

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

Final Subsequent Environmental Impact Report *for the* Pacific Gas And Electric Company Topock Compressor Station Final Groundwater Remediation Project

Volume 1: Response to Comments

SCH# 2008051003

December 2017



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Acronyms and Abbreviations Used in this Final SEIR

AB	Assembly Bill
ACEC	Area of Critical Environmental Concern
ADEQ	Arizona Department of Environmental Quality
ADT	Average Daily Traffic
ADOA	Arizona Department of Administration
ADOT	Arizona Department of Transportation
afa	acre feet per annum
AFY	acre-feet per year
AGFD	Arizona Game and Fish Department
ANSI	American National Standards Institute
AOC	Area of Concern
APE	Area of Potential Effect
AQAP	<i>1991 Air Quality Attainment Plan</i>
ARAR	applicable or relevant and appropriate requirement
AR4	<i>IPCC's Fourth Assessment Report</i>
A.R.S.	Arizona Revised Statutes
ASTM	American Society for Testing and Materials
AT&SF	Atchison, Topeka and Santa Fe Railway
BACT	Best Available Control Technology
bgs	below ground surface
BIAMP	Bird Avoidance and Minimization Plan
BLCA	Beal Lake Conservation Area
BLM	U.S. Bureau of Land Management
BMP	Best Management Practice
BNSF	Burlington Northern Santa Fe
BOR	U.S. Bureau of Reclamation
CAAQS	California ambient air quality standards
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CALFIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act

CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CGP	Construction General Permit
CH ₄	methane
CHMPM	<i>Cultural and Historical Properties Management Plan</i>
CHQ	Construction Headquarters
CHRIS	California Historical Resources Information System
CIP	Clean-In-Place
CLP	USEPA Contract Laboratory Program
CMS/FS	<i>Corrective Measures Study/Feasibility Study</i>
CNDDB	<i>California Natural Diversity Database</i>
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
COC	chemical of concern
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalents
COPC	chemical of potential concern
CPUC	California Public Utilities Commission
Cr(III)	trivalent chromium
Cr(T)	total chromium
Cr(VI)	hexavalent chromium
C/RAWP	<i>Construction/Remedial Action Work Plan</i>
CRHR	California Register of Historical Resources
CRIT	Colorado River Indian Tribes
CRPR	CNPS California Rare Plant Rank
CSLC	California State Lands Commission
CTF	Clearinghouse Taskforce
CTR	California Toxics Rule
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWG	Consultative Work Group
dB	decibels
dBA	A-weighted decibels
DEIR	draft environmental impact report
DEM	digital elevation model
DOI	United States Department of the Interior
DOT	U.S. Department of Transportation
DPM	diesel particulate matter
DPR	California Department of Parks and Recreation
DQO	Data Quality Objective
DTSC	California Department of Toxic Substances Control

Draft SEIR	draft subsequent environmental impact report
EHS	San Bernardino County Department of Public Health, Division of Environmental Health Services
EIR	environmental impact report
EM	electromagnetic induction
EPA	Environmental Protection Agency
EPAct	Energy Policy Act of 1992
EPCRA	Emergency Planning and Community Right-to-Know Act
EZ	exclusion zone
FAA	Federal Aviation Administration
FCAA	Federal Clean Air Act
FCAAA	Federal Clean Air Act Amendments of 1990
FCR	field contact representative
FESA	Federal Endangered Species Act
FEIR	final environmental impact report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FWHA	Federal Highway Administration
Final RFI/RI Report	Final RCRA Facility Investigation and Remedial Investigation Report (RFI/RI Report)
Final SEIR	final subsequent environmental impact report
FLPMA	Federal Land Policy and Management Act
FMIT	Fort Mojave Indian Tribe
FTA	Federal Transit Administration
FWPTS	freshwater pre-injection treatment system
GANDA	Garcia and Associates
Groundwater FEIR	Topock Compressor Station Groundwater Remediation Project Final EIR (January 2011)
HDCCR	Hualapai Department of Cultural Resources
HDPE	high-density polyethylene
GHG	greenhouse gas
GIS	Geographic Information System
gpm	gallons per minute
GPR	ground-penetrating radar
H ₂ S	hydrogen sulfide
HAZWOPER	Hazardous Waste Operations and Emergency Response
HAPs	hazardous air pollutants
HMBP	<i>Hazardous Materials Business Plan</i>
HMD	Hazardous Materials Division
HOV	high occupancy vehicle
HNWR	Havas National Wildlife Refuge
HSWA	Hazardous and Solid Waste Amendments
NTH	National Trails Highway
Hz	Hertz
I-40	Interstate 40

IAPMO	International Association of Plumbing and Mechanical Officials
IDW	investigation-derived waste
IEPR	Integrated Energy Policy Report
IM	Interim Measure
Interested Tribes	Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and the Hualapai Indian Tribe
IPCC	Intergovernmental Panel on Climate Change
IRZ	in situ reactive zone
IS	Initial Study
kWh	kilowatt-hours
LACM	Natural History Museum of Los Angeles County
LCR MSCP	Lower Colorado River Multi-Species Conservation Program
LCWSP	Lower Colorado River Water Supply Project
LDL	Larson Davis Laboratories
LES	Liquid Environmental Solutions
L_{eq}	energy-equivalent noise level
L_{max}	maximum noise level
L_{min}	minimum noise level
LOS	Level of Service
LUST	Leaking Underground Storage Tank
MACT	Maximum Achievable Control Technology
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
MG	million gallons
mg/L	milligrams per liter
mg/kg	milligrams per kilogram
MLD	Most Likely Descendant
MMRP	Mitigation Monitoring and Reporting Program
MMTCO ₂ e	gross million metric tons of carbon dioxide equivalent
mph	miles per hour
MPO	metropolitan planning organization
MRZ	Mineral Resource Zone
MS4	municipal separate storm sewer system
msl	mean sea level
MW	monitoring well
MWh	megawatt-hour
my	million years
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standards
NAHC	Native American Heritage Commission
NED	National Elevation Dataset

NEPA	National Environmental Policy Act
NESHAP	national emissions standards for hazardous air pollutants
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
NPS	U.S. National Park Service
NRCS	National Resource Conservation Service
NRHP	National Register of Historic Places
NSF	National Sanitation Foundation
NTH	National Trails Highway
NTR	National Toxics Rule
NWP	Nationwide Permit
O&M Manual	<i>Operation and Maintenance Manual Final (100%) Design Submittal</i>
OEHHA	Office of Environmental Health Hazard Assessment
OHV	Off-Highway Vehicle
OSHA	U.S. Occupational Safety and Health Administration
PA	Programmatic Agreement
PAH	polycyclic aromatic hydrocarbon
PBA	<i>Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Remedial and Investigative Actions</i>
PCBs	polychlorinated biphenyls
PFC	Perfluorocarbon
PFYC	Potential Fossil Yield Classification
PG&E	Pacific Gas and Electric Company
PM _{2.5}	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM ₁₀	fine particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
ppd	pounds per day
PPV	peak particle velocity
PQS	professional qualifications standards
PRC	Public Resources Code
PRMP	<i>Paleontological Resources Management Plan</i>
PRPA	Paleontological Resources Preservation Act
RAO	Remedial Action Objective
RAWP	<i>Human Health and Ecological Risk Assessment Work Plan</i>
RB	River Bank
RCRA	Resource Conservation and Recovery Act
RFA	RCRA Facility Assessment
RFI	RCRA Facility Investigation
RFI/RI	Resource Conservation and Recovery Act Facility Investigation and Remedial Investigation Report
RMA	Risk management analysis

RMP	Resource Management Plan
RMS	root mean square
ROG	reactive organic gases
ROW	right-of-way
RV	recreational vehicle
RWQCB	Regional Water Quality Control Board
SBAIC	San Bernardino Archaeological Information Center
SBCM	Museum of San Bernardino County
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCF	standard cubic feet
SCH	State Clearinghouse
Scoping Plan	<i>AB 32 Climate Change Scoping Plan</i>
SCRMA	Special Cultural Resource Management Area
SCS	sustainable communities strategies
Section 106	Section 106 of the National Historic Preservation Act
SEIR	subsequent environmental impact report
SEL	sound exposure level
SENEL	single event noise exposure level
SERC	State Emergency Response Commission
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SFL	Sacred Lands Search
SLM	sound level meter
SO ₂	sulfur dioxide
SO _x	oxides of sulfur
SOP	Standard Operating Procedure
Station	Topock Compressor Station
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit
SWPPP	Stormwater Pollution Prevention Plan
SWRCB	California State Water Resources Control Board
TACs	toxic air contaminants
TAL/TCL	Target Compound and Target Analyte Lists
TBC	"To Be Considered" criteria
TCA	Topock Cultural Area
TCP	Traditional Cultural Property
TCS	Topock Compressor Station
TCRA	Time critical removal action
TCVA	Topock Cultural Values Assessment
TDS	total dissolved solids

TMDL	Total Maximum Daily Load
TOC	total organic carbon
TPH	total petroleum hydrocarbons
TRC	Technical Review Committee
TW Bench	Transwestern Bench
TWG	Technical Workgroup
UA	Undesignated Area
ug/kg	micrograms per kilogram
ug/L	micrograms per liter
URBEMIS	Urban Emissions model
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
US 95	United States Route 95
VMG	Vertical Magnetic Gradient
VOC	volatile organic compound
VRM	Visual Resource Management
WDR	Waste Discharge Requirements
WWII	World War II
XRF	x-ray fluorescence
ZEV	zero emission vehicle
ZNE	zero net energy

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OVERVIEW OF THE FINAL SEIR

OV.1 Purpose of the Final Subsequent Environmental Impact Report

This final subsequent environmental impact report (Final SEIR) has been prepared to respond to comments received from responsible, trustee, and other public agencies; Native American Tribes; interested organizations; and members of the public regarding the draft subsequent environmental impact report (Draft SEIR) prepared for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station (Station) Final Groundwater Remediation Project (Project). In accordance with the California Environmental Quality Act (CEQA), the California Department of Toxic Substances Control (DTSC), in its role as the state lead agency, is required to communicate with and obtain comments from public agencies that have jurisdiction by law with respect to the Project, to provide the general public with opportunities to comment on the DEIR (Public Resources Code [PRC] Section 21091), and to respond to significant environmental issues raised during the public review process. This Final SEIR consists of two volumes:

- Volume 1 contains a list of persons, organizations, and public agencies commenting on the Draft SEIR; comments received on the Draft SEIR; and responses to significant environmental points raised in the review and communication process.
- Volume 2 contains the revised Draft SEIR text in its entirety, including all revisions made to the DEIR, and the mitigation monitoring and reporting program (MMRP).

Technical appendices are also considered part of the Final SEIR and are being provided on CD which is found in the front cover of Volume 1.

OV.2 Project Summary

The Final SEIR addresses the potential environmental effects of actions associated with treatment of contaminated groundwater at the Station (please see Volume 2, Chapter 3, “Project Description,” of the Final SEIR for a full narrative of the Project details). Past activities at the Station have resulted in the release of hexavalent chromium Cr(VI) and other chemicals of potential concern (COPCs) into groundwater. Under certain exposure conditions, these chemicals are harmful to human health and the environment. The Final SEIR is tiered off a prior CEQA document, the 2011 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. In

certifying the Groundwater FEIR in January 2011, DTSC adopted the preferred remedy, identified as Alternative E—In Situ Treatment with Freshwater Flushing.

The *Basis of Design Report/Final (100%) Design Submittal for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California, November* (Final Remedy Design) was completed in 2015 after undergoing an extensive design review process. The Project analyzed in the Final SEIR focuses primarily on the modifications or changes since certification of the 2011 Groundwater FEIR that were identified through completion of the Final Remedy Design. The Draft SEIR was prepared for DTSC to consider adoption of the Final Remedy Design for the Final Groundwater Remedy Project.

The Final SEIR evaluates the potential environmental effects of the Project summarized above and the following three alternatives, in addition to the No Project Alternative:

- Aboveground Pipeline Infrastructure Alternative
- Elimination of On-site Soil Storage Alternative
- Freshwater Supply in California Alternative

OV.3 CEQA Requirements

This Final SEIR has been prepared to respond to comments received on the Draft SEIR. The Final SEIR has been prepared by DTSC in accordance with Sections 15089 and 15132 of the CEQA Guidelines. Additionally, as defined under CEQA Guidelines Sections 15204 and 15088, response to comments is typically reserved to those that specifically pertain to the sufficiency of an environmental document under CEQA, and ways in which the significant effects of the project might be avoided or mitigated. Lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made.

OV.4 Public Review and Future Steps

As the lead agency, before considering certification of the Final SEIR and approval of the Project, DTSC must provide no less than ten days for review by commenting responsible and trustee agencies of the proposed responses to those comments. On December 22, 2017, DTSC provided commenting agencies and Interested Tribes with proposed responses to their comments for a 30-day period.

Copies of this Final SEIR are available for review at:

DTSC
Cypress Office
5796 Corporate Avenue
Cypress, CA 90630

Colorado River Indian Tribes Public
Library
26600 Mohave Road
Parker, AZ 85344

Lake Havasu City Library
1770 McCulloch Boulevard
Lake Havasu City, AZ 86403

Golden Shores Community Library
13136 South Golden Shores Parkway
Topock, AZ 86436

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasupai Lake, CA 92363

Needles Public Library
1111 Bailey Avenue
Needles, CA 92363

As the lead agency, before approving the Project, DTSC must certify the Final SEIR as adequate and completed in accordance with CEQA. DTSC must also review and consider the information contained in the Final SEIR, including all supporting documents, before considering approval of the Project. DTSC will certify the Final SEIR using independent judgment and analysis. In consideration of the findings of the Final SEIR, DTSC will approve the Project or an alternative thereof through a written finding of fact and a statement of overriding consideration for each identified significant adverse environmental impact and any significant and unavoidable impact identified in the Final SEIR. Because some Project impacts were found to be significant, DTSC will adopt mitigation measures that either avoid or reduce those impacts to less than significant levels where feasible. These mitigation measures are identified in the MMRP in Volume 2, Chapter 11 of this Final SEIR. If the Project is approved, DTSC will file a notice of determination with the Governor's Office of Planning and Research, State Clearinghouse within 5 working days of Project approval.

OV.5 Revisions to Draft SEIR

DTSC has made revisions to the Draft SEIR based on comments received on the Draft SEIR. DTSC has also made additional minor modifications to the Draft SEIR for clarification purposes which do not involve "significant new information" that would require additional recirculation of the Draft SEIR pursuant to CEQA Guidelines Section 15088.5. The revised Draft SEIR is included as Volume 2 of this Final SEIR. Changes in the text of the Draft SEIR are indicated by strikeouts (~~strikeout~~) where text is removed and by underlining (underline) where text is added.

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CHAPTER 1

Introduction

1.1 Overview of Volume 1

Volume 1 contains a list of persons, organizations, public agencies, and Tribal groups commenting on the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Final Groundwater Remediation Project (Project) draft subsequent environmental impact report (Draft SEIR); comments received on the Draft SEIR; and responses to significant environmental points raised in the review and communication process.

1.2 Public Review of Draft SEIR

In accordance with Section 15105 of the California Environmental Quality Act Guidelines (CEQA), a public review and comment period was provided for the Draft SEIR, beginning on January 12, 2017, and ending on February 27, 2017.

Two public meetings were held during the public review period to provide an opportunity for public comment. These meetings took place on January 31, 2017, in Needles, CA, and on February 1, 2017, in Golden Shores, AZ. Transcripts of the comments received at these public hearings are included as part of the final subsequent environmental impact report (Final SEIR) as **Appendix TRANS** (see Chapter 4, “Individual Comments and Responses”).

As shown in **Table 1-1**, a total of 21 written comment letters were received by the California Department of Toxic Substances Control (DTSC) on the Draft SEIR and two oral comments were submitted at the Draft SEIR public hearings.

TABLE 1-1
LIST OF COMMENTERS

Letter #	Commenter	Date of Comment
Agency		
A1	Mojave Desert Air Quality Management District Alan J. De Salvio, Deputy Director – Mojave Desert Operations	January 12, 2017
A2	Arizona State Historic Preservation Office Kris Powell	February 22, 2017
A3	California Department of Transportation, District 8 Mark Roberts, Office Chief, Intergovernmental Review, Community and Regional Planning	February 6, 2017

Letter #	Commenter	Date of Comment
A4	Arizona Department of Environmental Quality Tina L. Le Page, Manager, Remedial Project Section	February 16, 2017
A5	United States Department of the Interior, Office of the Secretary, Office of Environmental Policy and Compliance Patricia Sanderson Port, Regional Environmental Officer	February 22, 2017
A6	California Department of Fish and Wildlife Richard Kim, Environmental Scientist	February 23, 2017
A7	California State Lands Commission Cy R. Oggins, Chief, Division of Environmental Planning and Management	February 27, 2017
A8	Metropolitan Water District of Southern California Bart Koch, Interim Water System Operations Assistant Group Manager	February 27, 2017
A9	Colorado River Basin Regional Water Quality Control Board Robert Purdue, Supervising Engineering Geologist	February 27, 2017
Individual		
I1	Ron Letcher	January 12, 2017
I2	John K. Ziegler	January 14, 2017
I3	Russell Morse	February 7, 2017
I4	Draft SEIR Public Meeting Comment Ruth Musser-Lopez	January 31, 2017
I5	Draft SEIR Public Meeting Comment Don Oswell	February 1, 2017
I6	Cox, Castle & Nicholson LLP, on behalf of Pacific Gas and Electric Company (PG&E),	February 27, 2017
I7	Ruth Musser-Lopez	February 27, 2017
Tribes		
T1	Twenty-Nine Palms Band of Mission Indians Anthony Madrigal, Jr., Tribal Historic Preservation Officer	February 23, 2017
T2	Cocopah Indian Tribe Edgar Castillo, Topock Project Manager	February 27, 2017
T3	Hualapai Indian Tribe Dawn Hubbs, Director/Tribal Historic Preservation Officer/Archaeologist	February 27, 2017

Letter #	Commenter	Date of Comment
T4	Fort Mojave Indian Tribe Nora McDowell, Topock Project Manager	February 28, 2017
T5	Fort Mojave Indian Tribe Nora McDowell, Topock Project Manager	February 28, 2017
T6	Cocopah Indian Tribe Edgar Castillo, Topock Project Manager	March 6, 2017
T7	Fort Mojave Indian Tribe Nora McDowell, Topock Project Manager	March 6, 2017
T8	Cocopah Indian Tribe Jill McCormick, Cultural Resources Manager	June 1, 2017

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CHAPTER 2

Master Responses

This chapter contains master responses to comments received on the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Final Groundwater Remediation Project (Project) draft subsequent environmental impact report (Draft SEIR). After reviewing all of the comments received on the Draft SEIR, the California Department of Toxic Substances Control (DTSC) identified several reoccurring themes and has prepared “master responses” that address these themes individually. The master responses provide comprehensive discussions in response to select sets of issues that received multiple comments. The master responses are as follows:

- Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property
- Master Response 2: Use of the Future Activity Allowance in the Draft SEIR
- Master Response 3: Inapplicability of Assembly Bill 52 in Project Approval

The master responses provide clarification and refinement of information presented in the Draft SEIR and, in some cases, correct, adjust or update information in the Draft SEIR. In some instances, the text of the Draft SEIR has been revised and incorporated into these master responses. Where appropriate, the commenter is directed to these master responses to view DTSC’s response to individual comments.

Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property

Summary of Comments Raised Regarding the SEIR's Analysis of Cumulative Impacts to the Topock Traditional Cultural Property

Comments were received on the Draft SEIR regarding the cumulative impacts of the Project as a whole. These comments included concerns regarding impacts associated with the Future Activity Allowance component of the Project. Commenters express concern that the Allowance substantially worsens the overall significant and unavoidable impacts of the Project to the Topock Traditional Cultural Property (TCP). The TCP was determined eligible for the National Register of Historic Places by the U.S. Bureau of Land Management (BLM) and is therefore a historical resource under the California Environmental Quality Act (CEQA).

Comments question why the Draft SEIR, while requiring project-level mitigation in Section 4.4, "Cultural Resources," includes no additional cumulative-specific mitigation related to the significant cumulative effects to the Topock TCP that would result from the combination of Project-related impacts and impacts from other past, present, and reasonably foreseeable future projects. Commenters also question how cumulative impacts to the Topock TCP and sacred area from these cumulative projects have been considered in the Draft SEIR. Commenters note that the Draft SEIR concludes that significant and unmitigable cumulative impacts would result from the Project, but the Draft SEIR takes the approach of "double dipping" by relying on project-specific mitigation to cover cumulative impacts, which does not meet CEQA's requirements.

Finally, some commenters indicate that many of the mitigation measures from the Topock Compressor Station Groundwater Remediation Project Final Environmental Impact Report (2011 Groundwater FEIR; DTSC 2011) apply to the design process, and that some measures that were also incorporated into the SEIR to address an increase in cumulative impacts due to the final remedy design are insufficient.

Commenters suggest several mitigation measures that should be considered in order to reduce cumulative impacts to the Topock TCP to the extent practicable. These include:

1. Compensation of the physical impact by replacing or providing substitute resources or environments through designation of a nearby cultural preserve;
2. Funding for university scholarships and/or technical training focused in the areas of archaeology, anthropology, hydrology, engineering, and biology;
3. Field mapping of extant trails within the landscape in support of a landscape study;
4. Provision of financial support for tribal interpretive centers and programs on tribal lands;
5. Provision of funding to support culture and arts programs;
6. Additional restoration of sections of the Colorado River;
7. Creation of a trust fund for a Cultural Preserve at Topock;
8. Provision of funding for increased security measures; and
9. Continued support of the Technical Review Committee (TRC) and Tribal Project Managers.

DTSC wishes to thank the Interested Tribes, which include the Chemehuevi Indian Tribe, the Cocopah Indian Tribe, the Colorado River Indian Tribes (also referred to as CRIT), the Fort Mojave Indian Tribe (also referred to as FMIT), and the Hualapai Indian Tribe, for their continued involvement and participation in all matters regarding the Project and related activities at the Topock site. DTSC has carefully reviewed the comments and suggestions for mitigation measures for the cumulative impacts as they relate to the requirements of CEQA. DTSC acknowledges that the context of these comments and the suggested mitigation measures have been raised by the Interested Tribes in response to past CEQA evaluations (namely the 2011 Groundwater FEIR and the 2014 Soil Investigation Project Environmental Impact Report (EIR)). In this particular instance, DTSC considered the context of the comments raised in relation to: (1) the information available regarding the Topock TCP; (2) the information regarding the Project's impacts; and (3) DTSC's obligations under CEQA as the lead agency. Accordingly, this Master Response is focused on those three areas.

SEIR's Definition of the Topock TCP, Assessment of Direct Project Impacts, and Protections for Cultural Resources

To identify impacts to a "historical resource" under CEQA, it is necessary to identify the elements of the resource that convey its significance. The Topock TCP was identified in the 2011 Groundwater FEIR as the Topock Cultural Area (TCA), and has been further defined since that time, based on information provided by the Interested Tribes as part of DTSC's undertaking of the 2014 Soil Investigation Project EIR, as well as through additional documentation and discussions that have occurred as part of the development of this SEIR. Specifically, the character-defining features or "contributing elements" of the Topock TCP that contribute to defining its historical significance are now more broadly understood as including land (specifically, soil and clay deposits), water, animals, plants, viewshed, and prehistoric archaeological resources. See pages 4.4-61 and 4.4-62 of the Draft SEIR specifically for a discussion of these contributing elements and their importance to the Topock TCP as a whole. Additional prehistoric archaeological resources have also been identified since 2011. In November 2013, and by subsequent amendment in February 2014, the Interested Tribes identified Topock Cultural Values Assessment (TCVA) resources that are also considered contributing elements of the Topock TCP. Thus, this broader knowledge regarding the context and characteristics of the resource being impacted directly affect the consideration of what is appropriate and roughly proportional mitigation for the predicted impact.

In addition to a greater understanding of the resource being affected, the evolution of the Project design and the increase in the amount of expected impact also directly affects the amount and nature of feasible and appropriate mitigation. See Tables 3-1 and 3-2 of the SEIR for information regarding the overall increase in Project components since the 2011 Groundwater FEIR. The construction, operation, and maintenance phases of the *Basis of Design Report/Final (100%) Design Submittal for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California, November* (Final Remedy Design) would occur within an area identified as part of the Topock TCP. While this does not differ from the assumption in the 2011 Groundwater

FEIR, the project-level understanding of impacts related to the additional known information regarding the Topock TCP as a historical resource is an important consideration.

Potential direct impacts to the Topock TCP could occur as a result of: the importing of groundwater containing levels of arsenic from Arizona that are higher than the localized background concentration in water at the points of injection in California, which was not previously considered by the Groundwater FEIR; construction and operation of the Construction Headquarters/Long-Term Remedy Support Area and Soil Processing Area/Clean-Soil Storage Area near Moabi Regional Park, not previously considered in the Groundwater FEIR; a three-fold increase in soil disturbance from that previously considered in the Groundwater FEIR, as well as a Future Activity Allowance for soil disturbance; an approximately 12 percent increase in the number of boreholes from that previously considered in the Groundwater FEIR, as well as the Future Activity Allowance for boreholes; the use of portable generators and lighting to accommodate limited nighttime work activities not previously considered in the Groundwater FEIR; and the use of staging areas, not previously analyzed in detail in the Groundwater FEIR. The Final Remedy Design, as well as the Future Activity Allowance, have the potential to directly impact all seven of the contributing elements to the Topock TCP, including land, water, plants, animals, viewshed, prehistoric archaeological resources, and TCVA resources. The Draft SEIR concludes that Mitigation Measures CUL-1 through CUL-4 would reduce project-level impacts; however, even with the application of those mitigation measures, those project-level impacts would remain significant and unavoidable.

The SEIR's Cumulative Analysis and Final SEIR Clarifications

While the full geographic boundary of the Topock TCP is currently undefined, it likely comprises a large part of the geographic cumulative scoping area. The Draft SEIR therefore acknowledges on pages 6-33 and 6-34, that there are undoubtedly many archaeological resources, landforms, water sources, and similar features that contribute to the Topock TCP. The Draft SEIR also notes that there is a potential for ongoing and future development projects, including, most notably, the Soil Remediation and Potential Pilot Test Project (identified as Project 1F in Table 6-3 of the Draft SEIR) as well as the Sacramento Wash Improvements, Moabi Regional Park Improvements, and the Topock Marina Improvements, in the Project vicinity to disturb contributing elements of the Topock TCP. As stated in the Draft SEIR, the current baseline condition of the Topock TCP reflects that the resource has already been subjected to impacts as a result of past projects, including the introduction of transportation, energy, and recreational facilities; expansion of population centers, flood control management, and water supply; and through construction of the PG&E projects at the Topock Compressor Station and within surrounding areas and other activities undertaken in developing the Final Groundwater Remedy Project. The cumulative projects listed in Table 6-3 may bring additional people into the area that may directly or indirectly impact resources, as well as introduce other visual, auditory, and other environmental impacts that may adversely affect the Topock TCP. The proposed Project would result in direct physical changes to contributing elements of the Topock TCP (including landforms, water, and the viewshed), and indirect physical changes to the setting, feeling, and associations of the Topock TCP. In combination with other projects that would also cause similar and related impacts to contributing elements of the Topock TCP, this Project cumulatively

increases the severity of the impact and substantially alters the ability of the Topock TCP to convey its significance. The Draft SEIR concludes that Mitigation Measures CUL-1 through CUL-4 would reduce project-level impacts; however, it concluded that no feasible mitigation exists to reduce the Project's contribution to a less-than considerable level of significance. The Project's contribution to cumulative cultural impacts was therefore identified as significant and unavoidable.

To more fully clarify impacts specific to the Topock TCP, the text on page 6-34 of the Draft SEIR has been modified as follows:

Many of the cultural resources within the geographic scope have already been subjected to impacts as a result of past projects, including the introduction of transportation, energy, and recreational facilities, expansion of population centers, flood control management and water supply, as well as through construction of the PG&E projects at the Station and within surrounding areas and other ground-disturbing activities undertaken in developing the Final Groundwater Remedy Project. Projects undertaken before environmental laws such as CEQA were in place may not have considered, or mitigated, significant impacts to cultural resources, and may have resulted in damage to important cultural resources such as ~~geoglyphs, trails, and other resources that retain significant cultural value to Interested Tribes~~ prehistoric archaeological sites, as well as historic-period resources, paleontological resources, and human remains. Projects that have ~~already implemented or may occur in the~~ recently been completed, are currently under construction, or are foreseeable future at or near the Project Area ~~and may~~ could impact cultural resources. ~~These projects include:~~ PG&E projects at the Station (1A through 1F), BLM Quarry Operations (2B), the LCR National Wildlife Refuges CMP (4A), the Topock Marsh Water Infrastructure Improvement Project on the HNWR (4B), Sacramento Wash Improvements (4C), Moabi Regional Park Improvements (7A), Pirate Cove Resort (7B), Topock Marina Improvements (9A), the Sterling Solar Project (9B), and Distribution System Upgrades (11A).

These projects have the potential to involve ground-disturbing activities that would directly impact significant cultural resources. These projects may also bring additional people (e.g., work crews, residents, tourists) into the area that may result in increased rates of vandalism or Off Highway Vehicle (OHV) use that may directly or indirectly impact resources.

These projects also include activities such as ground disturbance and construction of infrastructure that have the potential to directly and/or indirectly impact contributing elements of the Topock TCP, such as prehistoric archaeological sites (including geoglyphs and trails), landforms (including soil and clay deposits), water, animals, plants, and the viewshed, as well as other resources that retain significant cultural value to Interested Tribes such as TCVA resources. In addition to the direct physical impacts, ~~These projects may also~~ result in visual, auditory, and other environmental impacts that are considered inconsistent with the Topock TCP and may adversely affect the Topock TCP. The proposed Project would result in direct physical changes to contributing

elements of the Topock TCP (including landforms, water, and the viewshed), and indirect physical changes to the setting, feeling, and associations of the Topock TCP.

Physical impacts associated with implementation of the Project, including additional infrastructure and soil disturbances, and the proposed importation of water containing arsenic over the anticipated course of 30 years, will result in a substantial adverse change and an increase in the severity of the cumulative impacts as well as irreversible alteration of some contributing elements of the Topock TCP. In combination with other projects that could also cause similar and related impacts to contributing elements of the Topock TCP (to varying degrees, dependent on the particular project), this Project cumulatively increases the severity of the impact on contributing elements and constitutes a substantial adverse change altering the ability of the Topock TCP to convey its significance. The Topock TCP is a non-renewable resource and the cultural and traditional values associated with those physical features (contributing elements) that would be damaged or destroyed as a result of this Project, and which could also be damaged or destroyed by other cumulative projects, significantly alters critical values which some Tribes ascribe to the Topock TCP. This Project, combined with other past, present, and future projects, is in direct conflict with the traditional cultural values and belief systems of the Interested Tribes and their relationship to the Topock TCP and therefore the project's contribution to the cumulative impact is cumulatively considerable.

For ~~these~~ the reasons outlined in the preceding paragraphs, the combined impacts on cultural resources in the geographic scope ~~would be~~ are considered cumulatively significant, and unavoidable. This conclusion is consistent with the certified Groundwater FEIR which also found a significant and unavoidable impact to cultural resources.

As stated on page 4.4-73 of the Draft SEIR, traditional cultural values are often central to the way a community or group defines itself, and maintaining such values is often vital to maintaining the group's sense of identity and self-respect. "Properties to which traditional cultural value is ascribed often take on this kind of vital significance, so that any damage to or infringement upon them is perceived to be deeply offensive to, and even destructive of, the group that values them" (Parker and King 1998:2). Given this, the physical impacts associated with the Project in conjunction with other cumulative projects will result in irreversible alteration and destruction of some features of the Topock TCP that convey its historical significance, which is integrally tied to the values, traditions, and belief systems of Interested Tribes. Additionally, these impacts to character-defining features that convey the significance of the Topock TCP will likely result in a fundamental change in the way Interested Tribes interact with the Topock TCP and they also will result in a significant impact to the integrity of the resource. Although site and vegetation restoration will be conducted at the end of the Project, it would not restore every aspect that is important in conveying the significance of the Topock TCP, such as the compositional changes to soil and water. The physical alteration and destruction of the Topock TCP would result in a loss in the traditional cultural values and sense of identity of future generations.

Comments on the Draft SEIR Requesting Additional Mitigation

As mentioned previously, commenters have provided several categories of additional mitigation measures that some of the Interested Tribes indicate could reduce the overall level of Project-related impacts, although the impacts would remain significant and unavoidable. CEQA Guidelines Section 15370 provides a definition of “mitigation” and subsection (e) specifically states that mitigation should be “compensating for the impact by replacing or providing substitute resources or environments.” DTSC, as the lead agency, is required to determine whether mitigation measures would minimize significant adverse impacts and if they are feasible, both for project and cumulative impacts. (See CEQA Guidelines Section 15126.4(a)(1) [“An EIR shall describe feasible measures which could minimize significant adverse impacts”]; see also, CEQA Guidelines Section 15364[“Feasible” means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors”].)

The assessment of the appropriate amount and extent of mitigation has grown significantly since the time that the Groundwater FEIR was published and certified (January 2011), for two distinct, but related, reasons: (1) there is a more thorough and documented understanding of the Topock TCP and what features are considered contributing elements as compared to when the 2011 Groundwater FEIR was certified; and (2) the Project has been designed and developed more fully, including its inclusion of the Future Activity Allowance component (see Master Response 2: Use of the Future Activity Allowance in the Draft SEIR, below). Both of these factors result in increased impacts to the Topock TCP compared to what was projected in the 2011 Groundwater FEIR.

New Feasible Mitigation to be Included in the Final SEIR

As part of DTSC’s commitment to working closely with the Interested Tribes over many years, DTSC understands that each of the Interested Tribes can have differing views on the type of mitigation that could reduce impacts. Additionally, DTSC acknowledges that each of the Interested Tribes has their own resources and priorities, which are important considerations when identifying feasible and meaningful mitigation. These are key factors when considering feasibility of mitigation measures.

DTSC has concluded—based on a comprehensive assessment of the Topock TCP, that the specific environmental impacts (direct Project and cumulative) of the Project as it relates to this historical resource, the Tribal considerations regarding feasibility, and the ability of additional mitigation to minimize significant adverse impacts—that additional mitigation shall be required as part of the Project. While the inclusion of this mitigation measure reduces the Project’s impacts to some degree, by providing substitute resources through preservation, interpretation, and education, the Project’s overall contribution to this significant cumulative cultural impact would remain cumulatively considerable and therefore significant and unavoidable.

The following provides the new Mitigation Measure CUL-5 as well as the various sections of the Final SEIR that require revisions. The text on pages 6-34 and 6-35 of the Draft SEIR has been modified as follows:

When considered in combination with the impacts of other projects in the cumulative scenario, the proposed Project's incremental contribution to impacts on cultural resources including historical resources (including the Topock TCP), unique archaeological resources, unique paleontological resources or geologic features, and human remains would remain cumulatively considerable and therefore significant. Although Mitigation Measures CUL-1 through CUL-4, which are described in detail in Section 4.4, "Cultural Resources," **and Mitigation Measure CUL-5, which is described below in Impact CUM-2,** 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. The Project's contribution to this significant cumulative cultural impact would remain cumulatively considerable (significant and unavoidable).

