells (some which are not currently pumping) to track and evaluate pumping effects over time and to assist with assessments required below in Mitigation Measure HYDRO-6b and 6c. Chemical testing shall include, at a minimum, Title 22 metals, Cr(VI), stable isotopes of hydrogen and oxygen, general minerals, and TDS. After the second year of monitoring, sampling frequencies may be reduced to semi-annually for two additional years and annually thereafter with DTSC approval. The well network, monitoring frequency, pressure transducer monitoring, and chemical constituents may be modified with DTSC approval. 				
HYDRO-6b	<p>Water Supply Mitigation (New Measure).</p> <ul style="list-style-type: none"> If non-pumping groundwater elevations substantially decrease from baseline conditions established under HYDRO-6a in a monitored non-Project water supply well (e.g., below top of well screen, below pump depths, or causes significant decrease in well yield) or a similar groundwater elevation decrease is observed in a water resource protection monitoring well described in HYDRO-6a, PG&E shall inform DTSC as soon as practicable and no longer than two weeks (unless modified with DTSC approval) after receipt of data documenting such an event. Additionally, PG&E will assess well and aquifer conditions to evaluate if the Project has caused a substantial decrease in groundwater elevations/well yield. PG&E shall promptly provide its 	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>assessment to DTSC for review. At a minimum, the assessment shall consider the following conditions:</p> <ul style="list-style-type: none"> o Historical well usage o Well condition o Anticipated drawdown effects o Regional groundwater level trends <ul style="list-style-type: none"> • If PG&E or DTSC determines that the Project has adversely impacted a non-Project water supply well to the extent that the Project is determined to be the primary cause, or one of the primary contributing causes, of the reduction in well yield or elevation such that the well does not provide sufficient water, PG&E shall promptly notify the well owner. PG&E shall coordinate with the well owner(s) to arrange for an interim drinking water supply if necessary, and develop a plan (for DTSC approval) which will assist in restoring the water resource by using measures that may include: <ul style="list-style-type: none"> o Lowering the well pump o Rehabilitating the well o Deepening the existing well o Providing short and/or long term replacement of water supply o Constructing a new replacement well, o Modifying remedy operations (e.g., placing a packer in HNWR-1A) <p>An alternate course of action may be considered, provided it is mutually agreeable to DTSC, PG&E, and the well owner.</p> <p>Unless an alternative period is approved by DTSC, the plan/alternate course of action should be provided to DTSC for approval within 30 days of determining that the Project adversely impacted a non-Project water supply well.</p>				
HYDRO-6c	<p>Water Quality Mitigation (New Measure).</p> <ul style="list-style-type: none"> • If the groundwater quality of a non-Project water supply well deteriorates by exceeding water quality objectives (e.g., MCLs for drinking water wells) and baseline conditions established pursuant to HYDRO-6a, PG&E will immediately notify DTSC and DOI and take steps to collect confirmation samples from the well within 60 days of original sample collection unless modified with DTSC approval. PG&E shall identify/confirm the specific uses of the well and inform DTSC, DOI, the Arizona Department of Environmental Quality, and the well owner of the deterioration as soon as possible (e.g., within 7 days of 	During the use of freshwater wells	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

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MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<p>receiving confirmation samples results). This shall include PG&E providing both the initial and confirmation sample data to agencies and well owner even if the initial exceedance is not confirmed.</p> <ul style="list-style-type: none"> • If PG&E or DTSC determines that the Project has adversely impacted a non-Project water supply well to the extent that the Project is determined to be the primary cause, or one of the primary contributing causes, of the reduction in water quality, PG&E shall immediately notify the well owner. PG&E shall coordinate with the well owner(s) to arrange for an interim drinking water supply if necessary, and develop a plan (for DTSC approval) which will assist in restoring the water resource by using measures which may include: <ul style="list-style-type: none"> ○ Deepening the existing well ○ Providing short and/or long term replacement of water supply ○ Constructing a new replacement well ○ Conducting water treatment, ○ Modifying remedy operations (e.g., placing a packer in HNWR-1A) <p>An alternate course of action may be considered, provided it is mutually agreeable to DTSC, PG&E and the well owner.</p> <p>The plan/alternate course of action should be provided to DTSC for approval within 30 days, unless modified with DTSC approval, of determining that the Project adversely impacted a non-Project water supply well.</p> <ul style="list-style-type: none"> • If the groundwater quality of any well installed as part of HYDRO-6a deteriorates by exceeding water quality objectives (e.g., MCLs for drinking water wells) and baseline conditions, PG&E shall conduct confirmation sampling and promptly assess aquifer conditions to evaluate if the Project has adversely impacted the well. PG&E shall promptly inform DTSC, DOI, and the Arizona Department of Environmental Quality of any adverse impacts and provide an assessment with any recommendations for review and approval. 				
NOISE-2	<p>Mitigation Measure NOISE-2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions).</p> <ul style="list-style-type: none"> • Construction equipment shall be properly maintained per manufacturer specifications and fitted with the best available noise-suppression devices (e.g., mufflers, silencers, wraps). All impact tools shall be shrouded or shielded, and all intake and exhaust ports on power equipment shall be muffled or shielded. 	During all initial construction activities, during operation and maintenance, and during decommissioning	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	<ul style="list-style-type: none"> Construction equipment shall not idle for extended periods of time (more than 15 minutes) when not being utilized during construction activities. A notable exception is when a support vehicle is needed to remain running for health and safety reasons (i.e., air conditioning), consistent with health and safety procedures. Construction activities shall include, but not limited to, the use of berms, stockpiles, dumpsters, and/or bins to shield the nearest noise-sensitive receptor adjacent to construction activities to within acceptable non-transportation noise level standards. When construction activities are conducted within the distances outlined earlier (i.e., 1,850 feet and 5,830 feet from California receptors and 330 feet and 735 feet from Arizona receptors for daytime and nighttime noise, respectively) relative to noise-sensitive uses in the project area, noise measurements shall be under the supervision of a qualified acoustical consultant at the nearest noise-sensitive land use relative to the construction activities with a sound level meter that meets the standards of the American National Standards Institute (ANSI Section S14 1979, Type 1 of Type 2) to ensure that construction noise associated with the project component complies with applicable daytime and nighttime noise standards. Coordination with the Tribes and appropriate landowner(s) shall occur to allow opportunity for input in determining noise monitoring locations. If noise levels are still determined to exceed noise standards, temporary engineered acoustical barriers shall be erected as close to the construction activities as feasible, breaking the line of sight between the source and receptor where noise levels exceed applicable standards. Coordination with the Tribes shall occur in a manner consistent with the Cultural Impact Mitigation Program (CIMP; see Appendix H to the C/RAWP) throughout all Project phases, including input in determining constraints in locating temporary noise barriers to avoid or minimize physical impact to cultural resources. All acoustical barriers shall be constructed with material having a minimum surface weight of 2 pounds per square foot or greater and a demonstrated Sound Transmission Class (STC) rating of 25 or greater as defined by the American Society for Testing and Materials' Test Method E90. Placement, orientation, size, and density of acoustical barriers shall be specified by, or under the direct supervision of, a qualified acoustical consultant. A disturbance coordinator shall be designated by the PG&E, which will post contact information in a conspicuous location near groundwater project activity areas so that it is clearly visible to nearby noise-sensitive receptors as identified in Figure 4.7-1 and Interested Native American Tribes (Chemehuevi Indian Tribe, Cocopah Indian Tribe, 				

TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
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	<p>Colorado River Indian Tribes, Fort Mojave Indian Tribe, and the Hualapai Indian Tribe). The coordinator will manage and thoroughly investigate complaints resulting from the Project-related noise to ensure resolution. Reoccurring disturbances will be evaluated by a qualified acoustical consultant retained by PG&E to ensure compliance with applicable standards. Noise complaints shall be reported to DTSC as soon as practicable and no more than 72 hours upon receipt of complaint. Resolutions will be recorded, tracked, and reported to DTSC on a monthly basis. The disturbance coordinator will contact nearby noise-sensitive receptors as labeled in Figure 4.7-1 and Interested Tribes, advising them of the Project activity schedule. The disturbance coordinator will also consider the timing of Project activities in relation to Tribal ceremonial events that are sensitive to noise in a manner consistent with the Cultural Impact Mitigation Program (CIMP) Section 2.11 (see Appendix H to the C/RAWP).</p> <ul style="list-style-type: none"> This shall be achieved in part through annual project update mailings (could be combined with other annual project mailings) to potentially impacted owners/occupants of sensitive land uses to give notice of possible disturbances and impacts. The mailing shall also identify the disturbance coordinator's contact information. 				
NOISE-1	<p>Mitigation Measure NOISE-1: Short-Term Groundborne Vibration Levels Caused by Project Activities near Sensitive Receptors (Groundwater FEIR Measure with Revisions).</p> <ul style="list-style-type: none"> New wells shall be constructed a minimum of 45 feet from vibration-sensitive receptors, as feasible. Constructing new wells within 30 feet of vibration-sensitive land uses located in California and 275 feet of vibration-sensitive land uses located in Arizona shall be avoided. A disturbance coordinator shall be designated by PG&E, which will post contact information in conspicuous locations near Project activity areas such as on construction fencing or trailers, but with consideration to culturally sensitive areas such as the Topock Maze. Signage will be clearly visible to nearby vibration-sensitive receptors as identified in Figure 4.7-1. The coordinator will manage complaints resulting from the construction vibration. Reoccurring disturbances will be evaluated by a qualified acoustical consultant retained by the project applicant to ensure compliance with applicable standards. The disturbance coordinator will contact nearby vibration-sensitive receptors, advising them of the construction schedule. This shall be achieved in part through annual project update mailings (could be combined with other annual project mailings) to owners/occupants of potentially impacted sensitive land uses to give notice of possible disturbances and impacts. The mailing shall also identify the disturbance coordinator's contact information. 	<p>During all construction activities that occur during the initial construction phase, as well as during operation and maintenance and decommissioning that are being performed in proximity to vibration-sensitive receptors.</p>	<p>PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.</p>		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
CUL-5	<p>Cumulative Impacts to the Topock TCP (New Measure).</p> <p>PG&E shall provide funding to the following Tribes (Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai Indian Tribe) that would facilitate actions to preserve the cultural and ecological integrity of the Topock TCP, and that would provide interpretation, and/or educational programs related to the Topock TCP. The funds shall be used for the purposes of ensuring the preservation, conservation and transmission of cultural values associated with the Topock TCP, including furthering Tribal knowledge and community awareness of the TCP's importance and meaning for each Tribe. The funds shall be used to implement interpretive facilities or programs, land preservation/conservation, educational programs (such as grant funding to further the cultural understanding, including research of the Topock area). The Project's Conditions of Approval will identify the amount of the one-time contribution to be made by PG&E, and the type of funding mechanism to be utilized as determined by DTSC. The funding mechanism shall provide for the management of individual, separate funds of equal amounts for each of the five Tribes, and shall administer the release of funds upon review and approval of proposals by Tribe(s). Proposals must meet the above-described purpose related to preservation/conservation, interpretation, and/or educational programs pertaining to the Topock TCP, and must meet pre-established minimum criteria. The funding mechanism shall also provide tracking and verification through documentation of the appropriate use of the funds. Within 6 months of Project approval, DTSC shall develop, in consultation with the Tribes, Tribal Funding Application Guidelines for distribution to the Tribes. The Tribal Funding Application Guidelines will identify the funding management organization that will manage the funds and will provide guidance on accessing the funds, including the identification of minimum criteria by which proposals will be evaluated. Within 30 days of notification by DTSC that the funding management organization has been established, PG&E shall provide documentation that the required funding contribution has been made. The funding organization shall report to DTSC upon the following three occasions: (1) receipt of a proposal by Tribe(s), (2) approval and release of funds, and (3) verification of implementation/use of funds. Funding shall be available for use within the duration of the active remedy, currently estimated to be approximately 30 years.</p>	Implementation of CUL-1 through CUL-4 prior to and during construction, operation and maintenance, and decommissioning, and CUL-5 prior to construction activities and over 30 years of Project operation.	PG&E shall be responsible for the implementation of these measures. DTSC shall be responsible for ensuring compliance.		
NOISE-3	<p>Cumulative Noise Increases from Remedial Activities (New Measure).</p> <p>Coordination between teams implementing soil remedial activities (including investigation, pilot testing, and remediation) and groundwater remediation shall occur as to avoid cumulative noise levels to exceed ambient noise levels by 5 dBA or greater, or to exceed applicable County standards at any sensitive receptor (as defined in Chapter 4.7 of this SEIR). If concurrent activities must occur near common sensitive receptors, real time noise measurements of activities shall be conducted by a qualified acoustical consultant (or contractor</p>	Prior to and during construction, operation and maintenance, and decommissioning	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.		

**TABLE 1
MITIGATION MONITORING AND REPORTING PROGRAM FOR THE TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDY PROJECT**

Mitigation Number	Mitigation Measure	Timing/ Schedule	Implementation Responsibility	Completion of Implementation	
				Action	Date Completed
	trained by an appropriate qualified acoustical consultant) at the nearest noise-sensitive land use with a sound level meter that meets the standards of the American National Standards Institute (ANSI Section S14 1979, Type 1 of Type 2). If exceedances are not observed, monitoring can be discontinued. If exceedances are experienced, temporary barriers shall be erected as close to the construction activities as feasible, breaking the line of sight between the source and receptor where noise levels exceed applicable standards. If noise cannot be effectively mitigated, one or more of the concurrent activities shall be modified (options include but are not limited to using lower-noise-producing equipment or manual methods, relocating activities further away from each other, or avoiding/rescheduling concurrent activity, etc.) so as to result in appropriate noise levels.				

SOURCES:

CH2M HILL. 2014. *Bird Impact Avoidance and Minimization Plan Topock Groundwater Remediation Project*. Prepared for Pacific Gas and Electric Company. April 2014;

International Society of Arboriculture (ISA 2011). 2011. *Pruning Mature Trees*. Champaign, IL;

Society for Vertebrate Paleontology (SVP). 2010. *Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources*. Available:.. Accessed February 20, 2014.

EXHIBIT D – TOPOCK COMPRESSOR STATION FINAL GROUNDWATER REMEDIATION PROJECT

CALIFORNIA STATE LANDS COMMISSION STATEMENT OF FINDINGS AND STATEMENT OF OVERRIDING CONSIDERATIONS (PRC 8737, State Clearinghouse No. 2008051003)

1.0 INTRODUCTION

The California State Lands Commission (Commission or CSLC), acting as a responsible agency under the California Environmental Quality Act (CEQA), makes these Findings and this Statement of Overriding Considerations to comply with CEQA as part of its discretionary approval to authorize issuance of a General Lease – Public Agency Use, to the Pacific Gas and Electric Company (PG&E), for use of sovereign land associated with the proposed Topock Compressor Station Final Groundwater Remediation Project (Project). (See generally Pub. Resources Code, § 21069; State CEQA Guidelines, § 15381.)¹ The Commission has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The Commission also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions. (Pub. Resources Code, §§ 6301, 6306, 6009, subd. (c).) All tidelands and submerged lands, granted or ungranted, as well as navigable lakes and waterways, are subject to the protections of the common law Public Trust.

The Commission is a responsible agency under CEQA for the Project because the Commission must amend a lease for the Project to go forward, and because the Department of Toxic Substances Control (DTSC), as the CEQA lead agency, has the principal responsibility for approving the Project and has completed its environmental review under CEQA. The DTSC analyzed the environmental impacts associated with the Project in an Environmental Impact Report (EIR or Groundwater FEIR), an Addendum to the FEIR (Addendum No.1 for Alternative Freshwater Source Evaluation Activities [Addendum]), and a Subsequent Environmental Impact Report (SEIR) (State Clearinghouse [SCH] No. 2008051003). The EIR was certified on January 31, 2011, the Addendum was certified on September 4, 2013, and the DTSC certified the SEIR on April 23, 2018, and adopted a Mitigation Monitoring and Reporting Program (MMRP), CEQA Findings of Fact, and Statement of Overriding Considerations.

The Project involves in situ treatment of chromium-contaminated groundwater with freshwater flushing. In situ treatment (which refers to the reduction in mass, toxicity, mobility, volume, and concentration of the chromium plume using technologies that treat groundwater in place as opposed to pumping and circulating water through a treatment plant) would be performed by placing a degradable food-grade organic compound

¹ CEQA is codified in Public Resources Code section 21000 et seq. The State CEQA Guidelines are found in California Code of Regulations, title 14, section 15000 et seq.

(carbon substrate or carbon amendment) in the groundwater to create conditions to convert hexavalent chromium [Cr(VI)] dissolved in groundwater to relatively insoluble trivalent chromium [Cr(III)]. The reduced chromium would precipitate or become adsorbed onto soils below the water table and thereby be removed from groundwater. The organic carbon substrate would be released into the aquifer by injection after mixing on-site with a water source, such as extracted contaminated groundwater or clean water.

The DTSC determined that the Project could have significant environmental effects on the following environmental resources:

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology and Soils (Taken from the Groundwater FEIR)
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise
- Utilities, Service Systems, and Energy
- Water Supply

Of the 10 resources areas noted above, Project components within the Commission's jurisdiction (in or adjacent to the Colorado River) could have significant environmental effects on eight of the resource areas, as follows:

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources
- Cultural Resources
- Geology and Soils (Taken from the Groundwater FEIR)
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise

In certifying the Final SEIR and approving the Project, the DTSC imposed mitigation measures for Project-related significant effects on the environment as conditions of Project approval and concluded that Project-related impacts would be substantially lessened by implementing these mitigation measures. However, even after integration of all feasible mitigation, the DTSC concluded in the SEIR that some identified impacts remained significant, and adopted a Statement of Overriding Considerations (see Attachment D-1) to support its Project approval despite the significant and unavoidable impacts. The DTSC determined that, after mitigation, the Project may still have significant impacts on cultural resources and noise (both Project-related and cumulative) and aesthetics (cumulative). Because some of these significant impacts may occur on lands under the Commission's jurisdiction, the Commission also adopts

its own Statement of Overriding Considerations as set forth in this exhibit as part of its approval.

As a responsible agency, the Commission complies with CEQA by considering the EIR, Addendum, and SEIR and reaching its own conclusions on whether, how, and with what conditions to approve a project. In doing so, the Commission may require changes in a project to lessen or avoid the effects, either direct or indirect, of that part of the project which the Commission will be called on to carry out or approve. To ensure the identified mitigation measures or Project revisions are implemented, the Commission adopts the Mitigation Monitoring Program (MMP) as set forth in Exhibit C as part of its Project approval.

2.0 FINDINGS

The Commission's role as a responsible agency affects the scope of, but not the obligation to adopt, findings required by CEQA. Findings are required under CEQA by each "public agency" that approves a project for which an EIR has been certified that identifies one or more significant impacts on the environment (Pub. Resources Code, § 21081, subd. (a); State CEQA Guidelines, § 15091, subd. (a).) Because the EIR, Addendum, and SEIR certified by the DTSC for the Project identify potentially significant impacts that fall within the scope of the Commission's approval, the Commission makes the Findings set forth below as a responsible agency under CEQA. (State CEQA Guidelines, § 15096, subd. (h); *Riverwatch v. Olivenhain Mun. Water Dist.* (2009) 170 Cal.App.4th 1186, 1202, 1207.

While the Commission must consider the environmental impacts of the Project as set forth in the EIR, Addendum, and SEIR, the Commission's obligation to mitigate or avoid the direct or indirect environmental impacts of the Project is limited to those parts which it decides to carry out, finance, or approve (Pub. Resources Code, § 21002.1, subd. (d); State CEQA Guidelines, §§ 15041, subd. (b), 15096, subds. (f)-(g).) Accordingly, because the Commission's exercise of discretion involves issuing a 49-year General Lease – Other Use for this Project, the Commission is responsible for considering only the environmental impacts related to lands or resources subject to the Commission's jurisdiction. With respect to all other impacts associated with implementation of the Project, the Commission is bound by the legal presumption that the EIR, Addendum, and SEIR fully comply with CEQA.

The Commission reviewed and considered the information contained in the Project EIR, Addendum, and SEIR. All significant adverse impacts of the Project identified in these documents relating to the Commission's approval of a General Lease – Other Use for the Project are included herein and organized by the resource affected.

These Findings, which reflect the independent judgment of the Commission, are intended to comply with CEQA's mandate that no public agency shall approve or carry out a project for which an EIR has been certified that identifies one or more significant environmental effects unless the agency makes written findings for each of those significant effects. Possible findings on each significant effect are:

- (1) Changes or alterations have been required in, or incorporated into, the Project that avoid or substantially lessen the significant environmental effect as identified in the Final SEIR.
- (2) Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the Commission. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- (3) Specific economic, legal, social, technological or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final SEIR.²

A discussion of supporting facts follows each Finding.

- Whenever Finding (1) occurs, the mitigation measures that lessen the significant environmental impact are identified in the facts supporting the Finding.
- Whenever Finding (2) occurs, the agencies with jurisdiction are specified. These agencies, within their respective spheres of influence, have the responsibility to adopt, implement, and enforce the mitigation discussed.
- Wherever Finding (3) is made, the Commission has determined that, even after implementation of all feasible mitigation measures and consideration of feasible alternatives, the identified impact will exceed the significance criteria set forth in the EIR. Furthermore, to the extent that potentially feasible measures have been alleged or proposed, the Findings explain why certain economic, legal, social, technological or other considerations render such possibilities infeasible. The significant and unavoidable impacts requiring Finding (3) are identified in the Final EIR, discussed in the Responses to Comments, and explained below. Having done everything it can to avoid and substantially lessen these effects consistent with its legal authority and CEQA, the Commission finds in these instances that overriding economic, legal, social, and other benefits of the approved Project outweigh the resulting significant and unavoidable impacts. The Statement of Overriding Considerations adopted as part of this exhibit applies to all such unavoidable impacts as required by CEQA. (Pub. Resources Code, § 21081, subd. (b); State CEQA Guidelines, §§ 15092 and 15093.)

These Findings are supported by substantial evidence contained in the EIR, Addendum, and SEIR and other relevant information provided to the Commission or existing in its files, all of which is contained in the administrative record. The mitigation measures are briefly described in these Findings; more detail on the mitigation measures is included in the Final SEIR.

The Commission is the custodian of the record of proceedings upon which its decision is based. The location of the Commission's record of proceedings is in the Sacramento office of the Commission, 100 Howe Avenue, Suite 100-South, Sacramento, CA 95825.

² See Public Resources Code section 21081, subdivision (a) and State CEQA Guidelines section 15091, subdivision (a).

A. SUMMARY OF FINDINGS

Based on public scoping, the proposed Project will have No Impact on the following environmental issue areas:

- Agricultural Resources
- Mineral Resources
- Population and Housing
- Public Services

The SEIR subsequently identified the following impacts as Less Than Significant:

- Land-Based Transportation

For the remaining potentially significant effects, the Findings are organized by significant impacts within the SEIR issue areas as presented below.

B. POTENTIALLY SIGNIFICANT IMPACTS

The Final SEIR identified the impacts listed in Table 1 to be potentially significant absent mitigation. After application of mitigation, several impacts were determined to be less than significant (LTSM). For the full text of each mitigation measure (MM), please refer to Exhibit C, Attachment C-1. However, even with the integration of all feasible mitigation, the DTSC concluded in the SEIR that the other identified potentially significant impacts will remain significant. Table 1 identifies those impacts that the DTSC determined would be, after mitigation, significant and unavoidable (SU).

Table 1 – Significant Impacts by Issue Area

Environmental Issue Area	Impact Nos.	
	LTSM	SU
Aesthetics	AES-1, AES-2	
Air Quality	AIR-1, AIR-2	
Biological Resources	BIO-1, BIO-2, BIO-3, BIO-4	
Cultural Resources	CUL-3	CUL-1, CUL-2, CUL-4
Geology and Soils	GEO-1a, GEO-1b	
Hazards and Hazardous Materials	HAZ-1	
Hydrology	HYDRO-1, HYDRO-2, HYDRO-3	
Noise	NOISE-2	NOISE-1, NOISE-3, NOISE-4
Cumulative		CUM-1, CUM-2, CUM-3

C. IMPACTS REDUCED TO LESS THAN SIGNIFICANT LEVELS WITH MITIGATION (LTSM)

The impacts identified below were determined in the Final SEIR to be potentially significant absent mitigation; after application of mitigation, however, the impacts were determined to be less than significant.

1. AESTHETICS

CEQA FINDING NO. AES-1

Impact: **Impact AES-1. Substantial Adverse Effects on Scenic Vistas.** The proposed Project could introduce additional wells, roads, pipelines, and other associated infrastructure, which could have a substantial adverse effect on a scenic vista.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The construction of pipelines, wells, buildings, storage facilities, staging areas, and roadways that may be seen from identified scenic vistas. MM AES-1 would reduce the potentially adverse effect on a scenic vista associated with the Project. Although certain elements of the Project would remain visible, incorporating design elements that are consistent with the surrounding natural color palette, as well as plant preservation and revegetation, would blend Project infrastructure into the visual setting and would reduce the overall contrast of the Project to a less than significant level.

MM AES-1: Substantial Adverse Effects on Scenic Vistas (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. AES-2

Impact: **Impact AES-2. Substantial Damage to Scenic Resources within a Scenic Corridor.** The proposed Project could introduce new features in the Colorado River floodplain.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Construction activities associated with the Future Activity Allowance may introduce new wells, roads, pipelines, and other associated infrastructure along the Colorado River floodplain. MM AES-2 would reduce the overall change to the visual character of the view corridor along the Colorado River associated with features in the River's floodplain and to the general Future Activity Allowance locations to the extent such locations are reasonably foreseeable at this time. Although the Project would remain visible, incorporating design elements that are consistent with the surrounding natural color palette, as well as plant preservation and revegetation, would blend the Project into the

visual setting within the floodplain and would reduce the overall visual contrast of the Project to a less than significant level.

MM AES-2: Substantial Damage to Scenic Resources within a Scenic Corridor
(Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

2. AIR QUALITY

CEQA FINDING NO. AIR-1

Impact: **Impact AIR-1. Short-term Construction-Related Emissions of Criteria Pollutants and Precursors.** The proposed Project could violate air quality standards for NO_x during construction activities.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would emit pollutants during the following construction activities: (1) drilling, grading, and excavation; (2) workers traveling to and from Project site; (3) delivery and hauling of supplies to, and debris from, the Project Area; (4) soil stockpiling and processing for reuse on-site; (5) fuel combustion by on-site equipment; and (6) paving. Construction emissions are considered short term and temporary but have the potential to represent a significant impact with respect to air quality.

Implementation of MM AIR-1 and AIR-1a would reduce fugitive dust (PM₁₀) emissions by a minimum of 75 percent. Thus, post mitigation PM₁₀ emissions would be substantially reduced to below MDAQMD's threshold of 82 pounds per day. With implementation of required fugitive dust controls, the impact after mitigation is reduced to a less than significant level for PM₁₀. Implementation of the dust control measures including the use of Tier-4 equipment would reduce NO_x emissions to a less than significant level.

MM AIR-1: Short Term-Construction Related Emissions of Criteria Air Pollutants (Groundwater FEIR Measure).

MM AIR-1a: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. AIR-2

Impact: **Impact AIR-2: Result in a Cumulatively Considerable Net Increase.** The proposed Project could result in a cumulatively considerable net increase in criteria pollutant emissions with respect to NO_x emissions during construction activities.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would emit NO_x emissions during construction activities that would result in potentially significant impacts, which is a new identified impact from the Groundwater FEIR. The proposed Project would not result in a cumulative considerable net increase in any other criteria pollutant emissions. Impacts related to all other criteria pollutants for construction and for operational activities would be less than significant, as previously identified in the Groundwater FEIR.

Implementation of Mitigation Measure AIR-1a would reduce NO_x emissions to a less than significant level.

MM AIR-1a: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

3. BIOLOGICAL RESOURCES

CEQA FINDING NO. BIO-1

Impact: **Impact BIO-1. Potential Fill of Wetlands and Other Waters of the United States/California, and Disturbance or Removal of Riparian Habitat.**

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Project implementation could disturb ephemeral waters under U.S. Army Corps of Engineers (USACE) and California Department of Fish and Wildlife (CDFW) jurisdiction. While the proposed Project has been determined to be exempt from obtaining regulatory agency permits by the USACE (USACE 2013) and CDFW because it is an activity undertaken entirely on a Comprehensive Environmental Response,

Compensation, and Liability Act (CERCLA) site, direct impacts to jurisdictional areas that have not been previously disturbed would be potentially significant.