**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 historical resource identified as the Topock TCP; cause a substantial adverse change in the significance of unknown historical or unique archaeological resources; result in a substantial adverse change to a unique paleontological resource or unique geologic feature; and disturb human remains, including those interred outside of formal cemeteries. This impact would be **cumulatively significant** and the proposed Project's contribution to this impact would remain **cumulatively considerable** as identified in the Groundwater FEIR.

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

PG&E shall provide funding to the following Tribes (Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes, 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 funds for each of the four 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 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.

Timing:	Implementation of CUL-1 through CUL-4 prior to and during construction, operation and maintenance, and decommissioning, <u>and funding required by CUL-5 shall be made available prior to construction activities and over 30 years of Project operation.</u>
Responsibility:	PG&E would be responsible for the implementation of these measures. DTSC would be responsible for ensuring compliance.
Significance after Mitigation:	The impact would remain significant and unavoidable after

implementation of the mitigation measures detailed above. The Project in combination with other projects in the area would continue to contribute considerably to a cumulatively significant impact to the integrity of those physical characteristics that convey the significance of the Topock TCP and to historical resources unique and important to the region.

The Prior Settlement Agreements as it Relates to Mitigation Measure CUL-5

It is important to note that one of the Interested Tribes, the Fort Mojave Indian Tribe, has been excluded from the new Mitigation Measure CUL-5 because of the terms of previously entered Settlement Agreements. Specifically, the Fort Mojave Indian Tribe is in the unique position of having previously entered into two separate Settlement Agreements with DTSC and PG&E, respectively. The Settlement Agreements resolved litigation over DTSC's approval of the Topock Compressor Station Groundwater Remediation Project and certification of the 2011 Final EIR (Sacramento Superior Court Case No. 34-2011-80000802-CU-WM-GDS). The Settlement Agreement between the Fort Mojave Indian Tribe and DTSC provides that "[t]o implement the provisions contained in the PG&E Settlement, the Tribe waives any and all legal, equitable, or administrative claims, and requests for additional mitigation measures, against DTSC, in any tribunal, court or regulatory forum, related to the groundwater and soils remedies...." (p. 4, Section 10(c).) The Settlement Agreement between the Fort Mojave Indian Tribe and PG&E, states that "[t]he Tribe waives any and all administrative, equitable, or legal claims against the federal government and California in any tribunal, court or regulatory forum related to the groundwater and soils remedies..." including "related to PG&E's implementation of these remedies as approved as of October 18, 2011[.]" (p. 5, Section X(B).)

The Settlement Funds paid by PG&E to the Fort Mojave Indian Tribe as part of that Agreement contemplated use of the funds for items such as acquisition and management of land, planning for a potential cultural heritage center and programs, and scholarships for Tribal members to study sciences, technologies and legal aspects of environmental impact assessment, among others at the discretion of the Fort Mojave Indian Tribe. (pp. 3-4, Section VII.) Because of the terms of the prior Settlement Agreements between the Fort Mojave Indian Tribe and PG&E, and the Fort Mojave Indian Tribe and DTSC, the Fort Mojave Indian Tribe has not been included in Final SEIR Mitigation Measure CUL-5. The Final SEIR nevertheless mitigates the significant cumulative impacts of the Project to the extent feasible by including a measure (CUL-5) which provides an opportunity for the Tribes identified in the measure to engage in similar activities to preserve and protect the Topock TCP. Considering the terms of the prior Settlement Agreements, exclusion of the Fort Mojave Indian Tribe from CUL-5 does not render the SEIR mitigation ineffective.

Master Response 2: Use of the Future Activity Allowance in the Draft SEIR

Summary of Comments Raised Regarding the SEIR's Inclusion of the Future Activity Allowance

Comments were received on the Draft SEIR that question DTSC's inclusion of the Future Activity Allowance as part of the Project. These comments were provided in the comment letters in response to the Draft SEIR and were further reiterated to DTSC during several meetings after close of the Draft SEIR public comment period. Comments related to the Future Activity Allowance include 10 main categories:

1. Inclusion of this Project component is unprecedented
2. This Project component is undefined in the project description and not analyzed at the appropriate level of detail in the SEIR, and the 25 percent limit is arbitrary
3. Questions about whether the 10 monitoring wells included as part of the Future Activity Allowance are part of the Project or included as mitigation
4. Clarification that the Future Activity Allowance applies only to components included in the Final Remedy Design
5. Tracking of this Project component within the SEIR to ensure that activities are within the scope of the SEIR
6. Concern that the Future Activity Allowance is a way to evade the requirements of CEQA and Assembly Bill (AB) 52
7. "Provisional" elements are included in Final Remedy Design and allow DTSC enough flexibility, and the Future Activity Allowance is not consistent with past Topock projects
8. The Future Activity Allowance was not part of the cumulative analysis and appropriate mitigation has not been included in the SEIR
9. Concerns regarding Tribal notification and consultation of the Future Activity Allowance
10. This Project component is inconsistent with cultural resources plans and other agreements for the Topock area

The following master response provides clarification regarding each of these comment categories as it relates to the Future Activity Allowance.

Background and Purpose of the Future Activity Allowance as Defined in the Draft SEIR

As stated on page 3-11 of the Draft SEIR, the Future Activity Allowance includes an additional allowance for all Project infrastructure established at up to 25 percent of the parameter set forth in the Final Remedy Design, and up to 10 additional monitoring well boreholes to be installed in Arizona. As explained during a meeting between DTSC and Tribal representatives on July 18, 2017 and again on August 15, 2017, the Future Activity Allowance is included in the project description and the SEIR to ensure that a comprehensive environmental analysis has been conducted and impacts disclosed, should additional activities be warranted over the decades-long Project implementation. As stated in the Draft SEIR, the Future Activity Allowance could result in construction of additional Project features during the initial 5-year construction phase of the Project and/or during the approximate 30-year operation and maintenance phase that constitutes active remediation.

Minor Work Variances

The current remedy design is heavily based on the fate and transport modeling established from DTSC's understanding of the site. All models have inherent uncertainties and cannot predict all of the site's variabilities. As such, DTSC anticipates that minor work variances, or what are referred to as "material deviations" in the Final Remedy Design, during initial construction could be necessary to respond to any unanticipated onsite conditions, which is typical of projects of this nature. These minor work variances in response to field conditions during initial construction activities are not considered to be a part of the 25 percent Future Activity Allowance, as they are already part of the Final Remedy Design. Such minor work variances caused by field conditions and whose components are already part of the Final Remedy Design that went through a lengthy stakeholder and Tribal review and comment period would be addressed as part of the regular construction communication with Tribes and stakeholders as currently addressed in the Final Remedy Design and as required by the various protocols defined in the Cultural Impact Mitigation Program (CIMP) required by Mitigation Measure CUL-1a-8q. Specifically, the following sections of the CIMP would ensure continued Tribal coordination during construction activities: Section 2.2 which describes collaboration with Interested Tribes for the treatment of archaeological materials and pre-construction field verification; Section 2.10 which requires Tribal notification in advance of Project-related activities; and Section 2.12 which requires notification and invitation to Interested Tribes to observe ground-disturbing activities.

Future Activity Allowance

There may be other unforeseen activities not specified in the Final Remedy Design, which may be necessary during both construction and implementation (operation and maintenance) of the remedy. A practical example of such a possible significant deviation is the change in the siting location of monitoring well-U (MW-U) due to easement constraints and lack of access approval from the California Department of Transportation (Caltrans). If not for the final agreement from Caltrans, the modification of the well location would necessitate many more linear feet of access road grading to an undefined alternate MW-U location. While it is a modification of an infrastructure component that is in the current design, moving of MW-U to another location not

previously considered and the possible addition of access roads would be considered a substantial modification rather than a minor work variation leading to the potential reliance on the Future Activity Allowance.

In addition to the potential need for work variances during construction phase from unforeseen circumstances as explained above, the active remediation is anticipated to span decades. DTSC envisions that site conditions would change as a result of the remedy operation and that adjustment might become necessary in monitoring the contamination plume. Finally, DTSC, in remedy selection, also considered that some parts of the plume may require treatment refinements and/or transitioning to Monitored Natural Attenuation (MNA), which was not factored into the current design. Although PG&E's remedy design included various operational contingencies, PG&E did not and cannot currently conceive the plume condition when MNA would be employed. Regardless of whether a change is considered a Future Activity Allowance or a "material deviation" that was already included in the Final Remedy Design, implementation of all protective mitigation measures and communication with Tribes would occur.

Clarifications Made in the Final SEIR Regarding the Inclusion of the Future Activity Allowance and its Related Impacts

The inclusion of the Future Activity Allowance is necessary for DTSC to retain some flexibility to address unanticipated fluctuations or changes in the groundwater plume during remediation that may require additional infrastructure. The Draft SEIR text on page 3-12 is revised in the Final SEIR as follows:

The inclusion of the Future Activity Allowance is not intended to account for minor adjustments (work variances) of the remedy design during construction resulting from field conditions. DTSC's objective for the inclusion of the Future Activity Allowance is to consider the potential impacts of needing to take additional but previously unforeseen activities that were not contemplated as part of the Final Remedy Design but are activities that would improve the performance of the remedy, or are necessary to gather additional information on the remedy performance, and/or aid in the transition of the active remedy to monitored natural attenuation.

Therefore, the purpose of including the Future Activity Allowance in the SEIR is to ensure that DTSC considers all the potential environmental impacts of the Project, including those that may be needed in the future but that are a part of the whole of the Project. As a result of the comments raised and further discussions with Tribes about the Future Activity Allowance communication process, DTSC has determined that specific modifications to Mitigation Measure CUL-1a-14 that outlines Tribal notification of future activities are warranted.

CUL-1a-14: Tribal Notification of Potential Future Activities (New Measure). 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. For any potential future activities that the agencies will require PG&E to prepare a work plan, interested Tribes shall be notified and afforded the opportunity to provide input consistent with the general process described in Section 2.3 and Section 2.4 of the CIMP as defined in CUL 1a 8q. In circumstances where only one design cycle is deemed necessary by DTSC for the potential future work, steps A through H of Figure 2-1 MMRP CUL 1a 8d Design Review Protocol Flow Chart will be followed. PG&E shall, likewise, notify Interested Tribes at least two weeks in advance of project related ground-disturbing activities whenever possible in accordance with Section 2.10 of the CIMP.

DTSC acknowledges the dedication of the Interested Tribes in reviewing and commenting on the extensive preliminary, intermediate, pre-final, and final design iterations that have culminated in the Final Remedy Design that forms the basis of this SEIR project description. Key stakeholders and Tribal involvement have been integral to the design process in all stages. DTSC, as lead agency, has the responsibility to consider the long-term nature of the Project to ensure that the SEIR considers the whole of the Project and accommodates future uncertainty as it can be identified and analyzed at this present time. DTSC remains committed to the continued involvement of the Tribes in future activities associated with the Topock remediation efforts.

1. The Future Activity Allowance is Supported by CEQA Case Law and Consistent with DTSC Approach

CEQA requires lead agencies to consider the “whole of the project” and all reasonably foreseeable future activities that may occur as part of the Project. Inclusion of the Future Activity Allowance at a programmatic level of analysis is not unprecedented under CEQA, and allows DTSC flexibility to approve certain modifications if new information or new circumstances which are not or cannot be known today arise during the implementation phase. DTSC has appropriately included an analysis of the Future Activity Allowance as a program-level component of the Project that is geographically and situationally related to the whole of the action of groundwater cleanup within the Project Area. As explained in the Draft SEIR, to the extent additional activities might be determined as needed in response to results gleaned while implementing the final remedy, that potential activity has been included and programmatically analyzed to the extent feasible at this time.

DTSC took a similar approach in the Topock Compressor Station Soil Investigation Project EIR, which incorporated a 25 percent contingency for additional soil sampling outside of the parameters established in the Soil Work Plan, depending on the preliminary results of the investigation activities. The Soil Investigation Project EIR also included other activities such as

bench-scale tests and pilot studies analyzed at a programmatic level because locations and other details were not yet known at the time the Soil Investigation EIR was prepared. Similar to the Future Activity Allowance, these contingency sample locations and other activities necessary to meet project objectives were in locations that were not known at the time of that EIR.

The hybrid project-specific/programmatic approach and analysis included in the Draft SEIR regarding the Future Activity Allowance is permissible under CEQA and supported by case law. An EIR's description of the project should identify the project's main features and other information needed for an assessment of the project's environmental impacts. An engineering level of detail is not necessarily required. (See *Dry Creek Citizens Coalition v. County of Tulare* (1999) 70 Cal.App.4th 20, 26). As long as these requirements are met, a project description may allow for the flexibility needed to respond to unforeseeable events and changing conditions that could affect the project's final design. (See *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal.App.4th 1036, 1053). In *Citizens for a Sustainable Treasure Island*, the project proponent needed flexibility to account for potential unknown soil contamination among other issues, and therefore the project allowed the proposed development to be moved around within certain parameters, depending on the location and level of contamination that may be found within the project site (*Id.* at pp. 1053, 1060). Similarly, for the proposed Project, flexibility is required to be able to respond to conditions that are not known or cannot be known at this time; this flexibility is provided by the Future Activity Allowance.

2. Claims that the Future Activity Allowance is Undefined, Analyzed with an Inappropriate Amount of Detail, and Arbitrary

The Components of the Future Activity Allowance Are Well-Defined in the Project Description of the Draft SEIR

The Draft SEIR project description is consistent with CEQA and adequately describes the components of the Future Activity Allowance. Consistent with CEQA Guidelines section 15124, the project description identifies the Project's main features, including the Inner Recirculation Loop, Topock Compressor Station recirculation loop, freshwater injection wells, monitoring wells, piping and trenching, buildings and enclosed structures, soil processing area and procedures, staging areas, and various construction activities (Draft SEIR pages 3-9 through 3-97). Further, the Draft SEIR's project description quantifies the amount of Project infrastructure that could be constructed as part of the Future Activity Allowance, which considers the whole of the Project that is under consideration by DTSC (see Table 3-1 for monitoring well borehole counts included under the Future Activity Allowance; Table 3-2 for quantification of linear feet for pipeline trenches, electrical/communication conduit, and roadway improvements, as well as square feet for buildings and structures for the Future Activity Allowance; Table 3-4 for volume of soil disturbance associated with the Future Activity Allowance; and Table 3-5 for water needed to construct components included under the Future Activity Allowance). The project description related to the Future Activity Allowance is adequately described in accordance with CEQA project description requirements and allows for appropriate impact analysis.

Potential Environmental Impacts Associated with the Future Activity Allowance Are Adequately Analyzed in the Draft SEIR and Appropriate Under CEQA

The Future Activity Allowance is analyzed in the Draft SEIR at the appropriate level of detail, as supported by the State CEQA Guidelines and case law. “The level of detail in an EIR is driven by the nature of the project” (*Citizens for a Sustainable Treasure Island, supra*, 227 Cal.App.4th at p. 1051; *Al Larson Boat Shop, Inc. v. Bd. of Harbor Commissioners of the City of Long Beach* (1993) 18 Cal.App.4th 729, 746 [same]). As the CEQA Guidelines (14 Cal. Code Regs., 15000 et seq.) state, “[t]he degree of specificity required in an EIR will correspond to the degree of specificity involved in the underlying activity which is described in the EIR... An EIR on a construction project will necessarily be more detailed in the specific effects of the project than will be an EIR on the adoption of a local general plan” (CEQA Guidelines, Section 15146). The “sufficiency of an EIR is to be reviewed in the light of what is reasonably feasible” (CEQA Guidelines, Section 15151). For projects that are implemented over decades, such as the proposed Project, detailed information about every component is often unavailable. For example, plans may be presented at a conceptual level to allow flexibility to respond to future unknowns (*Citizens for a Sustainable Treasure Island, supra*, 227 Cal.App.4th at p. 1053).

For this project, the Final Remedy Design is based on the current plume configuration. With the implementation of the remedy, the plume configuration will change in the future. Although the established fate and transport model provides a good prediction of change over time, there are inherent uncertainties with groundwater flow. When the model is refined over time based on actual project implementation and monitoring data, it is likely that something presently unforeseeable could arise that necessitates the need for more monitoring wells or piping (or some other Project component), although the exact future event is unknowable at this time. The Future Activity Allowance provides for appropriate Project adjustments or actions to respond to these unforeseen conditions up to the specified limits presented in the Project description.

DTSC included the Future Activity Allowance in the impact analyses of the SEIR consistent with the Project objectives and to ensure a complete environmental evaluation as required by CEQA to the extent such impacts may be reasonably foreseeable at this time given the information known to date about the groundwater plume. Based on the level of detail available, the Future Activity Allowance has been given full consideration in the Draft SEIR evaluation. Every resource topic included in the SEIR addresses and evaluates potential impacts from the Future Activity Allowance. Where possible, impacts were quantified to provide an upper limit of possible impacts (such as Biological Resources).

In every applicable section of the Draft SEIR, a summary table was included in the “Approach to Analysis” section that numerically quantifies the additional infrastructure (well boreholes, disturbed ground, fluid conveyance pipeline, electrical/communication conduits, buildings and structures, and roadway improvements) that could be implemented under the Future Activity Allowance so that impacts could be quantified (where appropriate, such as for biological resources and water supply) and analyzed in the various impact analysis sections. The Future Activity Allowance was systematically documented in the methodology such that accurate impact assessments could be reached.