Avoidance of impacts to ephemeral waters under USACE and CDFW jurisdiction would occur through implementation of habitat restoration plans described in MMs BIO-1a and BIO-1b. Using these measures, revegetation is expected to occur naturally within one to two growing seasons ensuring a no-net-loss of habitat value or function in this timeframe. This would reduce impacts on sensitive habitats to a less than significant level.

MM BIO-1a: No-net-loss of Jurisdictional Wetlands/Waters Function or Value
(New Measure).

MM BIO-1b: Final Remedy Restoration Plan (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-2

Impact: **Impact BIO-2. Direct Disturbance of and Loss of Habitat for Special-Status Species.** Implementation of the proposed Project could affect special-status species either directly or through habitat modifications.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project may result in the disturbance of, and Loss of Habitat for, Special-Status Birds, Desert Tortoise, Ring-Tailed Cat, Nelson's Bighorn Sheep, Special-Status Bats, and Special-Status Plants.

Implementation of MMs BIO-2a, 2b, 2c, 2d, 2e, 2f, and 2h consists of preconstruction surveys by a qualified biologist with species-specific experience, avoidance of avian breeding seasons and maternity roosting seasons for bats, and restoration of disturbed areas. MMs identified in BIO-2a, 2b, 2c, 2d, 2e, 2f, and 2h will reduce the impacts on special-status birds, desert tortoise, ring-tailed cat, Nelson's Bighorn Sheep, special-status bats, and special-status plants to a less than significant level.

MM BIO-2a: Disturbance of Special-Status Birds and Loss of Habitat
(Groundwater FEIR Measure with Revisions).

MM BIO-2b: Disturbance of Desert Tortoise and Loss of Habitat (Groundwater FEIR Measure with Revisions).

MM BIO-2c: Disturbance of Special-Status Species and Loss of Habitat Caused by Decommissioning (Groundwater FEIR Measure with Revisions).

MM BIO-2d: Disturbance to Ring-Tailed Cat Individuals and Habitat (New Measure).

MM BIO-2e: Disturbance of Nelson’s Bighorn Sheep (New Measure).

MM BIO-2f: Disturbance or Loss of Special-status Bat Species (New Measure).

MM BIO-2h: Disturbance of Special-Status Plants (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-3

Impact: **Impact BIO-3. Fish Mortality, Interference with Spawning Habitat, and Other Adverse Aquatic Effects.** Increased sedimentation and turbidity, the release of contaminants, and standing during construction activities could also adversely affect fish habitat and movement in the Colorado River.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would not result in direct impacts to fish species or their habitat as no construction would take place in aquatic habitats (i.e., the Colorado River). However, Project construction could increase sediments, turbidity, and contaminants that could indirectly affect fish and their aquatic habitat immediately adjacent to and downstream of the Project area.

Implementation of MM HYDRO-1 would minimize impacts on water quality by controlling potential pollutants, including sediment, and runoff discharges from the Project Site. Consequently, any impacts associated with pollutants resulting from alterations of drainage and water quality would be reduced to a less than significant level. Implementation of MM HYDRO-1 would reduce potentially significant impacts to a less than significant level.

MM HYDRO-1: Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. BIO-4

Impact: **Impact BIO-4. Substantial Interference with Fish or Wildlife Movement Corridors or Nursery Sites.** The Project could impede the use of bat maternity roosts, which are considered a type of native wildlife nursery site.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Modifying, destroying or impeding the use of active maternity roosts of special-status bat species could result in substantial interference to the species reproduction and distribution. Maternity roosting sites for bats can include rock crevices, caves, large trees, bridges, and buildings.

Implementation of MM BIO-2f would reduce impacts to bat maternity roost sites to a less than significant level through seasonal avoidance or establishing avoidance buffers around identified maternity roost sites for activities performed during the maternity roosting season.

MM BIO-2f: Disturbance or Loss of Special-status Bat Species (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

4. CULTURAL RESOURCES

CEQA FINDING NO. CUL-3

Impact: **Impact CUL-3. Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geologic Feature.** Construction, operation and maintenance, and decommissioning activities of the proposed Project could result in substantial adverse changes to a unique paleontological resource or unique geologic feature in the Project area.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The Project Area was deemed highly sensitive for paleontological resources. Ground disturbance and other Project-related activities could result in a potentially significant impact to unique paleontological resources or sites or unique geologic features

Implementation of MM CUL-3 will reduce impacts to any unique paleontological resource or site or unique geologic feature to a less than significant level through monitoring and treatment of any found resource in coordination with a qualified paleontologist

MM CUL-3: Implement the Paleontological Resources Management Plan and Paleontological Monitoring (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

5. GEOLOGY AND SOILS

CEQA FINDING NO. GEO-1a

Impact: **Impact GEO-1a. Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils.** The proposed project could result in ground-disturbing activities that could alter the natural drainage patterns and erosion rates of the area (erosion impact).

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would require drilling of remediation, extraction, injection, and monitoring wells. It would also involve grading new roads, including unpaved roads for vehicle travel and installation of utility connections. These activities would involve excavation, trenching, backfilling, drilling, and grading of on-site soils. Disturbed areas would be exposed to wind and water erosion during construction activity.

MM GEO-1a requires that grading measures along with erosion control measures would be in place and maintained to control the water and wind erosion of on-site soils. Implementation of MM GEO-1a has been incorporated into the Project to reduce this impact to a less than significant level.

MM GEO-1a: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils (Groundwater FEIR Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. GEO-1b

Impact: **Impact GEO-1b. Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils.**
The proposed project could result in ground-disturbing activities that could alter the natural drainage patterns and erosion of rates of the area (drainage patterns impact).

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would require drilling of remediation, extraction, injection, and monitoring wells. It would also involve grading new roads, including unpaved roads for vehicle travel and installation of utility connections. The proposed Project may result in differential compaction (i.e., where an area of soils is compacted at a much greater degree than surrounding soils and where the surrounding soils are more easily eroded) of soils caused by the substantial number of heavy, loaded trucks that would travel along unpaved or graded areas.

MM GEO-1b will address unnatural erosion hazards caused by differential compaction through uniform grading and compaction consistent with substantive San Bernardino County requirements, affected areas for which the Project increased the potential for erosion over original site conditions, best management practices (BMPs) will minimize the effect of component stages, and the extent of areas affected will be minimized to the extent feasible. Implementation of MM GEO-1b has been incorporated into the Project to reduce this impact to a less than significant level.

MM GEO-1b: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils (Groundwater FEIR Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

6. HAZARDS AND HAZARDOUS MATERIALS

CEQA FINDING NO. HAZ-1

Impact: **Impact HAZ-1. Spills or Releases of Contaminants during Construction, Operation and Maintenance, and Decommissioning Activities.** Activities may include routine transport, use, and disposal or the reasonably foreseeable accidental release of hazardous materials that could expose workers, the public, or the environment.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Construction, operation, and maintenance, and decommissioning of the proposed Project could result in the potential release of hazardous materials during use or delivery of hazardous materials as a result of component failure (e.g., valve, flange, or pipe), tank failure, or human error (e.g., tank overfilling).

MMs HAZ-1a, HAZ-1b, and HAZ-2 would ensure compliance with applicable regulations regarding the safe transportation, storage, handling, and disposal of hazardous materials. In addition, plans that include procedures to respond to accidental spills and releases will be applied. Collectively, compliance with existing regulations and implementation of the plans as required by MMs HAZ-1a, HAZ-1b, and HAZ-2 would ensure that impacts related to the routine use or accidental release of hazardous materials would be less than significant. Measures and plans would be in place to prevent spills of hazardous materials from occurring and to appropriately handle spills if they occur on-site.

The plans include procedures for the decommissioning of the Final Groundwater Remedy, wells, and the disposal of materials, including hazardous and non-hazardous materials. However, decommissioning of the Final Groundwater Remedy would not occur for decades in the future and therefore regulations and technology may evolve over time. Consequently, although the Final Remedy Design provides plans and procedures for hazardous material and waste management during construction, operation, and decommissioning of the Final Groundwater Remedy, a Final Decommissioning Plan for the Groundwater Remedy would have to be prepared decades in the future to address regulatory and technological changes for the proposed decommissioning procedures. With MM HAZ-3, this impact would be reduced to a less than significant level because measures and plans would be in place to manage hazardous materials generated from the decommissioning of the Final Groundwater Remedy Project Implementation of MMs HAZ-1a, HAZ-1b, HAZ -2, and HAZ-3 has been incorporated into the Project to reduce this impact to a less than significant level.

MM HAZ-1a: Spills or Releases of Contaminants during Operation and Maintenance Activities (Groundwater FEIR Measure with Revisions).

MM HAZ-1b: Spill or Release of Contaminants during Construction and Decommissioning Activities (Groundwater FEIR Measure with Revisions).

MM HAZ-2: Reasonably Foreseeable Releases of Chemicals from Excavated or Disturbed Soil (Groundwater FEIR Measure with Revisions).

MM HAZ-3: Final Groundwater Remedy Decommissioning Plan (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

7. HYDROLOGY

CEQA FINDING NO. HYDRO-1

Impact: **Impact HYDRO-1. Exceedance of Water Quality Standards, Violation of Waste Discharge Requirements, or Degradation of Water Quality.** The ground disturbing activities associated with constructing the Project could result in the exceedance of water quality standards.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The ground-disturbing activities associated with constructing the Project, use of ethanol or carbon substrate for injection into the aquifer, chemicals in the freshwater source, generation of byproducts (specifically manganese and arsenic), discharge of water to the evaporation ponds, and runoff associated with the soils stockpiling could result in the exceedance of water quality standards, violation of waste discharge requirements, or substantial degradation of water quality.