See the following sections of the SEIR for detailed evaluation of the Future Activity Allowance:

- Aesthetics Section 4.1.5.2 (Impact Methodology) and Section 4.1.5.3 (Impact Analysis)
- Air Quality Section 4.2.5.2 (Impact Methodology) and Section 4.2.5.3 (Impact Analysis)
- Biological Resources Section 4.3.5.2 (Impact Methodology) and 4.3.5.2 (Impact Analysis)
- Cultural Resources Section 4.4.5.2 (Impact Methodology) and 4.4.5.2 (Impact Analysis)
- Hazards and Hazardous Materials Section 4.5.5.2 (Impact Methodology) and 4.5.5.2 (Impact Analysis)
- Hydrology and Water Quality Section 4.6.5.2 (Impact Methodology) and 4.6.5.2 (Impact Analysis)
- Noise Section 4.7.5.2 (Impact Methodology) and 4.7.5.2 (Impact Analysis)
- Utilities and Service Systems Section 4.8.5.2 (impact methodology) and 4.8.5.2 (Impact Analysis)
- Water Supply Section 4.9.5.2 (Impact Methodology) and 4.9.5.2 (Impact Analysis)

All mitigation measures identified in the SEIR apply to the Project as a whole, including any Project components that may be constructed under the Future Activity Allowance, which could occur during the construction or operation phases over the lifetime of the Project. In addition, DTSC included mitigation measures that specifically address the Future Activity Allowance to ensure that protections and protocols are implemented whenever Future Activity Allowance components may be constructed. For examples, see Mitigation Measures BIO-2h, CUL-1a-9, CUL-1a-14, and CUL-1a-15, which specifically address the Future Activity Allowance.

The Limit of the Future Activity Allowance is Quantified and Based on Technical and Site-Specific Expertise

Accordingly, the Draft SEIR analyzes the Future Activity Allowance by assuming all Project elements are increased by 25 percent, based on the Final Remedy Design's anticipated infrastructures, and placed in areas of similar environmental sensitivity as the Project. This type of "worst-case scenario" approach to analysis complies with CEQA (*Citizens for a Sustainable Treasure Island, supra*, 227 Cal.App.4th at p. 1053, fn. 7). The Future Activity Allowance represents the upper bound (i.e., maximum worst-case effects) that could occur under the proposed Project within the Project Area. The 25 percent allowance is not open-ended, but rather represents a quantifiable limit based on the parameters set forth in the Final Remedy Design. The 25 percent limit was selected as a reasonable engineering estimation based on DTSC's familiarity with the Final Design, site characteristics, understanding of inherent uncertainties with groundwater flow, and past activities on-site. This allowance limit is neither arbitrary nor excessive, but rather is based on DTSC's considerable experience and expertise as a regulatory agency that oversees remediation activities throughout the state of California. Further, while the location(s) of Future Activity Allowance infrastructure is currently unknown, infrastructure would be situated within the Project Area identified on Figure 3-3 of the Draft SEIR, and generally near similar infrastructure. For instance, as discussed on page 4.1-66 of the Draft SEIR,

the Future Activity Allowance would include construction of pipelines and electrical power underground throughout the Project Area, boreholes potentially located in the floodplain area and generally in the vicinity of existing/planned boreholes, monitoring well boreholes in Arizona, and additional structures near existing/planned structures and facilities (like at the Station, Transwestern Bench, Construction Headquarters, etc.).

3. Ten Monitoring Wells Are Appropriately Analyzed in the SEIR as Part of the Future Activity Allowance

Commenters questioned whether the 10 monitoring wells included as part of the Future Activity Allowance are mitigation measures as specified in Mitigation Measure HYDRO-6, or if the wells are included as part of the project description. As explained in Chapter 3 of the Draft SEIR, the Future Activity Allowance is included as part of the project description in recognition that additional activities may be warranted over the decades-long project implementation. The SEIR therefore analyzes, at a program level, all of the foreseeable, potentially significant impacts of the Future Activity Allowance, including the installation of up to 10 monitoring wells, as part of the Project.

In Section 4.6, “Hydrology and Water Quality,” for example, DTSC determined that new monitoring wells could be needed in Arizona to assess and minimize impacts to non-Project water supply wells in Arizona, and therefore Mitigation Measure HYDRO-6 requires that new monitoring wells will be installed, but only if necessary based on PG&E’s access to non-Project water supply wells (see Draft SEIR text on page 4.6-60). These potential new monitoring wells are added as future activities analyzed in the SEIR (see Draft SEIR pages 3-23 and 3-24). Including the monitoring wells as part of the Project ensures that the construction of any new wells in Arizona will go through the same rigorous mitigation measures required under the proposed Project. Because of this, the mitigation measures included in the SEIR (including all cultural resource measures) will be implemented, as applicable, during the construction, operation, and decommissioning of any future monitoring wells in Arizona. This approach was also taken to ensure the environmental impacts of the 10 potential monitoring wells were fully analyzed in the SEIR.

4. Clarification in the Final SEIR Regarding the Relationship of the Future Activity Allowance to the Final Remedy Design

A comment was raised that questions DTSC’s reasoning for including the last phrase of the sentence indented below. DTSC acknowledges the ambiguity of this sentence and has therefore revised it to reflect that the Future Activity Allowance includes the same type of Project features identified in the Final Remedy Design. The purpose and intent of the Future Activity Allowance is not to have an open-ended Project that includes major components or new features not included in the Final Remedy Design, but to anticipate the need for the same types of infrastructure into the future based on new information discovered after the SEIR and deemed necessary for the continued implementation of the remedy or for protection of the environment. In response to the comment, the Draft SEIR text on page 3-11 is revised in the Final SEIR as follows:

The 25 Percent Potential Allowance is intended to apply generally to the development and implementation of the Final Remedy Design, and includes only those Project features which are even if a particular parameter or aspect of the Project is not listed in one of the examples set forth in the following subsections.

5. DTSC Will Require Tracking of Future Activity Allowance Components Through the Life of the Project

Commenters expressed concern that there is no way to track whether proposed components under the Future Activity Allowance are within the scope of the SEIR. DTSC as the lead agency has the responsibility and requirement to monitor the long-term activities associated with the Proposed Action, including both the compliance with the required mitigation measures and the implementation of any infrastructure. Page 3-12 of the Draft SEIR states that the Future Activity Allowance will be tracked by DTSC “to ensure that development of individual components is within the scope of this SEIR.” Further, any activities conducted under the Future Activity Allowance will be tracked by DTSC as a condition of approval for the Project. This tracking will occur as a Condition of Approval as well as a requirement of Mitigation Measure CUL-1a-14 (as revised in this Final SEIR shown above), which indicates that, for work request, work plan, or technical memorandum, requested by PG&E, they 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. This indicates that DTSC has the responsibility to ensure that any and all activities undertaken as part of the Project are consistent with the assumptions, analysis, and mitigation measures identified in the SEIR, to determine whether any additional future review under CEQA is required. It does not preclude the need for future CEQA analysis, if activities are outside and beyond what was already analyzed under Future Activity Allowance in this SEIR. Additionally, any work plans that may be prepared for Future Activity Allowance components will comply with Tribal notification and input provisions of Mitigation Measure CUL-1a-14.

Comments suggested that the analysis of the Future Activity Allowance should be located within a separate chapter of the SEIR to track and analyze impacts (including cumulative). Because the Future Activity Allowance is part of the Project identified in Chapter 3, “Project Description,” and would use the same technologies, construction equipment, and work parameters as the rest of the Project, the SEIR analysis is holistic in considering the entire Project, and not segmenting the analysis. In each resource section, the methodologies and impact evaluations consider the Future Activity Allowance explicitly. Providing this assessment in a separate chapter would not have different impact conclusions, and could be seen as misleading or confusing in the presentation of impact conclusions and mitigation measures. DTSC included the analysis of the Future Activity Allowance within each resource section and Chapter 6, “Cumulative Impacts,” just as every other Project feature is analyzed. However, as the lead agency, DTSC recognizes and appreciates the need to track use of the Future Activity Allowance, which is why it will ensure that a tracking mechanism is included as a requirement of CUL-1a-14 and in the Conditions of Approval for the Project.

6. The Applicability of AB 52 Applies to the Project as a Whole, Including the Future Activity Allowance

Some commenters questioned whether DTSC's inclusion of the Future Activity Allowance in the Draft SEIR is an effort to evade CEQA environmental review on those additional Project components, and requested that it be removed from the SEIR. The inclusion of the Future Activity Allowance is not an attempt to evade CEQA, but rather a necessary consideration by DTSC as lead agency to define the whole action in order to conduct meaningful review per CEQA Guidelines Section 15378(a), which defines a "project" as the "whole of the action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment..." Including potential Project components that address unknown changes to the groundwater plume constitutes the whole of the action, as required to be evaluated by CEQA Guidelines. It is therefore necessary for the Future Activity Allowance to remain in the SEIR. As described on page 3-12 of the Draft SEIR, there may be circumstances where additional approval may be required by DTSC and other agencies. As the lead agency, DTSC will be responsible for reviewing and tracking each of the activities conducted under the Future Activity Allowance to ensure that they are within the scope of the SEIR and that the mitigation measures would be applicable for reducing impacts. If Project components exceed the limits of the 25 percent threshold, fall outside of the Project Area boundaries as defined in Figure 3-3 of the Draft SEIR, or constitute a new kind of activity from those described in the SEIR, future CEQA action may be required to evaluate those environmental impacts. To further clarify this point, the Draft SEIR text on page 3-12 is revised in the Final SEIR as follows:

It should also be noted that additional facilities beyond those specifically described in the Final Remedy Design may require approval from DTSC and perhaps other agencies. If Project components exceed the limits of the 25 percent threshold, fall outside of the Project Area boundaries as defined in Figure 3-3 of the Draft SEIR, or constitute a new kind of activity from those described in the SEIR, future CEQA action may be required to evaluate any environmental impacts outside the scope of this SEIR. Consideration by DTSC of any such future approvals would be consistent with its existing and ongoing duties under CEQA laws and the Settlement Agreements with the FMIT and duty to confer, as may be needed, with Interested Tribes. The purpose of including the Future Activity Allowance is therefore to be sure that this SEIR evaluates all the potential effects of the Project, including those that may be needed in the future.

Similarly, some commenters state that DTSC is trying to avoid complying with the requirements of AB 52 for the Future Activity Allowance components. As explained previously, DTSC included the Future Activity Allowance within the SEIR to ensure that the "whole of the action" for the groundwater remedy is analyzed in the SEIR. The intent and goal of AB 52 focuses on coordination with Tribes for the purposes of identifying tribal cultural resources that could potentially be significantly impacted by a project early in the CEQA process, including for purposes of consulting with Tribes and incorporating an analysis of impacts to those resources in the EIR, and developing appropriate mitigation measures. Although not legally required to comply with AB 52 (see Master Response 3: Inapplicability of Assembly Bill 52 in Project

Approval), DTSC has acted in the spirit of AB 52 and good faith throughout the Final Remedy Design and SEIR process to understand the concerns of Tribal stakeholders, including multiple in-person meetings and other coordination efforts, thus informing the SEIR's identification of Tribal resources and perspectives in the analysis, including the analysis of impacts and mitigation. As outlined in Mitigation Measures CUL-1a-14, activities conducted as part of the Future Activity Allowance that require a work plan would involve Tribal notification and input per provisions of Mitigation Measure CUL-1a-14.

7. Provisional Design Elements and Future Activity Allowance Are Important to Achieve Remedial Goals

Several commenters expressed concern that DTSC has already made a concerted effort to anticipate possible expansion of the Project during the design process, and that the project has grown with each design iteration. Commenters stated that “provisional” features are included in the Final Remedy Design and therefore already provide flexibility for contingencies, removing the need for the Future Activity Allowance. DTSC has made a concerted effort to provide more specificity and details with each subsequent design iteration, as new information has become available, which may have the appearance that the Project has grown, when in fact more specifics and details have been provided about the project. Furthermore, during review of the design, DTSC offered comments and recommended additional provisional wells to account for some likely scenarios that may result when real data will be available during remedy construction and initial operation. These provisional Project features were included in the design iterations as a unique category in the Final Remedy Design and Draft SEIR. For example, provisional well locations were considered as a conservative approach to “address predictive uncertainty inherent to groundwater flow and solute transport modeling.” DTSC wanted to ensure that if conditions did not ultimately occur as the model predicted based on the current plume configuration, the remediation Project will allow for adjustments to modify or correct the Project operations. While locations for provisional wells are identified in the Final Remedy Design and analyzed at known locations in the Draft SEIR (page 3-23 and Table 3-1) based on existing plume data, the Future Activity Allowance would correspond to unknown plume changes that *may* occur in the future and therefore exact locations of those contingent Project features are not able to be identified like they are for provisional features considered in the Final Remedy Design.

Conversely, some commenters stated that the idea of a Future Activity Allowance is inconsistent with past work in and around the Topock Project Area, notably the Final Remedy Design, which was completed through several iterations to achieve specificity in identifying groundwater remedy infrastructure. Commenters also question why DTSC did not include the Future Activity Allowance in the Final Remedy Design, particularly because it is an expansion of the Project footprint.

Although the term “Future Activity Allowance” is not a part of the Final Remedy Design explicitly, the concept that additional Project changes may be needed throughout the lifetime of the Project in response to changing conditions in the groundwater plume is recognized in the Final Remedy Design. The *Construction/Remedial Action Work Plan for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California*, page 2-22 (Table 2.3-1), and

the Exhibit L2.2-1 of the Operation and Maintenance Manual, which are included as Appendix BOD to this SEIR, identify this idea under the terminology of “material deviations.” All stakeholders, including the Interested Tribes, have reviewed this language and the communication framework associated with the changed conditions. The inclusion of the Future Activity Allowance in the Draft SEIR takes this unknown quantity of future Project changes and puts a limit on it (not to exceed 25 percent). DTSC considerations of these features associated with the whole groundwater cleanup at Topock were analyzed appropriately per CEQA Guidelines Section 15378(a).

8. Cumulative Impacts Associated with the Whole of the Project, Including the Future Activity Allowance Were Adequately Addressed

Commenters expressed concern that Project features such as the Future Activity Allowance and the provisional wells from the Final Remedy Design were not included in the cumulative impacts scenario (Draft SEIR Chapter 6), and therefore that these additional Project components would worsen the already significant cumulative impacts to aesthetics, cultural resources, and noise. However, the analysis presented in Chapter 6, “Cumulative Impacts,” takes into consideration the whole of the Project, including the Future Activity Allowance, within the baseline of projects considered; the “proposed Project” references within Chapter 6 include the Final Remedy Design plus the Future Activity Allowance, which when taken together both constitute the proposed Project (see Chapter 3, “Project Description”). See Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for a more detailed discussion of cumulative impacts to the Topock TCP and additional mitigation to reduce the project contribution to cumulative impacts to the Topock TCP.

Commenters also questioned why cumulative-specific mitigation was not included in the Draft SEIR. There are three notable differences in the cumulative impact evaluation and mitigation measures since the 2011 Groundwater FEIR. (1) Mitigation Measure NOISE-3 was added to the cumulative analysis based on the increase in severity of cumulative impacts from the 2011 Groundwater FEIR to this SEIR. As a result, this SEIR results in a new significant and unavoidable impact to the cumulative noise scenario even after implementation of mitigation measures. (2) The level of cumulative impacts related to aesthetic resources has increased in severity from the 2011 Groundwater FEIR, and while Mitigation Measures AES-1 and AES-2 still apply, the impacts to the aesthetic cumulative scenario are now considered significant and unavoidable, based on the timing of projects in the geographic scope. (3) Regarding the Topock TCP, a new measure, Mitigation Measure CUL-5, was added to the cumulative analysis to address the increased impacts to the Topock TCP compared to what was projected in the 2011 Groundwater FEIR, (please see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property above for additional details). Notwithstanding the new mitigation measure, the cumulative effect on the Topock TCP remains significant and unavoidable. While the Future Activity Allowance contributed to this overall increase in cumulative impacts, this component of the Project is not the sole reason for the increase. As stated on page 6-34 of the Draft SEIR, the only way to fully mitigate cumulative impacts to

cultural resources, including the Topock TCP, would be by completely avoiding any future Project activity.

9. Tribes Were Adequately Notified of the Future Activity Allowance as a Project Component and Will Continue to be Involved Throughout the Life of the Project

Several commenters expressed concern that they were not consulted with or notified of the Future Activity Allowance as a component of the proposed Project while it was being developed by DTSC, and that the first time it was mentioned to stakeholders was not until the Consultative Work Group (CWG) meeting in January 2017, when the Draft SEIR was made available for public review.

As noted earlier in these responses, the concept of potential additional work and adjustment in the Project is captured within the Final Remedy Design. Material deviations and the communication framework are specified within the Final Remedy Design, which stakeholders have reviewed and commented on throughout its iterative development. Also, in a meeting to discuss Tribal mitigation concepts on July 19, 2016, the concept was introduced by DTSC to the Interested Tribes as the “25 Percent Unanticipated Project Component.” DTSC explained to the Interested Tribes that while the proposed Project analyzed in the Draft SEIR is based on the detail presented in the Final Remedy Design, given the overall length of time to achieve groundwater cleanup and based on DTSCs technical expertise about the nature of remediation projects, there may be a need for additional infrastructure (of the same types identified in the Final Remedy Design) over the lifetime of the Project that is not currently envisioned. Since the July 2016 meeting, and throughout the development of the Draft SEIR, the Future Activity Allowance terminology became more fully defined over time as a way to describe this important element of the overall Project. DTSC as the lead agency has the responsibility to consider the whole of the action and has been committed to providing timely information to stakeholders, including that of the Future Activity Allowance.