MM HYDRO-1, MM HYDRO-1a/2a/3a, and MM HYDRO-1b/2b/3b included BMPs for erosion, stockpile management, spill prevention and control, and waste management BMPs and preventative maintenance. MM HYDRO-4 and MM HYDRO-5, -5a, -5b, -5c, and -5d include sampling, monitoring, and treatment procedures to control levels of manganese and arsenic. MM HYDRO-6, -6a, -6b, and -6c) includes testing, monitoring, and assessment of non-Project water supply wells located within approximately 1 mile of the site for contamination and groundwater elevations.

Implementation of MM HYDRO-1, -1a/2a/3a, -1b/2b/3b, MM HYDRO-4, MM HYDRO-5, -5a, -5b, -5c, -5d, and MM HYDRO-6, -6a, -6b, and -6c has been incorporated into the Project to reduce this impact to a less than significant level.

MM HYDRO-1: Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).

MM HYDRO-1a/2a/3a: Construction Best Management Practices Plan

(Groundwater FEIR Measure with Revisions).

MM HYDRO-1b/2b/3b: O&M SWPPP (Groundwater FEIR Measure with Revisions).

MM HYDRO-4: Manganese Treatment System (New Measure).

MM HYDRO-5: Contingent Freshwater Pre-Injection Treatment (New Measure).

MM HYDRO-5a: Incorporate Arsenic Monitoring of Freshwater Injection into the Sampling and Monitoring Plan (New Measure).

MM HYDRO-5b: Assessment and Implementation of Interim Action if the California MCL is Exceeded 150 Feet Radially from Freshwater Injection Point (New Measure).

MM HYDRO-5c: Implementation of Alternatives if California Maximum Contaminant Level is Exceeded for Arsenic 225 feet from any Freshwater Injection Point (New Measure).

MM HYDRO-5d – Post-Remedy Arsenic Monitoring (New Measure).

MM HYDRO-6, Protection of Non-Project Water Supply Wells (New Measure).

MM HYDRO-6a: Incorporate Non-Project Water Supply Wells and/or Additional Monitoring Wells into the Monitoring Program (New Measure).

MM HYDRO-6b: Water Supply Mitigation (New Measure).

MM HYDRO-6c: Water Quality Mitigation (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. HYDRO-2

Impact: **Impact HYDRO-2. Drainage Pattern Alterations.** The proposed Project would require the construction of wells, piping corridors, buildings, and associated infrastructure that could alter the existing drainage system.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project could result in a substantial increase of erosion and siltation or flooding on and off the Project Area. MM HYDRO-1 (MM HYDRO-1a/2a/3a and 1b/2b/3b) includes BMPs for erosion, stockpile management, spill prevention and control, and waste management BMPs and preventative maintenance. Consequently, any impacts associated with erosion and siltation resulting from alterations of drainage

and hydrology and water quality during construction, operation and maintenance, and decommissioning would be mitigated to a less than significant level.

MM HYDRO-1: Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).

MM HYDRO-1a/2a/3a: Construction Best Management Practices Plan (Groundwater FEIR Measure with Revisions).

MM HYDRO-1b/2b/3b: O&M SWPPP (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

CEQA FINDING NO. HYDRO-3

Impact: **Impact HYDRO-3. Polluted Stormwater Runoff.**

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project could result in a substantial increase of erosion and siltation or flooding on and off the Project Area. MM HYDRO-1 (MM HYDRO-1a/2a/3a and 1b/2b/3b) includes BMPs for erosion, stockpile management, spill prevention and control, and waste management BMPs and preventative maintenance. Consequently, any impacts associated with pollutants discharging into existing or planned stormwater drainage systems would be mitigated to a less than significant level.

MM HYDRO-1: Exceedance of Water Quality Standards (Groundwater FEIR Measure with Revisions).

MM HYDRO-1a/2a/3a: Construction Best Management Practices Plan (Groundwater FEIR Measure with Revisions).

MM HYDRO-1b/2b/3b: O&M SWPPP (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

8. NOISE

CEQA FINDING NO. NOISE-2

Impact: **Impact NOISE-2. Groundborne Vibration Impacts Caused by Construction Activities.** Implementation of the proposed Project would result in the exposure of sensitive receptors to groundborne vibration levels that exceed the applicable standards of the San Bernardino County Development Code (83.01.090) and the Mohave County Zoning Ordinance.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Drilling and large bulldozer equipment that would be used to install boreholes for wells would result in the worst-case vibration impacts to nearby sensitive receptors. Groundborne vibration levels could result in annoyance or architectural/structural damage.

MM NOISE-1 would require a minimum of 45 feet between sensitive receptors and Project activity, ensuring that construction of new wells would be built at sufficient distances from vibration-sensitive land uses and receptors to prevent property damage and annoyances. The impact would be less than significant.

MM NOISE-1: Short-Term Groundborne Vibration Levels Caused by Project Activities near Sensitive Receptors (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. With the mitigation described above, this impact is reduced to a less than significant level.

D. SIGNIFICANT AND UNAVOIDABLE IMPACTS

The following impacts were determined in the Final SEIR to be significant and unavoidable. The Statement of Overriding Considerations adopted as part of this exhibit applies to all such unavoidable impacts as required by CEQA. (Pub. Resources Code, § 21081, subd. (b); State CEQA Guidelines, §§ 15092 and 15093.)

1. CULTURAL RESOURCES

CEQA FINDING NO. CUL-1

Impact: **Impact CUL-1. Cause Substantial Adverse Change in the Significance of a Historical Resource as Defined in CEQA Guidelines Section 15064.5.** Construction, operation and maintenance, and decommissioning activities of the proposed Project could result in substantial adverse changes to historical resources in the Project Area.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Adverse changes to historical resources in the Project area could occur through ground disturbance and other Project-related activities or through the introduction of out-of-character visual or auditory intrusions to historical resources that gain their significance in part because of historical associations or aesthetic values.

MMs were drafted with input from the Interested Tribes and draft and final documents were provided to them for review and comment. For the Topock Traditional Cultural Property (TCP), the DTSC determined that Project implementation would result in an adverse impact on the National Register of Historic Places-eligible Topock TCP. According to input from Interested Tribes, those physical characteristics that convey the TCP's historical significance (contributing elements) include the Topock Maze, land, water, plants, animals, prehistoric archaeological resources, and the viewshed. Construction and implementation of the Project, and other ongoing activities in the Topock TCP, could cause a substantial adverse impact to the contributing elements of the TCP historical resources, as defined in State CEQA Guidelines section 15064.5. The substantial adverse impact to the contributing elements to the Topock TCP would result from ground-disturbing activity that would directly and adversely affect the soil, landforms, and unknown prehistoric archaeological resources; additionally, the presence of construction equipment, workers, and vehicles would introduce activities that are inconsistent with the natural setting associated with the Topock TCP. These

activities would also materially affect the cultural values ascribed to the TCP by some Native American Tribes. This impact would be significant and unavoidable.

To reduce these impacts, MMs CUL-1a-1 through 19 and CUL-1c through 7 shall be implemented. Implementation of MMs CUL-1a through 19 and CUL-1c through 7 will reduce but not completely avoid the potential for significant impacts to the historical resources identified in as the Topock TCP. The Project would result in the destruction or alteration of contributing elements which convey the historical significance of the Topock TCP. As a result, the impacts to the historical resource identified as the Topock TCP would remain significant and unavoidable.

MM CUL-1a-1: Avoidance and Preservation in Place (Groundwater FEIR Measure with Revisions).

MM CUL-1a-2a: Implement Tribal Access Plans (New Measure).

MM CUL-1a-3: Site Security (Groundwater FEIR Measures with Revisions).

MM CUL-1a-3a: Professional Qualifications and Site Condition Assessment (Groundwater FEIR Measure with Revisions).

MM CUL-1a-3c: Coordination with BLM and San Bernardino County (Groundwater FEIR Measure with Revisions).

MM CUL-1a-3d: Signage (Groundwater FEIR Measure with Revisions).

MM CUL-1a-3e: Site Security (New Measure).

MM CUL-1a-4: Technical Review Committee (Groundwater FEIR Measure with Revisions).

MM CUL-1a-5: Avoidance of Indigenous Plants of Biological and Cultural Significance (Groundwater FEIR Measure with Revisions).

MM CUL-1a-6: Noise (Groundwater FEIR Measure with Revisions).

MM CUL-1a-7: Nighttime Lighting (Groundwater FEIR Measure with Revisions).

MM CUL-1a-8q: Implement Cultural Impact Mitigation Program (New Mitigation Measure).

MM CUL-1a-9: Preference for Previously Disturbed Areas (Groundwater FEIR Measure with Revisions).

MM CUL-1a-10: Avoidance of Topock Maze (Groundwater FEIR Measure with Revisions).

- MM CUL-1a-11: Open Grant Funding** (Groundwater FEIR Measure with Revisions).
- MM CUL-1a-12: Tribal Ceremonies** (Groundwater FEIR Measure with Revisions).
- MM CUL-1a-13a: Implement Worker Education Training** (New Measure).
- MM CUL-1a-14: Tribal Notification of Potential Future Activities** (New Measure).
- MM CUL-1a-15: Future Activity Allowance Cultural Resources Survey** (New Measure).
- MM CUL-1a-16: Implement Restoration Plan** (New Measure).
- MM CUL-1a-17: Displaced Soil Procedures** (New Measure).
- MM CUL-1a-18: Aesthetics** (New Measure).
- MM CUL-1a-19: Implement Treatment Plan for the Topock TCP** (New Measure).
- MM CUL-1b/c-1: Consider Locations of Historical Resources during Design** (Groundwater FEIR Measure with revisions).
- MM CUL-1b/c-3: Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP** (Groundwater FEIR Measure with Revisions).
- MM CUL-1b/c-4: Cultural Resources Monitoring Program and Inadvertent Discovery Measures** (Groundwater FEIR Measure with Revisions).
- MM CUL-1b/c-4a: Cultural Resources Monitoring Program.**
- MM CUL-1b/c-4b: Inadvertent Discoveries.**
- MM CUL-1b/c-5: Avoidance and Preservation in Place** (New Measure).
- MM CUL-1b/c-6: Implementation of Additional Protective Measures** (New Measure).
- MM CUL-1b/c-7: Compliance with SOI Standards** (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUL-2

Impact: **Impact CUL-2. Substantial Adverse Change in the Significance of a Unique Archaeological Resource.** Many of the cultural resources within the Project area may meet the CEQA criteria for a unique archaeological resource.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Construction, operation and maintenance, and decommissioning activities of the proposed Project could result in substantial adverse changes to one or more unique archaeological resources in the Project Area through ground disturbance and other Project-related activities.

In addition to the Topock TCP, a total of 124 known historical resources are located within the Project Site, including 119 significant archaeological resources and five historic-period built resources. The Project as designed will avoid significant impacts to known historical resources. However, because the Project involves ground-disturbing activities, there is the potential for such activities to disturb unknown potentially significant resources qualifying as historical resources under CEQA. Ground-disturbing activities associated with the Project have the potential to cause substantial adverse changes to unknown historical resources. Any damage to or destruction of such resources during the discovery process could result in significant impacts. Because prehistoric archaeological resources are considered contributing elements to the Topock TCP, any inadvertent discoveries would be significant given their relationship as contributing elements to the Topock TCP.

To reduce these impacts, MMs CUL1b/c-1, CUL-1b/c-3, CUL1b/c-4, CUL-1b/c-5, and CUL-1b/c-6 shall be implemented. Construction and implementation of these MMs and the Project as designed will ensure avoidance of significant impacts to known historical resources and will reduce impacts in the event of inadvertent discovery of unknown historic-period archaeological resources, potentially qualifying as historical resources or unique archaeological resources under CEQA, to a less than significant level. However, even with the implementation of MMs CUL-1b/c-1, CUL-1b/c3, CUL1b/c-4, CUL-1b/c-5, and CUL-1b/c-6, impacts to historical resources and unique archaeological resources resulting from the inadvertent discovery of unknown prehistoric archaeological resources would be significant and unavoidable given their relationship as contributing elements to the Topock TCP. Therefore, impacts to known and unknown historical resources would remain significant and unavoidable.

MM CUL-1b/c-1: Consider Locations of Historical Resources during Design
(Groundwater FEIR Measure with revisions).

MM CUL-1b/c-3: Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP (Groundwater FEIR Measure with Revisions).

MM CUL-1b/c-4: Cultural Resources Monitoring Program and Inadvertent Discovery Measures (Groundwater FEIR Measure with Revisions).

MM CUL-1b/c-4a: Cultural Resources Monitoring Program.

MM CUL-1b/c-4b: Inadvertent Discoveries.

MM CUL-1b/c-5: Avoidance and Preservation in Place (New Measure).

MM CUL-1b/c-6: Implementation of Additional Protective Measures (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUL-4

Impact: **Impact CUL-4. Disturb human remains, including those interred outside of formal cemeteries.** Ground-disturbing activities required for all project phases may disturb as-yet undiscovered human remains, including Native American burial remains (i.e., human remains and grave goods).

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Project activities could result in a potentially significant impact to human remains. While no human remains were known to exist or have been documented in the Project Area, the density of cultural resources in the Project area suggest that there may be the potential to encounter human remains during ground disturbance.

MM CUL-4 will reduce potential impacts to human remains but not to a less than significant level. As a result, any destruction or alteration of human remains to Native

American Tribes would be significant. Therefore, impacts to human remains would remain significant and unavoidable.

MM CUL-4: Discovery of Human Remains (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

2. NOISE

CEQA FINDING NO. NOISE-1

Impact: **Impact NOISE-1. Long-Term Operational-Related Non –Transportation Noise and Vibration Impacts.** Construction activities associated with the Future Activity Allowance that could occur during long-term operation and maintenance could result in noise levels that exceed applicable standards.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The activities involved with the Future Activity Allowance would be more sporadic and intermittent as they would be performed based on unforeseen malfunctions or needs throughout the 30-year operation and maintenance phase of the Project. Construction activities associated with the Future Activity Allowance during operation and maintenance could exceed thresholds resulting in significant impacts.

MM NOISE-2 will ensure that noise generated during construction activities associated with the Future Activity Allowance will be minimized and that activities will be limited to daytime hours. However, existing noise-sensitive land uses will still experience increased noise levels due to Project activities for short term periods. The Project could exceed applicable County standards for a place of worship and would consequently result in a temporary substantial increase in ambient noise levels. The unique values associated with the Topock TCP cannot be reconciled with additional Project-related noise. Even after mitigation, this impact would remain significant and unavoidable

MM NOISE-2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. NOISE-3

Impact: **Impact NOISE-3. Project-Generated Construction-Related Noise Levels.** Construction activities could potentially expose sensitive receptors to noise levels in excess of the applicable noise standards or result in a substantial increase in ambient noise levels.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The Project would result in intermittent construction activities including installation of wells, roadways, water conveyance, utilities, water filtration facilities, and structures. These construction activities could potentially expose sensitive receptors to noise levels in excess of the applicable noise standards. As a result, this impact would be significant.

To reduce this impact, implementation of MM NOISE-2 would require a disturbance coordinator to manage complaints during construction and require an acoustical consultant for reoccurring disturbances. MM NOISE-2 would not reduce impacts to less than significant levels, and as such, impacts would be significant and unavoidable.

MM NOISE-2: Potential Impacts to Noise Levels and Noise Standards
(Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. NOISE-4

Impact: **Impact NOISE-4. Land Use Compatibility of Future Project Noise Levels with the Topock Traditional Cultural Property.** Implementation of the proposed Project could result in future noise that could result in conflicts with land use compatibility.

- Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.
- (3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Land use compatibility impacts would result from an exceedance of San Bernardino County standards for Places of Worship or conflict with Native American values associated with the Topock TCP, which is considered highly sensitive. Changes in the noise environment would adversely affect Native American participants. Construction, operation and maintenance, and decommissioning phases of the Project could result in noise levels that could expose the Topock TCP to levels that exceed the County's standards and that would conflict with Native American values associated with this resource. As a result, this impact would be significant.

Implementation of MMs NOISE-1 and NOISE-2 would reduce potential impacts related to noise. In addition, MM CUL-1a-12 would ensure specifically that accommodations for Tribal ceremonies are provided for during construction activities. However, due to the heightened sensitivity and use of the area, impacts are considered significant and unavoidable after implementation of these measures.

MM NOISE-1: Short-Term Groundborne Vibration Levels Caused by Project Activities near Sensitive Receptors (Groundwater FEIR Measure with Revisions).

MM NOISE-2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions).

MM CUL-1a-12: Tribal Ceremonies (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

3. CUMULATIVE IMPACTS

CEQA FINDING NO. CUM-1

Impact: **Impact CUM-1. Cumulatively Considerable Impacts to Aesthetic Resources.** Implementation of the proposed Project, in combination with other projects in the geographic scope, could cause a substantial adverse change to scenic vistas, scenic resources, and the existing visual character and quality of the site and its surroundings.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

The proposed Project would represent an incremental change that would substantially alter the composition or character of existing landscape views, when considered in addition to the anticipated impacts of other projects in the cumulative scenario, particularly the Soil Remediation and Potential Pilot Test Project.

There is a potential that the construction phase of the Project could overlap with the Soil Investigation Activities. When added to the cumulative scenario described in the Final SEIR, Chapter 6, the effects of the Project would contribute incrementally to the cumulative impacts on aesthetic resources. The Project's incremental contribution to aesthetic impacts, particularly with respect to the potential to substantially degrade the existing visual character or quality of the site and its surroundings, is considered cumulatively considerable and a significant cumulative impact.

MM AES-1: Substantial Adverse Effects on Scenic Vistas (Groundwater FEIR Measure with Revisions).

MM AES-2: Substantial Damage to Scenic Resources within a Scenic Corridor (Groundwater FEIR Measure with Revisions).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUM-2

Impact: **Impact CUM-2. Cumulatively Considerable Impacts to Cultural Resources.** Implementation of the proposed Project, in combination with other projects in the geographic scope, could cause a substantial adverse change in the significance of the cultural resources within the Project area.

Finding(s): (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.

(3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Cultural resources that may be adversely affected within the Project area include the historical resource identified as the Topock Cultural Property, unknown historical or unique archaeological resources, unique paleontological resources, or unique geologic feature. The proposed Project may also disturb human remains, including those interred outside of formal cemeteries.

Projects that have already been implemented or may occur in the foreseeable future at or near the Project Site that could impact cultural resources are described in the Final SEIR Volume 2, Chapter 6, “Cumulative Impacts.” The projects in the cumulative scenario have the potential to involve ground-disturbing activities that would directly impact significant cultural resources and paleontological resources. These projects may also result in visual, auditory, and other environmental impacts that may adversely affect the Topock TCP. For these reasons, the combined impacts on cultural resources in the geographic scope are considered cumulatively significant. When considered in combination with the impacts of other projects in the cumulative scenario, the Project’s incremental contribution to impacts on cultural resources including historical resources (i.e., the Topock TCP), unique archaeological resources, and human remains would be cumulatively considerable. To reduce these impacts, MMs CUL-1 through CUL-5 shall be implemented. Although implementation of MMs CUL-1 through CUL-5 would reduce the significance of the impacts to the degree feasible, the only method to fully mitigate these impacts would be complete avoidance of any future Project activity. After review of comments on the Draft SEIR, the DTSC added MM CUL-5 to provide funding for the Interested Tribes (Chemehuevi Indian Tribe, the Cocopah Indian Tribes, the Colorado River Indian Tribes, FMIT, and the Hualapai Indian Tribe) to be used to preserve and promote cultural values associated with the Topock TCP. The funds can be used to accomplish this through preservation/conservation programs, interpretational efforts, and the establishment of educational programs. While this measure contributes to reducing the significant and unavoidable cumulative impact, it does not reduce it to less than considerable. No other feasible mitigation exists that would reduce the Project’s contribution to less than considerable. The Project’s contribution to this significant

cumulative cultural impact is therefore cumulatively considerable (significant and unavoidable).