Commenters further suggest that provisions be made in the SEIR for additional CEQA review to include Tribal consultation to be performed prior to any ground-disturbing activities. This has been provided for. All mitigation measures adopted as part of the SEIR will apply to the Future Activity Allowance. For any activity conducted as part of the Future Activity Allowance that requires a work plan, Tribes will be notified and provided opportunities for input under Mitigation Measures CUL-1a-14 and CUL-1a-15. Tribes would also be afforded opportunities to participate during pre-construction surveys or new surveys under the provisions of the CIMP.

If and when additional information about conditions on the ground is discovered in the future that does require DTSC to approve additional Project infrastructure included in the Future Activity Allowance, DTSC would determine if any of the circumstances listed in Public Resources Code (PRC) Section 21166 and CEQA Guidelines 15162 trigger the need for additional environmental review. If so, additional CEQA review will be conducted, which would include any appropriate Tribal consultation. If, on the other hand, DTSC determines that the activity falls within the scope of analysis contained within the SEIR as certified, then no additional CEQA review would be

required. “The obligation to conduct supplemental review under section 21166 applies regardless of whether the project under consideration has undergone previous project-specific environmental review, or is being carried out under a plan for which the agency has previously certified a program EIR” (*Citizens for a Sustainable Treasure Island, supra*, 227 Cal.App.4th at p. 1051, citing Guidelines, Sections 15162, 15168, subd. (c)(2); *May v. City of Milpitas* (2013) 217 Cal.App.4th 1307, 1326).

Commenters specifically requested consultation on the Future Activity Allowance. In response to this comment and related concerns, DTSC staff held meetings with Tribal representatives April 17–20, 2017, where the idea of the Future Activity Allowance was discussed in detail. DTSC also met with Interested Tribes on July 18, 2017 and again on August 15, 2017, to discuss the communication process regarding implementing the Future Activity Allowance. DTSC, U.S. Department of the Interior (DOI), BLM, and the U.S. Bureau of Reclamation (BOR) have also jointly engaged the Tribes on September 13, 2017 and October 17, 2017 to discuss consultation protocol if changes arise during construction (see revisions to Mitigation Measure CUL-1a-14 above which clarifies communication protocols).

10.Provisions of Cultural Resource Plans Apply to the Future Activity Allowance

Commenters expressed concern that the Future Activity Allowance is inconsistent with the CIMP, and is therefore in conflict with the Programmatic Agreement (PA), the CIMP, and the Cultural and Historic Properties Management Plan (CHPMP). However, all provisions developed as part of these governing documents (CIMP, PA, and CHPMP) would still apply to the Future Activity Allowance and the Future Activity Allowance would be implemented in a manner consistent with CIMP, PA, and CHPMP provisions.

Commenters expressed concern that the Future Activity Allowance will not meet Applicable or Relevant and Appropriate Requirements (ARARs). As stated earlier, the idea of project changes throughout the construction and operation of the remedy is a concept that is embedded in the project design. In fact, one example of a necessary “material deviation” is in response to ensuring legal requirements. The determination that a proposed future project feature is within the Future Activity Allowance does not automatically imply approval by the agencies. Since the DOI is obligated to evaluate ARAR compliance of all proposed actions associated with the Project, activities falling within the Future Activities Allowance definition will not eliminate that requirement for approval. Although ARAR compliance evaluation is not required under Corrective Action administered by DTSC, PG&E must ensure that their Project complies with all legal requirements.

Master Response 3: Inapplicability of Assembly Bill 52 in Project Approval

Summary of Comments Raised Regarding DTSC's Compliance with AB 52

Some commenters stated that DTSC should comply with AB 52 before deciding whether to certify the Final SEIR. These comments revolve around the following two main points: (1) the SEIR should comply with AB 52's procedural and consultative requirements regarding tribal cultural resources regardless of whether they are applicable or not; and (2) the proposed Future Activity Allowance approach is an attempt to avoid the requirements of AB 52 for future Project components.

The California Legislature adopted AB 52 and the governor signed the bill into law on September 26, 2014. AB 52 amended and included new sections to the Public Resources Code (PRC) that require, prior to the release of a negative declaration, mitigated negative declaration, or EIR for a project, that the lead agency consult with California Native American Tribes that are traditionally and culturally affiliated with the geographic area of the proposed project under certain circumstances. AB 52 also requires consideration of tribal cultural resources in the environmental document. AB 52 became effective on January 1, 2015 and applies to projects that had a CEQA Notice of Preparation (NOP) or a notice of negative declaration/mitigated negative declaration filed "on or after July 1, 2015." (See Legislative Counsel's Digest, AB 52, p. 3; see also Section 11(c) ["This act shall only apply to a project that has a notice of preparation or a notice of negative declaration or mitigated negative declaration filed on or after July 1, 2015"].)

The NOP to initiate a 30-day comment period for the Draft SEIR on this Project was issued on May 5, 2015, prior to the legislation going into effect. The NOP was sent to all stakeholders, including Interested Tribes. Appendix G of the CEQA Guidelines was not revised until September 2016, following approval of the California Office of Administrative Law to include two threshold questions of significance relating to AB 52 (see Appendix G, subd. XVII). The thresholds were established in the CEQA Guidelines after DTSC's preparation of the Draft SEIR was well under way. Because many of the procedural deadlines set forth in AB 52 originate from actions or decisions that have already occurred with respect to the Final Remedy Design, and therefore, due to the time of release of the NOP and other factors described above, it is not possible to comply with the strict letter of the law in AB 52 at this time. Because the NOP for the SEIR was issued prior to July 1, 2015, DTSC is not, and was not, required to comply with AB 52 as part of the SEIR process.

1. DTSC has Met the Intent of AB 52 and Fully Complies with Other Requirements for Tribal Coordination

DTSC has consulted with Interested Tribes throughout the remedy design, CEQA review, and Project approval processes, and in many instances has met the legislative intent of AB 52 as it is outlined in Section 1(b)(1-9) of the PRC. In addition, State Executive Order B-10-11, which was issued on September 19, 2011, applies to the Project, and has been complied with by DTSC since

issuance. While AB 52 does not specifically apply to this Project for those reasons identified above, consultation with the Interested Tribes has been on-going. State Executive Order B-10-11, which requires the State to enter into meaningful government-to-government consultation with Tribes, has been carefully executed for this Project through gathering of input from Interested Tribes at regular project meetings and special meetings with individual Interested Tribes and/or Tribal Nations collectively at the Tribes discretion. Consultation with the Interested Tribes was also achieved through compliance with several mitigation measures set forth in the 2011 Groundwater FEIR, such as CUL-1a, which requires development of the CIMP, and CUL-1a-4, which requires development of the Technical Review Committee (TRC). DTSC's commitment to consultation with the Interested Tribes meets the intent of AB 52, as well as requirements applicable to the Project. The following discussion presents the AB 52 requirements as set forth in the text from Section 1(b)(1–9) of the PRC and explains DTSC's Tribal coordination efforts, to date, after each of the nine points:

(b) In recognition of California Native American tribal sovereignty and the unique relationship of California local governments and public agencies with California Native American tribal governments, and respecting the interests and roles of project proponents, it is the intent of the Legislature, in enacting this act, to accomplish all of the following:

(1) Recognize that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities.

DTSC recognizes the importance of Native American resources to Interested Tribes as they relate to the Topock site and has demonstrated this recognition through coordination with Interested Tribes that has been ongoing for more than 20 years, since the 1990s, and through special consideration of these elements in CEQA documentation for the site since the 2011 Groundwater FEIR certified on January 31, 2011 (SCH No. 2008051003).

(2) Establish a new category of resources in the California Environmental Quality Act called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation.

Although the NOP for the Project was issued before the July 1, 2015, date identified as triggering the requirements of AB 52, DTSC has nonetheless already established a working relationship with the Interested Tribes through regular project meetings, including the quarterly CWG meetings and Technical Workgroup (TWG) meetings, and the monthly Clearinghouse Taskforce (CTF) meetings. DTSC has also met numerous times with Interested Tribes during the preparation of the 2011 Groundwater FEIR in which DTSC has identified the project area to be within a Topock Cultural Area of Interested Tribes. DTSC has considered, and continues to consider, resources of Tribal concern—most notably the Topock TCP—in its environmental documents for their value separate and apart from typical archaeological and scientific values in the following ways. (1) The Topock TCP was found by the BLM to be eligible for listing in the National Register of Historic Places not only under Criterion D (scientific value), but also under Criteria A (association with events)

and C (distinctive characteristics) based on values ascribed to the TCP by Tribes. The Draft SEIR acknowledges this Tribal value and further treats the resource as eligible for listing in the California Register of Historical Resources under the same scientific and nonscientific eligibility criteria. (2) Although the TCP is considered in the Draft SEIR as a “historical resource” as opposed to a “tribal cultural resource,” the identification of the resource, analysis of impacts to the resource, and mitigation of the resource in the SEIR are appropriate and consistent with CEQA requirements to address a tribal cultural resource as the term has since been established by AB 52 even though that specific term was not used. (3) DTSC has added Mitigation Measure CUL-5 to the cumulative analysis to address Tribal concerns regarding the increase in severity of impacts to the Topock TCP identified since the 2011 Groundwater FEIR was certified, to compensate for these impacts, and that considers values ascribed to the Topock TCP by Tribes (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details).

The Draft SEIR includes a separate discussion (see Section 4.4.3.2, “Native American Heritage Resources”) that is similar to the concept of “tribal cultural resources,” as referred to in PRC Section 1(b)(2). As part of this discussion, perspectives expressed by Interested Tribes have been integrated and contributors to the Topock TCP have been addressed, including contributing elements of the Topock TCP as identified by Interested Tribes in their Tribal Cultural Values Assessment (TCVA), which includes both archaeological and non-archaeological resources of importance to Interested Tribes. The Draft SEIR identifies these TCVA resources as significant and provides mitigation measures to avoid these resources in addition to archaeological resources, consistent with the intent of AB 52. Also, as noted in the previous paragraph, DTSC has added Mitigation Measure CUL-5 to the cumulative analysis to address Tribal concerns and values (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details).

(3) Establish examples of mitigation measures for tribal cultural resources that uphold the existing mitigation preference for historical and archaeological resources of preservation in place, if feasible.

The following are examples of mitigation identified in PRC Section 21084.3 (new statute resulting from AB 52) that may be considered by a lead agency if feasible and in the event measures are not otherwise identified in the consultation process:

- (1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- (2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource.
 - (B) Protecting the traditional use of the resource.

(C) Protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

(4) Protecting the resource.

As discussed more thoroughly below, DTSC has promoted the avoidance of impacts to cultural resources to the extent feasible through numerous iterations of the Final Remedy Design, including changes made at the request of one or more Tribal members, and has incorporated aspects of the mitigation strategies listed above into the measures identified in the SEIR, including: avoiding direct and indirect physical impacts to the Topock Maze, avoiding impacts to other archaeological sites to the extent practicable, avoiding and protecting indigenous plants of traditional cultural significance to the extent practicable, enhancing site security and protective measures, ensuring Tribal access to the Topock area for ceremonies and other activities, and reducing noise and visual impacts. Prior to publication of the Draft SEIR for public review, DTSC met with Interested Tribes on two separate occasions (July 15 and August 9, 2015) specifically to discuss proposed mitigation measures. DTSC considered Tribal input as the document was prepared. Additionally, DTSC conducted two meetings (April 19-20, 2017, and August 14-15, 2017) with Interested Tribes between the Draft and Final SEIR to further discuss their concerns regarding mitigation measures. In response, DTSC has added Mitigation Measure CUL-5 to the cumulative analysis to address Tribal concerns regarding the increase in severity of impacts to the Topock TCP, to compensate for these impacts, and that considers values ascribed to the Topock TCP by Tribes (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details).

(4) *Recognize that California Native American tribes may have expertise with regard to their tribal history and practices, which concern the tribal cultural resources with which they are traditionally and culturally affiliated. Because the California Environmental Quality Act calls for a sufficient degree of analysis, tribal knowledge about the land and tribal cultural resources at issue should be included in environmental assessments for projects that may have a significant impact on those resources.*

DTSC has solicited input from Interested Tribes, regarding their knowledge, and perspectives of cultural resources that are of importance to them, and has considered their input in the environmental review process for the 2011 Groundwater FEIR and also specifically for this SEIR. The coordination and government-to-government relationship between DTSC and the Interested Tribes has been ongoing since 2008. Tribal perspectives have been collected through numerous meetings, field visits, and Tribal review and comment of various documents considered and incorporated by DTSC. The Tribal perspectives prepared as part of the Draft SEIR, for example, were circulated to Interested Tribes for review and comment in advance of the public comment period.

Tribal concerns that were raised and, where feasible alternatives to impacting resources of concern existed were addressed through the Project design process in coordination with Interested Tribes. Prior to preparation of the NOP for this SEIR, Interested Tribes were closely involved in the development of the Final Groundwater Remedy alternatives, the remedy selection process and its associated environmental analysis for the remedy. Interested Tribes were similarly engaged in providing comprehensive review and comment on the 30% (preliminary), 60% (intermediary), and 90% (pre-final) of the Final Remedy Design. Tribal involvement and specific comments provided during this multi-year (2011–2016) design process resulted in modifications and changes to the Project in order to minimize project effects to cultural resources of importance to Interested Tribes. This included considerable redesign of the proposed approach to soil management, construction staging area locations, and locations of infrastructure such as pipelines and monitoring wells, as well as other important Project implementation methodologies. Tribal comments during this process, and a commitment to avoidance of resources, have specifically been responded to and resulted in a Project that has incorporated the input of Interested Tribes to minimize or avoid impacts to cultural resources.

As mentioned previously, DOI, DTSC, PG&E, key stakeholders, and Interested Tribes have worked diligently to advance the selected design through the 30%, 60%, 90%, and 100% design stages, as part of the CWG, TWG, and CTF. To accommodate diverse CWG/TWG member concerns, the design underwent a review and comment period before advancing to the next design stage. Up through the pre-final design, each member's comment on the design was carefully reviewed and responded to by the Agencies and PG&E, then deliberated openly with CWG members in striving for comment resolution. In response to input from the Interested Tribes, modifications have been reflected in the Final Remedy Design and SEIR which include, but are not limited to, the following:

- Removal of the eastern portion of the Topock Compressor Station (TCS) Evaporation Ponds from Staging Area 11;
- Removal of the quarry and former evaporation pond area from consideration as staging and soil storage;
- Removal of Staging Areas 15, 16, 19, and 20;
- Limited uses of Staging Areas 6, 7, 12, 13, and 25;
- Restricted practices regarding backfill of monitoring wells;
- Relocation of an access road to Well CW-01;
- Relocation of monitoring well (MW) IRL-1;
- Relocation of MW-P;
- Exclusion of two alternative freshwater source locations from consideration; and
- Revision of the numeric model that provides a prediction of the remedy's capabilities during the implementation of the cleanup.

- (5) *In recognition of their governmental status, establish a meaningful consultation process between California Native American tribal governments and lead agencies, respecting the interests and roles of all California Native American tribes and project proponents, and the level of required confidentiality concerning tribal cultural resources, at the earliest possible point in the California Environmental Quality Act environmental review process, so that tribal cultural resources can be identified, and culturally appropriate mitigation and mitigation monitoring programs can be considered by the decision making body of the lead agency.*

DTSC has met with Interested Tribes on numerous occasions to collect information and identify cultural resources of importance to Interested Tribes that might be impacted by the Project, both through the design development process and through the CEQA process. The Topock TCP was identified as possessing significant value to Interested Tribes and this resource was separately and specifically identified as a resource potentially subject to Project impacts, and impacts to the Topock TCP were evaluated based on the Tribal perspectives gathered.

On April 20, 2015, DTSC Director Barbara Lee and staff met with Chairman Timothy Williams and Linda Otero, Director of Cultural Society of the Fort Mojave Indian Tribe regarding DTSC's decision to prepare an SEIR on the Final Groundwater Remedy Project and that DTSC would issue a Notice of Preparation and hold a scoping period for the SEIR in May 2015. That same day Director Barbara Lee also met with representatives of the Fort Mojave Indian Tribe, Hualapai, Chemehuevi, and Colorado River Indian Tribes to also inform them of DTSC's decision to prepare an SEIR.

During preparation of the SEIR, Interested Tribes were invited to and attended a number of meetings where information was shared including: (1) a Tribal-focused scoping meeting held by DTSC on May 19, 2015, to ensure that Tribal concerns were heard confidentially, which was attended by Chemehuevi, Cocopah, Fort Mojave Indian Tribe, and Hualapai Tribes; (2) a meeting on October 5, 2015, with representatives from the Chemehuevi, Cocopah, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai to garner input regarding the SEIR; (3) a meeting on October 20, 2015, with representatives of the Chemehuevi, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai at the Fort Mojave Indian Tribe Tribal council office to discuss general consultation policy development (AB 52) and consultation with Interested Tribes, and specifically Tribal concerns related to the proposed locations of Monitoring Wells (MWs) -X and -Y; (4) a meeting on October 21, 2015, with representatives from the Fort Mojave Indian Tribe to discuss alternatives to the proposed Project and the Settlement Agreement; (5) site reconnaissance for noise and visual resources evaluation on March 23 and 24 with representatives of the Chemehuevi, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai; and (6) meetings held on July 19, 2016, and August 5, 2016, with representatives from the Chemehuevi, Cocopah, Colorado River Indian Tribes, Fort Mojave Indian Tribe, and Hualapai to discuss mitigation measure concepts for the SEIR ahead of issuing notice of availability of the Draft SEIR for public review and comment. DTSC and Tribes met on April 19 and 20, 2017 to

discuss mitigation prior to response to comments and issuance of the Final SEIR. Additionally, DTSC conducted two meetings (April 19-20, 2017, and August 14-15, 2017) with Interested Tribes between completion of the Draft and preparation of the Final SEIR to again discuss concerns regarding mitigation measures. In response, DTSC has added Mitigation Measure CUL-5 to the cumulative analysis to address Tribal concerns regarding the increase in severity of impacts to the Topock TCP, to compensate for these impacts, and that considers values ascribed to the Topock TCP by Tribes (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details).