MM CUL-1a-2a: Implement Tribal Access Plans (New Measure).

MM CUL-1a-3: Site Security (Groundwater FEIR Measures with Revisions).

MM CUL-1a-3c: Coordination with BLM and San Bernardino County
(Groundwater FEIR Measure with Revisions).

MM CUL-1a-3d: Signage (Groundwater FEIR Measure with Revisions).

MM CUL-1a-3e: Site Security (New Measure).

MM CUL-1a-4: Technical Review Committee (Groundwater FEIR Measure with Revisions).

MM CUL-1a-5: Avoidance of Indigenous Plants of Biological and Cultural Significance (Groundwater FEIR Measure with Revisions).

MM CUL-1a-6: Noise (Groundwater FEIR Measure with Revisions).

MM CUL-1a-7: Nighttime Lighting (Groundwater FEIR Measure with Revisions).

MM CUL-1a-8q: Implement Cultural Impact Mitigation Program (New Mitigation Measure).

MM CUL-1a-9: Preference for Previously Disturbed Areas (Groundwater FEIR Measure with Revisions).

MM CUL-1a-10: Avoidance of Topock Maze (Groundwater FEIR Measure with Revisions).

MM CUL-1a-11: Open Grant Funding (Groundwater FEIR Measure with Revisions).

MM CUL-1a-12: Tribal Ceremonies (Groundwater FEIR Measure with Revisions).

MM CUL-1a-13a: Implement Worker Education Training (New Measure).

MM CUL-1a-14: Tribal Notification of Potential Future Activities (New Measure).

MM CUL-1a-15: Future Activity Allowance Cultural Resources Survey (New Measure).

MM CUL-1a-16: Implement Restoration Plan (New Measure).

MM CUL-1a-17: Displaced Soil Procedures (New Measure).

MM CUL-1a-18: Aesthetics (New Measure).

MM CUL-1a-19: Implement Treatment Plan for the Topock TCP (New Measure).

MM CUL-1b/c-1: Consider Locations of Historical Resources during Design
(Groundwater FEIR Measure with revisions).

MM CUL-1b/c-3: Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP (Groundwater FEIR Measure with Revisions).

MM CUL-1b/c-4: Cultural Resources Monitoring Program and Inadvertent Discovery Measures (Groundwater FEIR Measure with Revisions).

MM CUL-1b/c-4a: Cultural Resources Monitoring Program.

MM CUL-1b/c-4b: Inadvertent Discoveries.

MM CUL-1b/c-5: Avoidance and Preservation in Place (New Measure).

MM CUL-1b/c-6: Implementation of Additional Protective Measures (New Measure).

MM CUL-1b/c-7: Compliance with SOI Standards (New Measure).

MM CUL-3: Implement the Paleontological Resources Management Plan and Paleontological Monitoring (Groundwater FEIR Measure with Revisions).

MM CUL-4: Discovery of Human Remains (Groundwater FEIR Measure with Revisions).

MM CUL-5 Cumulative Impacts to the Topock TCP (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

CEQA FINDING NO. CUM-3

Impact: **Impact CUM-3. Cumulatively Considerable Impacts Related to Noise and Vibration.** Implementation of the proposed Project, in combination with Soil Remediation Activities in the Project Area that are in the geographic scope, could cause a substantial adverse increase related to short-term construction-related noise and vibration.

- Finding(s):** (1) Changes or alterations have been required in, or incorporated into, the project that mitigate or avoid the significant environmental effect as identified in the EIR, Addendum, and SEIR.
- (3) Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the EIR, Addendum, and SEIR.

FACTS SUPPORTING THE FINDING(S)

Noise generated from the proposed Project could be compounded when taken in context with most other noise-generating projects in the geographic and temporal scope. In particular, activities associated with the PG&E soil investigation activities (1E) and soil remediation activities (1F), the Pavement Enhancement Project (5A), and the I-40 Improvement Project (5B), which would all be in close proximity to the Project and are likely to be implemented during a similar timeframe. While these activities are only expected to overlap with the Project for a short period of time, the Project's incremental contribution to noise impacts could be cumulatively considerable and therefore significant considering the projects in the cumulative scenario.

MM NOISE-3 has been identified to reduce construction-related noise and vibration impacts associated with the Final Groundwater Remedy Project. This measure will ensure coordination between teams implementing soil remediation activities which will avoid cumulative noise impacts. Although the measure would reduce the Project's contribution to significant cumulative noise and vibration impacts, impacts would remain significant even after mitigation.

MM NOISE-3: Cumulative Noise Increases from Remedial Activities (New Measure).

LEVEL OF SIGNIFICANCE AFTER MITIGATION. This impact is considered significant and unavoidable.

3.0 STATEMENT OF OVERRIDING CONSIDERATIONS

A. INTRODUCTION

This section addresses the Commission’s obligations under Public Resources Code section 21081, subdivisions (a)(3) and (b). (See also State CEQA Guidelines, §§ 15091, subd. (a)(3), 15093.) Under these provisions, CEQA requires the Commission to balance, as applicable, the economic, legal, social, technological, or other benefits, including regionwide or statewide environmental benefits, of the Lease approval related to the Topock Compressor Station Final Groundwater Remediation Project against the backdrop of the Project’s unavoidable significant environmental impacts. For purposes of CEQA, if the specific economic, legal, social, technological, or other benefits of a proposed Project outweigh the unavoidable significant environmental effects, those effects may be considered acceptable and the decision-making agency may approve the underlying Project. (State CEQA Guidelines § 15092, subd. (b)(2)(B).) CEQA, in this respect, does not prohibit the Commission from approving the Lease even if the Project activities as authorized under the Lease may cause significant and unavoidable environmental effects.

This Statement of Overriding Considerations presents a list of (1) the specific significant effects on the environment attributable to the approved Project that cannot feasibly be mitigated to below a level of significance, (2) benefits derived from the approved Project, and (3) specific reasons for approving the Project.

Although the DTSC and Commission have imposed mitigation measures to reduce impacts, impacts remain that are considered significant after application of all feasible mitigation. Significant impacts of the approved Project fall under three resource areas: Cultural Resources, Noise, and Cumulative (see Table 2). These impacts are specifically identified and discussed in more detail in the Commission’s CEQA Findings and in the DTSC’s Final EIR, Addendum, and SEIR. While the Commission has required all feasible mitigation measures, these impacts remain significant for purposes of adopting this Statement of Overriding Considerations.

Table 2 – Significant and Unavoidable Impacts Identified for the Approved Project

Impact	Impact Description
Cultural Resources	
Impact CUL-1. Cause substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines section 15064.5. Construction, operation and maintenance, and decommissioning activities of the Project could result in substantial adverse changes to historical resources in the Project Area.	Adverse changes to historical resources in the Project area could occur through ground disturbance and other Project-related activities or through the introduction of out-of-character visual or auditory intrusions to historical resources that gain their significance in part because of historical associations or aesthetic values. The proposed mitigation measures would avoid, minimize, reduce, or compensate for potential impacts to historical resources in the event of inadvertent discovery; however, such impacts would remain significant and unavoidable.
Impact CUL-2. Substantial	The proposed mitigation measures would avoid, minimize,

Impact	Impact Description
adverse change in the significance of a unique archaeological resource. Many of the cultural resources within the Project area may meet the CEQA criteria for a unique archaeological resource.	reduce, or compensate for potential impacts to historical resources in the event of inadvertent discovery and would reduce the severity of the impact, although not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.
Impact CUL-4. Disturb human remains, including those interred outside of formal cemeteries. Ground-disturbing activities required for all Project phases may disturb as-yet undiscovered human remains, including Native American burial remains (i.e., human remains and grave goods).	While no human remains were known to exist or had been documented in the Project Area, the density of cultural resources in the area suggests the potential to encounter human remains during ground disturbance. The proposed mitigation will require that the determination of whether remains are human or non-human will be made by qualified personnel, such as a physical or forensic anthropologist and ensure that the appropriate tribes are notified, thereby reducing the severity of the impact, but not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.
Noise	
Impact NOISE-1. Construction activities associated with the additional activity allowance could occur during long-term operation and maintenance.	While implementation of the proposed mitigation measure would reduce noise impacts to sensitive receptors during construction that could occur during operation and maintenance, impacts would not necessarily be reduced to a less than significant level, as due to the nature of the Project, it is impossible to ensure that nearby receptors would not be impacted by construction activities. Therefore, the impact would remain significant and unavoidable.
Impact NOISE-3. Project-Generated Construction-Related Noise Levels Could Impact Sensitive Resources. Construction activities could potentially expose sensitive receptors to noise levels in excess of the applicable noise standards or result in a substantial increase in ambient noise levels.	Implementation of proposed mitigation measure, which would reduce noise levels, has been incorporated into the Project and would reduce the severity of the impact, although not necessarily to a less than significant level. Therefore, the impact would remain significant and unavoidable.
Impact NOISE-4. Land Use Compatibility of Future Project Noise Levels with the Topock Traditional Cultural Property. Implementation of the Project could result in future noise that could result in conflicts with land use compatibility.	Land use compatibility impacts would result from an exceedance of San Bernardino County standards for Places of Worship or conflict with Native American values associated with the Topock TCP, which is considered highly sensitive. Changes in the noise environment would adversely affect Native American participants. Although the proposed mitigation would reduce the impact, due to the heightened sensitivity and use of the area, impacts are considered significant and unavoidable.
Cumulative	
Impact CUM-1. Cumulatively Considerable Impacts to Aesthetic Resources. Implementation of the	The Project would represent an incremental change that would substantially alter the composition or character of existing landscape views, when considered in addition to

Impact	Impact Description
<p>Project, in combination with other Projects in the geographic scope, could cause a substantial adverse change to scenic vistas, scenic resources, and the existing visual character and quality of the site and its surroundings.</p>	<p>the anticipated impacts of other projects in the cumulative scenario, particularly the Soil Remediation and Potential Pilot Test Project.</p> <p>Mitigation includes design requirements to ensure that development and alterations along the Colorado River and the associated scenic corridor do not significantly affect views. These measures would reduce the Project's contribution to significant cumulative aesthetic impacts but not to a level of less than significant.</p>
<p>Impact CUM-2. Cumulatively Considerable Impacts to Cultural Resources. Implementation of the proposed Project, in combination with other projects in the geographic scope, could cause a substantial adverse change in the significance of the cultural resources within the Project area.</p>	<p>Cultural resources that may be adversely affected within the Project area include the historical resource identified as the Topock Cultural Property, unknown historical or unique archaeological resources, unique paleontological resources, or unique geologic feature. The Project may also disturb human remains, including those interred outside of formal cemeteries.</p> <p>Proposed mitigation would reduce the significance of the impacts to the degree feasible, the only method to fully mitigate these impacts would be avoidance of any future Project activity; therefore, no feasible mitigation exists to reduce the Project's contribution to less than considerable.</p>
<p>Impact CUM-3. Cumulatively Considerable Impacts Related to Noise and Vibration. Implementation of the Project, in combination with Soil Remediation Activities in the Project Area that are in the geographic scope, could cause a substantial adverse increase related to short-term construction-related noise and vibration,</p>	<p>Noise generated from the Project could be compounded when other noise-generating projects in the geographic and temporal scope. In particular, activities associated with the PG&E soil investigation activities (1E) and soil remediation activities (1F), the Pavement Enhancement Project (5A), and the I-40 Improvement Project (5B), which would all be in close proximity to the Project and are likely to be implemented during a similar timeframe. While these activities are only expected to overlap with the Project for a short period of time, the Project's incremental contribution to noise impacts could be cumulatively considerable and therefore significant considering the projects in the cumulative scenario.</p>

B. ALTERNATIVES

As explained in *California Native Plant Society v. City of Santa Cruz* (2009) 177 Cal.App.4th 957, 1000:

When it comes time to decide on project approval, the public agency's decisionmaking body evaluates whether the alternatives [analyzed in the EIR] are actually feasible.... At this final stage of project approval, the agency considers whether '[s]pecific economic, legal, social, technological, or other considerations...make infeasible the mitigation measures or alternatives identified in the environmental impact report.' Broader considerations of policy thus come into

play when the decisionmaking body is considering actual feasibility than when the EIR preparer is assessing potential feasibility of the alternatives [citations omitted].

The nine alternatives analyzed in the SEIR represent a reasonable range of potentially feasible alternatives that could reduce one or more significant impacts of the Project. These alternatives include:

- 1) Alternative 1 - Aboveground Pipeline Infrastructure
- 2) Alternative 2 - Elimination of On-site Soil Storage
- 3) Alternative 3 - Freshwater Supply in California Alternative
- 4) Alternative 4 - No Project

As presented in the SEIR, the alternatives were described and compared with each other and with the proposed Project. Under State CEQA Guidelines section 15126.6, subdivision (e)(2), if the No Project Alternative is identified as the environmentally superior alternative, the EIR must also identify an environmentally superior alternative among the other alternatives. Based on the analysis contained in the SEIR, the Aboveground Pipeline Infrastructure Alternative would result in minor reductions in environmental effects when compared to the proposed Project; therefore, the Aboveground Pipeline Infrastructure Alternative was considered the Environmentally Superior Alternative.

The DTSC independently reviewed and considered the information on alternatives provided in the EIR and in the record. The EIR reflects the DTSC's independent judgment as to alternatives. The DTSC found that the Project provides the best balance between the Project goals and objectives and the Project's benefits. The four CEQA alternatives proposed and evaluated in the SEIR were rejected as being infeasible for reasons provided in the DTSC's Findings Regarding Alternatives (Attachment D-1). The Commission concurs with DTSC's Alternatives Analysis.

Based upon the objectives identified in the Final SEIR and the detailed mitigation measures imposed upon the Project, the Commission has determined that the Project should be approved, subject to such mitigation measures (Exhibit C, Mitigation Monitoring Program), and that any remaining unmitigated environmental impacts attributable to the Project are outweighed by the following specific economic, fiscal, social, environmental, land use, and other overriding considerations.

C. BENEFICIAL IMPACTS OF THE PROJECT

State CEQA Guidelines section 15093, subdivision (a) requires the decision-making agency to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or statewide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve the project.

The economic, legal, social, technological, and other benefits of implementing the Project outweigh and override the significant and unavoidable adverse effects of the

Project. The Commission has determined that the benefits of the Project, when balanced against all adverse effects, cause those effects remaining after mitigation to be acceptable due to the following listed considerations:

- The Final Groundwater Remedy Project will prevent and minimize migration of total chromium and hexavalent chromium in groundwater to ensure concentrations in surface waters do not exceed water quality standards that support the designated beneficial uses of the Colorado River, one of the most important water systems in the United States.
- The Final Groundwater Remedy Project will avoid and reduce the cumulative impacts on the environment and minimize risks to human health associated with contaminated groundwater by preventing and minimizing migration of total chromium and hexavalent chromium in groundwater.
- The Final Groundwater Remedy Project will result in the cleanup of groundwater contamination of a beneficial use drinking water supply as designated by the Regional Water Quality Control Board. The Final Groundwater Remedy Project will meet the substantive provisions of promulgated requirements that are applicable or relevant and appropriate requirements (ARARs), which were determined by the DOI, BLM, USFWS, and BOR. ARARs must be attained by the remedial action pursuant to Section 121(d) of CERCLA, which assures protection of human health and the environment, and requires attainment of “legally applicable or relevant and appropriate standard(s), requirement(s), criteria, or limitation(s).”
- The Final Groundwater Remedy Project would bring an economic benefit to Eastern San Bernardino County through the employment of additional workers and experts needed to implement the remedy and mitigation measures.

D. COMMISSION ADOPTION OF STATEMENT OF OVERRIDING CONSIDERATIONS

As noted above, under Public Resources Code section 21081, subdivisions (a)(3) and (b) and State CEQA Guidelines section 15093, subdivision (a), the decision-making agency is required to balance, as applicable, the economic, legal, social, technological, or other benefits, including region-wide or state-wide environmental benefits, of a proposed project against its unavoidable environmental risks when determining whether to approve a project.

For purposes of CEQA, if the specific economic, legal, social, technological, or other benefits of a proposed project outweigh the unavoidable significant environmental effects, the decision-making agency may approve the underlying project. CEQA, in this respect, does not prohibit the Commission from approving the Project, even if the activities authorized by that approval may cause significant and unavoidable environmental effects. This balancing is particularly difficult given the significant and unavoidable impacts on the resources discussed in the SEIR and these Findings.

Nevertheless, the Commission finds that the benefits anticipated by implementing the Project, as described above, outweigh and override the expected significant effects.

The CLSC has balanced the benefits of the Project against the significant unavoidable impacts that will remain after selection of the Approved Project and with implementation of all feasible mitigation in the SEIR that is adopted as enforceable conditions of the Commission's approval of the Project. Based on all available information, the Commission finds that the benefits of the approved Project outweigh the significant and unavoidable adverse environmental effects and considers such effects acceptable. The Commission adopts and makes this Statement of Overriding Considerations with respect to the impacts identified in the SEIR and these Findings that cannot be reduced to a less than significant level. Each benefit set forth above or described below constitutes an overriding consideration warranting approval of the project, independent of the other benefits, despite each and every significant unavoidable impact.

E. CONCLUSION

The Commission has considered the Final SEIR and all the environmental impacts described therein including those that cannot be mitigated to a less than significant level and those that may affect Public Trust uses of State sovereign land. The Commission has considered the fiscal, economic, legal, social, environmental, and public health and safety benefits of the Project and has balanced them against the Project's unavoidable and unmitigated adverse environmental impacts and, based upon substantial evidence in the record, has determined that the benefits of the Project outweigh the adverse environmental effects. Based on the foregoing and pursuant to Public Resources Code section 21081 and State CEQA Guidelines sections 15096 subdivision (h) and 15093, the Commission finds that the remaining significant unavoidable impacts of the Project are acceptable considering the economic, fiscal, social, environmental, and public health and safety benefits of the Project. Such benefits outweigh such significant and unavoidable impacts of the Project and provide the substantive and legal basis for this Statement of Overriding Considerations.

The Commission finds that to the extent that any impacts identified in the Final SEIR remain unmitigated, mitigation measures have been required to the extent feasible, although the impacts could not be reduced to a less than significant level.

Based on the above discussion, the Commission finds that the benefits of the Project outweigh the significant unavoidable impacts that could remain after mitigation is applied and considers such impacts acceptable.

ATTACHMENT D-1

California Department of Toxic Substances Control Findings Regarding Alternatives and Statement of Overriding Considerations