- (6) *Recognize the unique history of California Native American tribes and uphold existing rights of all California Native American tribes to participate in, and contribute their knowledge to, the environmental review process pursuant to the California Environmental Quality Act (Division 13 (commencing with Section 21000) of the Public Resources Code).*

DTSC has been and remains committed to affording Interested Tribes the opportunity to participate in and contribute their knowledge throughout the environmental review process (and beyond) for this Project. In addition to Tribal-specific meetings that DTSC has hosted as part of the remedy selection and adoption process, as well as Final Remedy Design and Draft SEIR development as summarized above, Interested Tribes are also involved throughout the environmental investigation and cleanup of the PG&E Topock Project. Tribes participate as important stakeholders in the CWG (which began in 2000 and currently meets quarterly), the TWG, the monthly CTF, and the Topock Leadership Partnership meetings that began in 2008. Tribal involvement in the CEQA review process for this Project has been extensive and effective for purposes of suggesting changes to the Project that would avoid or substantially lessen impacts and which can feasibly be incorporated into the Project.

In addition, as part of the mitigation measure requirements in the 2011 Groundwater FEIR, DTSC required that a TRC be assembled that is staffed with technical experts that attend Project meetings, review Project documents, etc., on behalf of Interested Tribes to assist the Tribes in navigating the technical complexity of this remediation Project. Tribal participation in the Project as it relates to the TRC has been an important component of Tribal involvement in providing Interested Tribes the resources to effectively partner with DTSC in understanding how Project components might affect sensitive Tribal resources.

- (7) *Ensure that local and tribal governments, public agencies, and project proponents have information available, early in the California Environmental Quality Act environmental review process, for purposes of identifying and addressing potential adverse impacts to tribal cultural resources and to reduce the potential for delay and conflicts in the environmental review process.*

DTSC has been coordinating with Interested Tribes since the 2004 interim measures to protect the Colorado River and has continued such coordination through the present for the expressed purpose of continuing to understand Tribal concerns about project impacts such

that they can be addressed in the appropriate type of CEQA document (in this case DTSC determined an SEIR was appropriate to fully consider the effects of the Project on the environment, including resources of Tribal concern), and so that resources of Tribal value could be fully evaluated and Project impacts determined.

(8) Enable California Native American tribes to manage and accept conveyances of, and act as caretakers of, tribal cultural resources.

The majority of the Project site is on public lands managed by the BLM which, as the lead federal agency, consults with Interested Tribes pursuant to Section 106 of the National Historic Preservation Act. As a result of consultation, a Programmatic Agreement (PA) was developed to guide preservation and management of cultural resources within the Topock area. Interested Tribes are actively involved in helping manage cultural resources as a result of the BLM's Section 106 consultation and also DTSC's environmental review process. Interested Tribes are invited to participate in all archaeological, biological and floristic surveys of the Project Area. In addition, Tribes also participate in the annual historical resource condition inspection. They consult with agencies on the preparation of management and treatment plans, such as the CHPMP, Cultural and Historical Properties Treatment Plan, and CIMP. Also, as part of the mitigation measure requirements of the 2011 Groundwater FEIR and the current SEIR, DTSC requires funding for part-time project manager positions for each of the Interested Tribes to continue interactions between Interested Tribes, PG&E, and DTSC to ensure coordination during the Final Remedy Design and its construction to avoid, reduce, or otherwise mitigate impacts on resources qualifying as historical resources under CEQA. Also, DTSC has added Mitigation Measure CUL-5 to the cumulative analysis, which provides funding to Tribes for preservation, documentation, and education related to the Topock TCP (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details).

(9) Establish that a substantial adverse change to a tribal cultural resource has a significant effect on the environment.

Based on the information gathered through Tribal coordination, DTSC has determined that implementation of the Project as evaluated in the SEIR will result in a substantial adverse change to resources of value to Interested Tribes and is considered a significant and unavoidable impact.

In summary, the intent and goal of AB 52 focuses on coordination with California Native American Tribes for the purposes of identifying Tribal cultural resources that could potentially be significantly impacted by a project early in the CEQA process, including for purposes of consulting with Tribes and incorporating an analysis of impacts to those resources in the EIR, and developing appropriate mitigation measures. In this spirit, in a manner pre-dating AB 52, DTSC has acted in good faith throughout the Final Groundwater Remedy Design and SEIR processes to hear the concerns of Tribal stakeholders, including through in-person meetings and other coordination efforts. This informed the SEIR's identification of Tribal resources and perspectives in the analysis, including the analysis of impacts and mitigation.

DTSC also worked extensively with Interested Tribes throughout the design process to incorporate feasible modifications into the Final Remedy Design that would avoid or substantially lessen impacts. The Draft SEIR included feasible mitigation measures, many of which are consistent with PRC 21084.3 of AB 52. Additionally, DTSC has added Mitigation Measure CUL-5 to the cumulative analysis to address Tribal concerns regarding the increase in severity of impacts to the Topock TCP, to compensate for these impacts, and that considers values ascribed to the Topock TCP by Tribes (see Master Response 1: Cumulative Mitigation for Impacts to the Topock Traditional Cultural Property for additional details). DTSC's efforts have therefore been consistent with the overall goals and intent of AB 52.

2. The SEIR Evaluates the Whole of the Action and this Does Not Eliminate the Potential for Future CEQA and AB 52 Compliance

Some commenters raised concerns that the proposed Future Activity Allowance approach is an attempt to avoid the requirements of AB 52 for future Project components. This is not the case. Given the nature of this Project, the development of Future Activity Allowance as an element of the project description is a necessary step by DTSC to fulfill its duty as the CEQA lead agency and ensure that the CEQA process does not segment the project but addresses the whole of the action in order to conduct meaningful and thorough environmental review. See CEQA Guidelines Section 15378(a) which defines a "project" as the "whole of the action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment...". See also Master Response 2, Use of the Future Activity Allowance in the Draft SEIR, earlier, for additional details. In addition, if Project components exceed the limits of the 25 percent threshold as defined by the Future Activity Allowance, fall outside of the Project Area boundaries as defined in Figure 3-3 of the Draft SEIR, or otherwise constitute a new kind of activity from those described in the SEIR, then future CEQA actions will be required to evaluate any environmental impacts and these CEQA actions would be subject to the requirements of AB 52.

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CHAPTER 3

Agency Responses

This chapter contains the comment letters received on the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Final Groundwater Remediation Project (proposed Project) draft subsequent environmental impact report (Draft SEIR) and the California Department of Toxic Substances Control's (DTSC's) responses to significant environmental points that were raised in those comments. Each letter, as well as each individual comment within the letter, has been given an assigned letter and number for cross-referencing. Responses are sequenced to reflect the order of comments within each letter. In some instances, Master Responses presented in Chapter 2 of this final subsequent environmental impact report (Final SEIR) may be referenced in response to comments. **Table 3-1** lists all public agencies who submitted comments on the Draft SEIR during the public review period.

TABLE 3-1
LIST OF AGENCY COMMENTERS

Letter #	Commenter	Date of Comment	Comment Page Number	Response Page Number
A1	Mojave Desert Air Quality Management District Alan J. De Salvio, Deputy Director, Mojave Desert Operations	January 12, 2017	3-2	3-3
A2	Arizona State Historic Preservation Office Kris Powell	February 22, 2017	3-4	3-5
A3	California Department of Transportation, District 8 Mark Roberts, Office Chief, Intergovernmental Review, Community and Regional Planning	February 6, 2017	3-6	3-8
A4	Arizona Department of Environmental Quality Tina L. Le Page, Manager, Remedial Project Section	February 16, 2017	3-9	3-10
A5	United States Department of the Interior, Office of the Secretary, Office of Environmental Policy and Compliance Patricia Sanderson Port, Regional Environmental Officer	February 22, 2017	3-11	3-12
A6	California Department of Fish and Wildlife Richard Kim, Environmental Scientist	February 23, 2017	3-13	3-14
A7	California State Lands Commission Cy R. Oggins, Chief, Division of Environmental Planning and Management	February 27, 2017	3-15	3-19
A8	Metropolitan Water District of Southern California Bart Koch, Interim Water System Operations Assistant Group Manager	February 27, 2017	3-22	3-26
A9	Colorado River Basin Regional Water Quality Control Board Robert Purdue, Supervising Engineering Geologist	February 27, 2017	3-31	3-39

Letter A1: Mojave Desert Air Quality Management District



Comment Letter A1

Mojave Desert Air Quality Management District

14306 Park Avenue, Victorville, CA 92392-2310

760.245.1661 • fax 760.245.2699

Visit our web site: <http://www.mdaqmd.ca.gov>

Brad Poiriez, Executive Director

January 12, 2017

Aaron Yue, Project Manager
Department of Toxic Substances Control
5796 Corporate Ave.
Cypress, CA 90630

Project: Draft Subsequent Environmental Impact Report for the PG&E Topock Compressor Station Final Groundwater Remediation Project

Dear Mr. Yue:

The Mojave Desert Air Quality Management District (District) has reviewed the Draft Subsequent Environmental Impact Report (DSEIR) for the Topock Compressor Station Final Groundwater Remediation Project. The Final Groundwater Remedy Project involves in situ treatment of contaminated groundwater with freshwater flushing.

The District has reviewed the DSEIR and concurs with the summary of air quality impacts and mitigation measures associated with the proposed project. As the proposed selected remedy method may include additional remediation equipment, the District recommends the submission of applicable permit applications and the associated application and permit fees to the District as a condition of approval.

Thank you for the opportunity to review this planning document. If you have any questions regarding this letter, please contact me at (760) 245-1661, extension 6726, or Tracy Walters at extension 6122.

Sincerely,

A handwritten signature in black ink, appearing to read "Alan J. De Salvio".

Alan J. De Salvio
Deputy Director – Mojave Desert Operations

AJD/tw

PG&E Topok DSEIR

A1-001

City of Adelanto Town of Apple Valley City of Barstow City of Blythe City of Hesperia City of Needles County of Riverside County of San Bernardino City of Twentynine Palms City of Victorville Town of Yucca Valley

**Letter
A1
Response****Mojave Desert Air Quality Management District
Alan J. De Salvio
January 12, 2017**

A1-001

The commenter summarizes the objectives of the proposed Project and states that the Mojave Desert Air Quality Management District (MDAQMD) concurs with the summary of air quality impacts and mitigation measures. The commenter also recommends that, because additional remediation equipment would be used, permit applications and the associated application and permit fees be submitted to the District as a condition of approval.

MDAQMD permit requirements are described in Section 4.2, “Air Quality,” on page 4.2-21; permits regarding fugitive dust associated with the proposed Project are discussed on page 4.2-36 and mandated in Mitigation Measure AIR-1, and MDAQMD permits regarding toxic air contaminants related to the Project are discussed on page 4.2-48. Any other permits and fees required as a result of implementation of the Project would be coordinated directly with MDAQMD. For information on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) permit exemption that applies to the proposed Project, please see Section 3.10 of the SEIR.

Letter A2: Arizona State Historic Preservation Office

SHPO - 2017-1674 (134941) / 9c
ARIZONA STATE HISTORIC PRESERVATION OFFICE

Comment Letter A2



Matthew Rodriguez
Secretary for
Environmental Protection

Department of Toxic Substances Control

Barbara A. Lee
Director
5796 Corporate Avenue
Cypress, California 90630



Edmund G. Brown Jr.
Governor

January 12, 2017

Ann Howard
Arizona State Historic Preservation Office
1300 West Washington Street
Phoenix, AZ 85007



Pacific Gas and Electric (PG&E) Topock Compression Station Final Groundwater Remediation Project Draft Subsequent Environmental Impact Report

Dear Ms. Ann Howard:

The California Department of Toxic Substances Control (DTSC) is pleased to announce the availability of the PG&E Topock Compressor Station Final Groundwater Remediation Project Draft Subsequent Environmental Impact Report (Draft SEIR) for public review. The public review and comment period is from January 12, 2017 to February 27, 2017.

A copy of the Draft SEIR is enclosed for your consideration. Comments must be mailed or emailed to DTSC no later than 5 p.m. Monday, February 27, 2017 for consideration in the Final SEIR. Comments can also be submitted to DTSC on the Draft SEIR at public meetings to be held in Needles, CA on January 31, 2017 and Golden Shores, AZ on February 1, 2017. Please see the enclosed Notice of Availability for complete details on comment submission and the upcoming public meetings.

Thank you for your continued interest in the PG&E Topock Project. Your comments on the proposed Final Groundwater Remediation Project will assist DTSC in making the most informed decision possible as we consider and respond to all comments received. For more information on the proposed project, you may contact my staff, Aaron Yue, at (714) 484-5439 or email at aaron.yue@dtsc.ca.gov. Additional information on the PG&E Topock environmental investigation and cleanup project can also be found on our website at www.dtsc-topock.com.

Sincerely,

Karen Baker, Chief
Geological Services Branch

Enclosures (3)

A2-001

Chris Powell 2-22-17
for ARIZONA STATE HISTORIC PRESERVATION OFFICE
Thank you for the information.
We have no comments.

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**Letter
A2
Response**

**Arizona State Historic Preservation Office
Kris Powell
February 22, 2017**

A2-001

The commenter thanks DTSC for the information about the proposed Project and has no comments.

The comment is noted for the record.

Letter A3: California Department of Transportation

Comment Letter A3

STATE OF CALIFORNIA—CALIFORNIA STATE TRANSPORTATION AGENCY

EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION

DISTRICT 8
PLANNING (MS 722)
464 WEST 4th STREET, 6th FLOOR
SAN BERNARDINO, CA 92401-1400
PHONE (909) 383-4557
FAX (909) 383-5936
TTY 711
www.dot.ca.gov/dist8



Serious Drought.
Help save water!

February 06, 2017

File: 08-SBd-40-PM R154.639

Aaron Yue
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, 90630

Subject: Topock Compressor Station Final Groundwater Remediation – Subsequent Environmental Impact Report, January 2017

Dear Mr. Yue:

The California Department of Transportation (Caltrans) has reviewed the Subsequent Environmental Impact Report for the Topock Compressor Station Final Groundwater Remediation (Project), located in eastern San Bernardino County about 12 miles southeast of the city of Needles, California, south of Interstate 40, and one-half mile west of the Colorado River. The project proposes to construct, operate, maintain and decommission of compressor station to clean up the groundwater contamination related to the historical release of chemicals at the Station.

As the owner and operator of the State Highway System (SHS), it is our responsibility to coordinate and consult with local jurisdictions when proposed development may impact our facilities. As the responsible agency under the California Environmental Quality Act, it is also our responsibility to make recommendations to offset associated impacts with the proposed project. Although the project is under the jurisdiction of the County of San Bernardino, due to the project's potential impact to the State facilities, it is also subject to the policies and regulations that govern the SHS. We offer the following comments:

- 1) Caltrans has the discretionary authority to issue special permits for the movement of vehicles/loads exceeding statutory limitations on the size, and weight. Requests for such special permits require the completion of a Transportation Permit. Information regarding Transportation Permit application for travel within the SHS, contact:

Transportation Permits Office
P.O. Box 942874, MS #41
Sacramento, CA 94274-0001
Main Number: (916) 322-1297
<http://www.dot.ca.gov/hq/traffops/permits/contact.htm>

"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"

A3-001

A3-002

Comment Letter A3

Mr. Yue
February 06, 2017
Page 2

- 2) Issuance of a Caltrans Encroachment permit will be required for any work or activity performed within, under, or over the State Right-of-Way. All comments above should be addressed prior to proceeding with the Encroachment Permit process. Review and approval of street, grading, and drainage construction plans will be necessary prior to permit issuance. For information regarding the Encroachment Permit application and submittal requirements, contact:

Caltrans Office of Encroachment Permits
464 West 4th Street, Basement, MS 619
San Bernardino, CA 92401-1400
<http://www.dot.ca.gov/hq/traffops/developserv/permits/>

A3-003

These recommendations are preliminary and summarize our review of materials provided for our evaluation. If this project is later modified in any way, please forward copies of revised plans as necessary so that we may evaluate all proposed changes for potential impacts to the SHS. If you have any questions regarding this letter, please contact Jacob Mathew at (909) 806-3928 or myself at (909) 383-4557.

Sincerely,



MARK ROBERTS
Office Chief
Intergovernmental Review, Community and Regional Planning

"Provide a safe, sustainable, integrated and efficient transportation system
to enhance California's economy and livability"

**Letter
A3
Response**

**California Department of Transportation
Mark Roberts
February 6, 2017**

A3-001

The commenter summarizes the proposed Project's location and purpose, and states the responsibilities of the California Department of Transportation (Caltrans) under the State Highway System, and as a responsible agency under the California Environmental Quality Act (CEQA).

The comment is noted for the record.

A3-002

The commenter states that Caltrans has the authority to issue special permits for the movement of vehicles and loads exceeding statutory limitations on size and weight, which is called a Transportation Permit. The commenter indicates where information can be obtained.

The comment is noted; all special permits associated with transportation requirements would be coordinated with Caltrans.

A3-003

The commenter states that issuance of a Caltrans Encroachment permit will be required for all work performed within, under, or over a State right-of-way, and that any comments should be addressed prior to proceeding with the Encroachment Permit process. The commenter gives information about the Encroachment Permit application and submittal requirements.

The comment is noted; all special permits would be coordinated with and obtained from Caltrans.

Letter A4: Arizona Department of Environmental Quality

Comment Letter A4



Douglas A. Ducey
Governor

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY



Misael Cabrera
Director

February 16, 2017
VRP 17-176

Mr. Aaron Yue
Project Manager
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, California 90630

Re: Comments on Draft Subsequent Environmental Impact Report
Topock Groundwater Site
Needles, California
VRP Site Code: 506252-01

Dear Mr. Yue,

The Arizona Department of Environmental Quality (ADEQ) Voluntary Remediation Program (VRP) has completed review of the *Draft Subsequent Environmental Impact Report* dated January 2017, and has the following comments:

ADEQ supports the installation of groundwater monitoring wells X and Y. These wells are vital for the collection of hydrologic data both prior to, and after the installation of, the remediation system. To date, existing data of current hydrologic conditions on the Arizona side of the Colorado River are minimal. After construction and start-up of the remediation system, these hydrologic conditions may significantly change and a comparison of baseline data to start-up/operation and maintenance conditions will be necessary to foresee if corrective measures may be required. Data collected from X and Y can be used to determine capture and/or containment of the remedy or the potential change in field conditions which may negatively impact the Arizona side of the river.

Installation of these wells anytime after remediation start-up would result in an incomplete understanding of baseline hydrologic conditions and also in the overall conceptual site model, thereby resulting in an inability to foresee a negative impact to Arizona groundwater.

If you have any questions, please contact me at 520-770-3127, or LePage.Tina@azdeq.gov.

Sincerely,

Tina L. Le Page
Remedial Projects Section, Manager

A4-001

Main Office
1110 W. Washington Street • Phoenix, AZ 85007
(602) 771-2300

Southern Regional Office
400 W. Congress Street • Suite 433 • Tucson, AZ 85701
(520) 628-6733

www.azdeq.gov
printed on recycled paper

**Letter
A4
Response**

**Arizona Department of Environmental Quality
Tina L. Le Page
February 16, 2017**

A4-001

The commenter summarizes the review conducted by the Arizona Department of Environmental Quality Voluntary Remediation Program on the Draft SEIR. The commenter indicates their support for the installation of groundwater monitoring wells (MWs) X and Y (MW-X and MW-Y).

The comment is noted for the record; DTSC has analyzed the use of MW-X and MW-Y in the SEIR.

Letter A5: United States Department of the Interior

Comment Letter A5



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
Pacific Southwest Region
333 Bush Street, Suite 515
San Francisco, CA 94104

IN REPLY REFER TO:
(ER 17/0030)

Filed Electronically

22 February 2017

Aaron Yue
Project Manager
California Department of Toxic Substance Control
5796 Corporate Avenue
Cypress, CA 90630
aaron.yue@dtsc.ca.gov

Subject: Draft Subsequent Environmental Impact Report (EIR) - PG&E Topock Compressor
Station Final Groundwater Remediation Project, San Bernardino County, California

Dear Mr. Yue,

The Department of the Interior has received and reviewed the subject document and has no
comments to offer.

A5-001

Thank you for the opportunity to review this project.

Sincerely,

Patricia Sanderson Port
Regional Environmental Officer

cc: OEPC - Staff Contact: Shawn Alam, 202-208-5465; shawn_alam@ios.doi.gov

**Letter
A5
Response**

**United States Department of the Interior
Patricia Sanderson Port
February 22, 2017**

A5-001

The commenter states they have reviewed the Draft SEIR and have no comments.

The comment is noted for the record.

Letter A6: California Department of Fish and Wildlife

Comment Letter A6

From: Kim, Richard@Wildlife [<mailto:Richard.Kim@wildlife.ca.gov>]
Sent: Thursday, February 23, 2017 10:35 AM
To: Yue, Aaron@DTSC
Cc: Vigil, David@Wildlife
Subject: DSEIR

Hi Aaron,

Thank you for sending me a hard copy of the DSEIR. I reviewed the biological resources section and have no comments. I also appreciate you allowing us to be involved with the drafting of the bio. sections, before the public release of the document. As always please feel free reach out if/when issues arise.

A6-001

Sincerely,

Richard Kim
Environmental Scientist
CA Dept. of Fish and Wildlife
Inland Deserts Region 6
PO Box 2160, Blythe, CA 92226
Off: (760) 922-6783
Fax: (760) 922-5638
Richard.Kim@wildlife.ca.gov



**Letter
A6
Response**

**California Department of Fish and Wildlife
Richard Kim
February 23, 2017**

A6-001

The commenter states they have reviewed the biological resources section of the Draft SEIR and have no comments. The commenter also expresses appreciation for being involved in the drafting of the biological resources section prior to public review.

The comment is noted for the record.

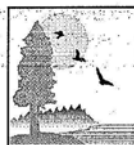
Letter A7: California State Lands Commission

Comment Letter A7

STATE OF CALIFORNIA

EDMUND G. BROWN JR., Governor

CALIFORNIA STATE LANDS COMMISSION
100 Howe Avenue, Suite 100-South
Sacramento, CA 95825-8202



Established in 1938

JENNIFER LUCCHESI, Executive Officer
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February 27, 2017

File Ref: SCH# 2008051003
PRC 8737.1

Aaron Yue
Project Manager
California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

**Subject: Draft Subsequent Environmental Impact Report (SEIR) for the PG&E
Topock Compressor Station Groundwater Remediation Project,
Adjacent to the Colorado River, near Needles in San Bernardino County.**

Dear Mr. Yue:

The California State Lands Commission (CSLC) staff has reviewed the Draft SEIR for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Groundwater Remediation Project (Project), which is being prepared by the Department of Toxic Substances Control (DTSC). The DTSC, as the public agency proposing to carry out the Project, is the lead agency under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The CSLC is a trustee agency for projects that could directly or indirectly affect sovereign lands and their accompanying Public Trust resources or uses. Additionally, because the Project may involve work on sovereign lands, the CSLC may act as a responsible agency.

A7-001

CSLC Jurisdiction and Public Trust Lands

The CSLC has jurisdiction and management authority over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways. The CSLC also has certain residual and review authority for tidelands and submerged lands legislatively granted in trust to local jurisdictions (Pub. Resources Code, §§ 6009, subd. (c); 6009.1; 6301; 6306). 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 Doctrine.

A7-002

As general background, the State of California acquired sovereign ownership of all tidelands and submerged lands and beds of navigable lakes and waterways upon its admission to the United States in 1850. The State holds these lands for the benefit of all

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people of the State for statewide Public Trust purposes, which include but are not limited to waterborne commerce, navigation, fisheries, water-related recreation, habitat preservation, and open space. On navigable non-tidal waterways, including lakes, the State holds fee ownership of the bed of the waterway landward to the ordinary low water mark and a Public Trust easement landward to the ordinary high water mark, except where the boundary has been fixed by agreement or a court. Such boundaries may not be readily apparent from present day site inspections.

A7-002

Please be advised that in 2006, the CSLC approved the issuance of a 20-year General Lease — Right-of-Way Use, Lease No. PRC 8737.1, to PG&E for the use and maintenance of groundwater monitoring wells extending from the Havasu National Wildlife Refuge and into the bed of the Colorado River (Calendar Item C41, December 14, 2006; http://archives.slc.ca.gov/Meeting_Summaries/2006_Documents/12-14-06/Items/121406C41.pdf). The Lease was subsequently amended twice in 2007 to revise lease provisions and to provide for additional well sites to be drilled from the Arizona side of the bed of the Colorado River.

A7-003

The alteration, removal, or addition to the existing wells, or proposed new construction of improvements on sovereign State-owned land, will require a lease amendment and submittal of a lease application by PG&E to the CSLC. Project elements possibly under CSLC jurisdiction include the planned California riverbank extraction wells, conveyance pipelines, and the provisional slant wells extending beneath the Colorado River. Please contact Ken Foster, Public Lands Manager (see contact information below), to further discuss these and other Project components that may be under the jurisdiction of the CSLC, or if you have any questions regarding CSLC leasing or permitting requirements.

Project Description

The Project involves the in situ treatment of contaminated groundwater with freshwater flushing and the conversion of hexavalent chromium Cr(VI) dissolved in groundwater to relatively insoluble trivalent chromium. The Project meets the DTSC's objective to clean up the groundwater contamination related to the historical release of chemicals at the PG&E Topock Compressor Station, in a manner that would be consistent with all applicable regulatory requirements and to do so within a reasonable period of time.

From the Project description, Commission staff understands that the Project would include a line of injection and extraction wells to distribute groundwater amended with a carbon substrate for treatment of Cr(VI). Commission staff understands that the following Project components may have the potential to occur on State-owned sovereign land:

A7-004

- Five river bank extraction well boreholes (plus up to four future provisional well boreholes) along the Colorado River (discussed on page 3-27);
- Slant well screens in the Colorado River (as shown on Figure 3-5); and
- Conveyance pipelines.

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The Aboveground Pipeline Infrastructure Alternative is considered the Environmentally Superior Alternative. However, the construction and long-term maintenance/operation of the alternative would result in greater risks to worker and public safety issues; therefore, this alternative would not meet the objectives of the Project.

A7-004

Environmental Review

CSLC staff requests that DTSC consider the following comments on the Project's SEIR.

Project Description

- Figure 3-5 of the Project description shows the location of a provisional "area for potential slant well screens," which if constructed would likely be within the jurisdiction of the CSLC. However, staff was unable to find an explanation for why these screens would be necessary, or a thorough description of the construction and operation of these components (e.g., types of equipment or methods that may be used, maximum area of impact, seasonal work windows, etc.), as well as the details of the timing and length of activities. If the requested descriptions can be found in existing documentation, please provide a reference. Thorough descriptions will facilitate CSLC staff's determination of the extent and locations of its leasing jurisdiction, make for a more robust analysis of the work that may be performed, and minimize the potential for subsequent environmental analysis to be required.

A7-005

Hydrology

- Section 3.6.1.2 explains that "the purpose of the Inner Recirculation Loop (IRL) is to induce a hydraulic gradient that would flush the plume toward the National Trails Highway in situ reducing zones (NTH IRZ), facilitate the cleanup of the Colorado River floodplain, and provide secondary protection for the Colorado River by controlling the migration of potential byproducts generated by the NTH IRZ." The IRL includes five river bank extraction well boreholes, and up to four future provisional well boreholes, along the Colorado River. Although the IRL system should prevent groundwater with Cr(VI) from flowing into the Colorado River, what contingency plan would be put in place should monitoring of the River show an increase in Cr(VI) or byproducts?

A7-006

Cultural Resources

- Please identify in the SEIR that the title to all abandoned archaeological sites, and historic or cultural resources on or in submerged lands of California is vested in the State and under the jurisdiction of the CSLC (Pub. Resources Code, § 6313). CSLC staff requests that DTSC consult with Attorney Jamie Garrett (see contact information below) should any cultural resources on State lands be discovered during construction of the proposed Project. In addition, CSLC staff requests that the following statement be included in the SEIR's Mitigation and Monitoring Program (MMP): "The final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the CSLC must be approved by the Commission."

A7-007

Aaron Yue

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February 27, 2017

Thank you for the opportunity to comment on the SEIR for the Project. As a potential responsible and trustee agency, the CSLC will need to rely on the Final SEIR for the issuance of any amended lease as specified above and, therefore, we request that you consider our comments prior to certification of the SEIR.

Please send copies of future Project-related documents, including electronic copies of the Approving Resolution, Final SEIR, MMP, Notice of Determination, CEQA Findings, and if applicable, Statement of Overriding Considerations when they become available. Please refer questions concerning environmental review to Cynthia Herzog, Senior Environmental Scientist, at (916) 574-1310 or via e-mail at cynthia.herzog@slc.ca.gov. For questions concerning archaeological or historic resources under CSLC jurisdiction, please contact Attorney Jamie Garrett, at (916) 574-0398 or via e-mail at jamie.garrett@slc.ca.gov. For questions concerning CSLC leasing jurisdiction, please contact Kenneth Foster, Public Lands Manager, at (916) 574-2555 or via e-mail at kenneth.foster@slc.ca.gov.

A7-008

Sincerely,



Cy R. Oggins, Chief
Division of Environmental Planning
and Management

cc: Office of Planning and Research
J. Garrett, CSLC
K. Foster, CSLC
C. Herzog, CSLC

**Letter
A7
Response**

**California State Lands Commission
Cy R. Oggins
February 27, 2017**

A7-001

The commenter states that the California State Lands Commission (CSLC) is a trustee agency for projects that could directly or indirectly affect sovereign lands and their accompanying public trust resources or uses, and that CSLC may act as a responsible agency for the proposed Project because it involves work on sovereign lands.

The CSLC is identified on page 3-100 of the Draft SEIR as a responsible agency with regard to State-owned “sovereign” lands such as the beds of navigable waters.

A7-002

The commenter provides background on CSLC’s management authority and jurisdiction over all ungranted tidelands, submerged lands, and the beds of navigable lakes and waterways since 1850, when California was admitted into the United States. The commenter provides specificity on CSLC’s fee ownership of the bed of navigable non-tidal waterways.

The comment is noted for the record.

A7-003

The commenter provides details about the 20-year General Lease for Right-of-Way Use (No. PRC 8737.1) for the maintenance of groundwater MWs in the bed of the Colorado River and indicates that construction of Project features within State-owned land would require a lease amendment.

Project features that may require a CSLC lease amendment could include River Bank Extraction Wells, conveyance pipelines, and potential Slant Well Screens extending beneath the Colorado River. In response to the comment, the Draft SEIR text on page 3-97 is revised in the Final SEIR as follows:

- Any necessary approvals or lease amendments from California and Arizona State Lands for the crossing of the Colorado River via the Arched Bridge, or resulting from construction of Project components in sovereign State of California-owned land within the bed of the Colorado River.

A7-004

The commenter reiterates Project description details and Project objectives presented in the Draft SEIR, and lists the Project features that have the potential to occur on State of California-owned land (five River Bank Extraction Wells, Slant Well Screens, conveyance pipelines). The commenter then reiterates conclusions reached in Chapter 7, “Alternatives to the Proposed Project.”

The comment is noted for the record.

- A7-005 The commenter requests additional information about the provisional slant wells in the area shown in Figure 3-5 of the Draft SEIR.
- Because these wells are provisional, the specific locations and construction details would depend on the response of the contaminant plume to the Final Remedy Design during Project operation and would be designed in the future only if needed. Provisional slant monitoring wells are described in further detail in Section 3.6.3 (Well Design Selection) of the *Basis of Design Report/Final (100%) Design for the Final Groundwater Remedy* in Appendix BOD to the SEIR. If necessary, two slant wells may be installed in response to chromium detection in Arizona and to provide additional evaluation of the remedy effectiveness. If they are needed, Section 3.6.2 in Appendix BOD to the SEIR describes the various types of design that may be employed. According to Table 3.6.1, the anticipated depths to be monitored will be 160 to 180 and 220 to 240 feet below the ground surface.
- A7-006 The commenter requests information on what actions would be taken in the unlikely event that Cr(VI) migrates beyond the Inner Recirculation Loop wells and is detected in the Colorado River.
- As shown in Figure 3-3c in the Draft SEIR, the first line of extraction wells are located along the National Trails Highway. The extraction rates at these wells in combination with the dosing rate at the injection wells can be modified in response to the concentrations detected at downgradient (dose response) wells. Further east, the River Bank Extraction Wells are located closer to the Colorado River and can be used to capture Cr(VI) and/or treatment byproducts for further control. The decision logic and operational framework for the Inner Recirculation Loop is found in Figure 2.2-4 of Appendix L, Operation and Maintenance Manual, in the SEIR Appendix BOD. Should contaminants be detected beyond anticipated locations, then the groundwater remedy would be modified using a number of options, which could include changing extraction and injection well rates, modifying the type or quantity of reductant injected into the aquifer, and adding additional extraction wells to the remedy.
- A7-007 The commenter states that historic or cultural resources on or in submerged lands of California are under the jurisdiction of the CSLC. The commenter requests that DTSC consult with CSLC's attorney should any cultural resources on State lands be discovered. The commenter requests that the following statement be included in the SEIR's Mitigation and Monitoring Program: "The final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the CSLC must be approved by the Commission."
- Treatment and disposition of historical and archaeological resources on non-Tribal and non-Federal land is governed by provisions in the Cultural Impact Mitigation Program (CIMP) Section 2.2.2, "Measures for Treatment of Archaeological Discoveries," which states that "Any

archaeological materials, including those associated with human remains, collected on non-Tribal and non-Federal land will be processed in compliance with state (Arizona or California) law at the landowner's request." Mitigation Measures CUL-1a-8q and CUL-1b/c-4b, which address historical and archaeological resources, require implementation of this provision of the CIMP. Therefore, CSLC would be consulted for any discoveries on land owned by CSLC. DTSC recognizes the benefit to clearly stating that any treatment of fossils would be recovered in coordination with the respective landowner. In response to the comment, the Draft SEIR text on page 4.4-141 is revised in the Final SEIR as follows:

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

PG&E shall comply with all requirements of the *Paleontological Resources Management Plan* (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.

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.

A7-008

The commenter thanks DTSC for the opportunity to provide comments on the Draft SEIR and reiterates comments about being a responsible/trustee agency and potential lease amendments. The commenter also requests that all copies of future Project-related documents, including approval documents and all Final SEIR-related materials, be sent to a specific staff member at CSLC. The commenter also includes resource-specific staff members that are available to answer further questions.

The CSLC will continue to remain on DTSC's mailing list for all Project related materials, and the comment is noted for the record.

Letter A8: Metropolitan Water District of Southern California

Comment Letter A8



THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Office of the General Manager

February 27, 2017

Mr. Aaron Yue
Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
Aaron.Yue@dtsc.ca.gov

Dear Mr. Yue:

Topock Groundwater Remediation Project – Comments on the January 2017 Draft Subsequent Environmental Impact Report

The Metropolitan Water District of Southern California (Metropolitan) would like to express our continued support and commitment to the groundwater remediation project at the Pacific Gas and Electric (PG&E) Topock site. We appreciate being a stakeholder in the project development process and recognize that a Subsequent Environmental Impact Report (SEIR) was necessary to evaluate potential environmental effects of the Final Remedy Design relative to the Final Environmental Impact Report, certified on January 31, 2011. Metropolitan has reviewed the January 2017 Draft SEIR and provides the comments below.

A8-001

- **Table 1-3 Mitigation Measure HYDRO-4** There are inconsistencies with the description of the proposed location of the manganese treatment system and further clarification is needed. HYDRO-4 indicates the system could be installed at the TW Bench, MW-20 Bench, and/or the Station. However, other sections including **Section 3.6.3.1** indicate the system could be installed at the TW Bench or MW-20 Bench, but *not* at the Station, the Remedy-Produced Water Conditioning Plant, or the FWPTS. Also, the SEIR refers in several places to the manganese treatment system described in Appendix J of the Final Remedy Design. However, the manganese treatment system described in Appendix J was designed to treat manganese in groundwater from a fresh water supply well in California (Park Moabi), not manganese generated as a byproduct of the groundwater treatment methodology, which is the current anticipated source. Thus, the SEIR should explain how the manganese treatment system described in Appendix J would be adjusted to account for this change in the potential source of the manganese. Lastly, the SEIR should explain how long it would take to construct the manganese treatment system and what steps would be taken to treat groundwater while the treatment system is being constructed.

A8-002

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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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- **Table 1-3 Mitigation Measure HYDRO-5c** The mitigation measure indicates that “[i]f 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 mitigation measure should be revised to be consistent with the direction provided by the State Water Resources Control Board (SWRCB) to the Department of Toxic Substances Control (DTSC) in the *Topock Compressor Station: Remedy Requirements Associated with Injection of Groundwater Containing Naturally Occurring Arsenic* letter, dated November 20, 2013. The SWRCB directed that “[i]n the event the arsenic plume exceeding the water quality objective extends 225 feet from any of the points of injection, then PG&E shall immediately cease further injection of untreated water from the HNWR-1 well and DTSC should either (i) require pretreatment to remove arsenic prior to injection or (ii) require another source of freshwater in order to meet the water quality objective.”

A8-003
- **Section 3.6.1.4** This section documents that up to six future provisional well boreholes are to be located east of the Topock Compressor Station in the southeast portion of the plume, in addition to the five East Ravine extraction well boreholes designated in the Final Remedy Design. The SEIR should consider that the location of the six future provisional well boreholes will be determined after further project evaluation and may be needed outside the designated area.

A8-004
- **Section 4.6.3** This section introduces ongoing groundwater monitoring and indicates that the most recent monitoring report is for the Fourth Quarter 2015 monitoring event. However, the section references data from more recent monitoring events in 2016. The reference to the Fourth Quarter 2015 monitoring event should be updated to reflect the most recent monitoring event evaluated for the SEIR.

A8-005
- **Section 4.9.2.1** The following sentences should be inserted at the beginning of the *Existing Pacific Gas and Electric Company Entitlements and Usage* section to provide further understanding of the Lower Colorado Water Supply Project:

“The LCWSP consists of wells which pump groundwater into the All-American Canal, permitting Imperial Irrigation District to use less Colorado River water than would be needed absent the LCWSP. Entities whose lands or interests in lands are located adjacent to the Colorado River in California who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future non-agricultural needs can use a specified amount of Colorado River water by executing a LCWSP subcontract with the City of Needles, a holder of a LCWSP contract with the Bureau of

A8-006

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Aaron Yue
Page 3
February 27, 2017

Reclamation. The amount of Colorado River water available for such needs is equal to the amount of LCWSP water pumped into the All-American Canal. The Metropolitan Water District of Southern California executed a LCWSP contract with the City of Needles and the Bureau of Reclamation to use the water unused by the other LCWSP contract holders."

A8-006

- **Section 4.9.2.1** The sentence "*However, there have been no water quality problems to date and Metropolitan Water District has agreed to establish a trust fund to protect future LCWSP users should the increased pumping result in water quality deterioration at the well fields*" under the *Future Availability of Water* section should be revised as follows to clarify the current status of the trust fund:

"However, there have been no water quality problems to date. The Imperial Irrigation District and Coachella Valley Water District have agreed to not object to the pumping of LCWSP water into the All-American Canal, due to the quality of the water, unless it is unhealthy or unsafe for the term of an intrastate agreement relating to the storage of water in Lake Mead. The Metropolitan Water District is contributing monies to a trust fund for specified purposes to protect LCWSP contract holders should the increased pumping result in LCWSP water quality deterioration."

A8-007

We thank DTSC for considering our comments on the Draft SEIR for the Topock Groundwater Remediation Project. Also, we value DTSC's extensive collaboration with stakeholders to adequately address outstanding project concerns, while ensuring that construction of the final remedy moves forward in a timely manner.

A8-008

If you have any questions, please contact me at (213) 217-5646 or bkoch@mwddh2o.com.



Bart Koch
Interim Water System Operations Assistant Group Manager

BK:MTL:ag
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THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

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February 27, 2017

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**Letter
A8
Response**

**Metropolitan Water District of Southern California
Bart Koch
February 27, 2017**

A8-001

The commenter expresses support for the proposed Project and the decision by DTSC to prepare an SEIR.

This comment is noted for the record.

A8-002

The commenter identified inconsistencies regarding the manganese treatment system. Specifically, the commenter identified inconsistencies for the proposed location of the manganese treatment system between Mitigation Measure HYDRO-4 (Transwestern Bench [TW] Bench, MW-20 Bench, and/or the Station) and Section 3.6.3.1 of the Project Description (TW Bench or MW-20 Bench, but not at the Station, Remedy-Produced Water Conditioning Plant, Contingent Freshwater Pre-Injection Treatment System).

Upon further review, since the concentration and flow rate of the manganese is unknown at this time, the location of a manganese treatment system, if needed, would be further considered in a future work plan. However, since the Dissolved Metals Removal System for well rehabilitation water discussed in Volume 3 of the Operation and Maintenance Manual (Appendix BOD to the SEIR) would potentially be a part of the Remedy-Produced Water Conditioning Plant (see Figure 3-3g), the manganese byproduct treatment would either use the Dissolved Metals Removal System if capacity is available or would be treated by a manganese treatment system preferentially co-located with 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 Interim Measure 3[IM-3] system is decommissioned/removed).

In response to the comment, the Draft SEIR text in the sections indicated below is revised in the Final SEIR as follows:

Section 3.6.3.1, page 3-76: Since the concentration and flow rate of manganese is unknown at this time, the location of a manganese treatment system, if needed, would be further considered in a future work plan. However, since the Dissolved Metals Removal System for well rehabilitation water discussed in Volume 3 of the O&M Manual would potentially be a part of the Remedy-Produced Water Conditioning Plant (see Figure 3-3g), the manganese byproduct treatment would either utilize the Dissolved Metals Removal System if capacity is available or would be treated by a separate manganese treatment system preferentially co-located with 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). The system could be located at TW bench or MW 20 Bench (after IM No.3 is decommissioned/removed), but not at the Station as part of the Contingent Freshwater Pre Injection Treatment System, the Remedy Produced Water Conditioning Plant, or the FWPTS.

Section 4.6.5.3, page 4.6-48: If the manganese is not treated at the Dissolved Metals Removal System due to capacity limitations, The the manganese treatment system would be constructed on a 2,500 square-foot concrete foundation with a building or partially sided roof (sunshade) that would could be located preferentially at the TW Bench or MW 20 Bench (after the IM 3 Facility is decommissioned/removed), but not at the Station, the Remedy Produced Water Conditioning Plant at the Station (see figure 3-3g), or the Contingent Freshwater Pre-injection Treatment System. 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).

Mitigation Measure HYDRO-4, page 4.6-58: 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 TW Bench or, MW 20 Bench, and/or the Station, 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).

The commenter identifies that the manganese treatment system described in Appendix J of the Final Remedy Design (Appendix BOD to the SEIR) is to treat manganese from a freshwater supply well in California (Park Moabi), not manganese generated as a byproduct of the groundwater treatment methodology, which is the current anticipated source. The manganese treatment system described in Appendix J of the Final Remedy Design (Appendix BOD to the SEIR) does refer to the option of using a Park Moabi well. However, the manganese treatment system described in Appendix J would also be used to treat remedy-produced water, if manganese exceeds water quality standards. In response to the comment, the Draft SEIR text on page 3-76 is revised in the Final SEIR as follows:

Available methods for the treatment of manganese and iron are described in Appendix J of the Final Remedy Design and include PG&E's preferred method of adsorptive or greensand filtration (CH2M Hill 2015a). The manganese treatment system described in Appendix J was developed as a contingency to treat manganese from a Park Moabi well if used for freshwater supply. However, the same system would also be used to treat remedy-produced water, if necessary. The method would include two banks of eight filters consisting of filter with filter media in pressure-rated housings, submersible and process pumps, piping, valves, chemical storage tanks and metering pumps for sodium hypochlorite, polymer, and sodium bisulfite, a surge tank and a decant tank. The equipment would be mounted on a 2,500 square foot concrete foundation with a building or partially-sided roof (sunshade).

The commenter asked how long it would take to construct the manganese treatment system and what steps would be taken to treat groundwater while the treatment system is being constructed. As described in Table 3-10 of the Draft SEIR, the Contingent Freshwater Treatment System would require 11 weeks to construct. If necessary, the groundwater treatment system would be shut down until the manganese treatment system is operational. Pre-engineered water filtration units for manganese removal are commercially available and may be used as a temporary treatment measure while a more permanent system is designed and installed. Bench scale and/or pilot testing may be conducted to aid in system design. Construction duration of a more permanent system would ultimately depend on the design details. Depending on the complexity, it could take several months to a few years to construct a permanent manganese treatment system after the system design is approved by the regulatory agencies and a contractor is selected for the construction.

A8-003

The commenter states that Mitigation Measure HYDRO-5 is not consistent with the November 20, 2013, State Water Resources Control Board (SWRCB) letter, which is included as Appendix WAT to the Draft SEIR.

Because of potential variability of naturally occurring metals and minerals in groundwater when subjected to hydraulic movement, it is important to verify the nature of the arsenic detection. The resampling step is to confirm that the concentration of arsenic exceeding the water quality objective is repeatable and persistent, which indicates that the plume has reached the century well. No change is made to HYDRO-5 on page 4.6-59 as a result of this comment.

A8-004

The commenter suggests that the sites of the six provisional boreholes that may be located east of the Topock Compressor Station should be determined after further project evaluation and may be outside the designated area.

DTSC agrees that location of additional wells should be considered only after a thorough evaluation of the Project needs. The current designated area describes the most likely scenario based on accessibility and possible need for additional extraction within the East Ravine area.

A8-005

The commenter notes that Section 4.6.3 of the Draft SEIR states the most recent groundwater monitoring event was for the Fourth Quarter of 2015, whereas the section references data from more recent groundwater monitoring events in 2016.

As discussed in Footnote 1 in Section 4.6.3, the second quarter 2016 monitoring event has a smaller set of sampled wells and the second quarter 2016 report does not present maps of the extent of arsenic, manganese, and iron. Consequently, the fourth quarter 2015 results are presented to provide a more extensive larger dataset and maps of the chemical extents. Further, the smaller subset included in the 2016 monitoring event did not differ significantly from the 2015 monitoring event, and the extent of the plume and level of concentrations are largely unchanged.

A8-006

The commenter requested that additional information be inserted at the beginning of the Existing Pacific Gas and Electric Company (PG&E) “Entitlements and Usage” Section 4.9.2.1.

This section of the Draft SEIR is intended to be a summary of setting conditions that were documented at the time the Groundwater FEIR was published in 2011. DTSC recognizes the importance of the background information provided by the commenter, and has therefore added a new “Lower Colorado River Water Supply” Section 4.9.3.2 to the Draft SEIR. As such, in response to the comment, the text is added on page 4.9-5 in the Final SEIR as follows:

4.9.3.2 Lower Colorado River Water Supply

The LCWSP consists of wells that pump groundwater into the All-American Canal, permitting the Imperial Irrigation District to use less Colorado River water than would be needed absent the LCWSP. Entities whose lands or interests in lands are located adjacent to the Colorado River in California who do not hold rights to Colorado River water or whose rights are insufficient to meet their present or anticipated future non-agricultural needs can use a specified amount of Colorado River water by executing an LCWSP subcontract with the City of Needles, a holder of an LCWSP contract with the Bureau of Reclamation. The amount of Colorado River water available for such needs is equal to the amount of LCWSP water pumped into the All-American Canal. The Metropolitan Water District of Southern California executed an LCWSP contract with the City of Needles and the Bureau of Reclamation to the water unused by the other LCWSP contract holders.

A8-007

The commenter requested that the text in Section 4.9.2.1 be revised to clarify the current status of the trust fund.

This section of the Draft SEIR is intended to be a summary of setting conditions recorded at the time the Groundwater FEIR was published in 2011. DTSC recognizes the importance of the background information provided by the commenter, and has therefore added a new “Lower Colorado River Water Supply” Section 4.9.3.2 to the Draft SEIR. As such, in response to the comment, the text is added on page 4.9-5 in the Final SEIR as follows:

The Imperial Irrigation District and Coachella Valley Water District have agreed not to object to the pumping of LCWSP water into the All-American Canal, due to the quality of the water, unless it is unhealthy or unsafe for the term of an intrastate agreement relating to the storage of water in Lake Mead. The Metropolitan Water District is contributing monies to a trust fund for specified purposes to protect LCWSP contract holders should the increased pumping result in LCWSP water quality deterioration.

A8-008

The commenter expresses support for DTSC’s extensive collaboration with stakeholders and acknowledges DTSC’s objective of ensuring construction of the proposed Project moves forward in a timely manner.

The comment is noted for the record.

Letter A9: Colorado River Basin Regional Water Quality Control Board



Comment Letter A9



Colorado River Basin Regional Water Quality Control Board

February 27, 2017

Aaron Yue
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

Dear Mr. Yue:

**SUBJECT: PACIFIC GAS AND ELECTRIC (PG&E) TOPOCK COMPRESSOR STATION
FINAL GROUNDWATER REMEDIATION PROJECT DRAFT SUBSEQUENT
ENVIRONMENTAL IMPACT REPORT (DRAFT SEIR)**

The Regional Water Quality Control Board, Colorado River Basin (Colorado River Basin Water Board) has reviewed the Draft SEIR for the Topock Compressor Station Groundwater Remediation Project. The Colorado River Basin Water Board has the following concerns:

On page 4.6-28, the Draft SEIR erroneously states, "[t]he section of the Colorado River adjacent to the Project Area is not listed on the impaired waters list (USEPA 2007)."

On April 18, 2015, the State Water Resources Control Board (State Water Board) approved the 303(d) List portion of the 2012 California Integrated Report for Regional Water Quality Control Boards 1, 6, and 7. On July 30, 2015, the United States Environmental Protection Agency issued its final decision approving all waters and pollutants that the State Water Board had identified for inclusion on California's 303(d) List. A reach of the Colorado River from the Nevada border to Lake Havasu is included on this list for toxicity. The source of the toxicity impairment is unknown and no Total Maximum Daily Load (TMDL) has been prepared at this time. However, the statement on page 4.6-28 should be revised to reflect the Colorado River's current impairment status.

A9-001

Further, the Colorado River Basin Water Board recommends that DTSC consider whether the Project has the potential to contribute to the toxicity impairment in the Colorado River. For example, the uncontrolled release of chemicals used in an Active Treatment System (Mitigation Measure Hydro 5) has the potential to cause or contribute to aquatic toxicity (California NPDES Construction General Permit, 2009-0009-DWQ, as amended, page 36). Additionally, sediment from construction areas can transmit pollutants with the potential to cause or contribute to toxicity, including but not limited to: metals, oils and grease.

A9-002

A9-003

If the Project has the potential to cause or contribute to the toxicity impairment in the reach of the Colorado River adjacent to the Project, DTSC should require mitigation and monitoring to specifically address potential sources of toxicity. Examples of mitigation and monitoring that

A9-004

NANCY WRIGHT, CHAIR | JOSE L. ANGEL, EXECUTIVE OFFICER

73-720 Fred Waring Drive, Suite 100, Palm Desert, CA 92260 | www.waterboards.ca.gov/coloradoriver

RECYCLED PAPER

- 2 -

December 6, 2016

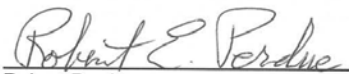
may be considered to avoid or minimize significant adverse impacts to the Colorado River's toxicity impairment include, but are not limited to:

- Update, as necessary, the SWPPP to address potential sources of toxicity;
- Revise, as necessary, the existing monitoring program to include aquatic toxicity tests on samples representative of the effluent from any active treatment systems, and the receiving water;
- If toxicity is found in any of the above samples, conduct a Toxicity Identification Evaluation/ Toxicity Reduction Evaluation (TIE/TRE) to identify and reduce responsible toxicants.

Finally, the Colorado River Basin Water Board has found a number of typographical and editorial errors. For your convenience, these edits are listed in Attachment A to this letter in a redlined/strikethrough format.

If you have any questions concerning this comment letter, please contact Robert Perdue, Supervising Engineering Geologist by phone at (760) 776-8938 or by email at Robert.Perdue@waterboards.ca.gov.

Sincerely,



Robert Perdue
Supervising Engineering Geologist
Colorado River Basin
Regional Water Quality Control Board

cc: Pamela S. Innis, DOI
Yvonne Meeks, PG&E
Frank Gonzalez, RWQCB
Adriana Nunez, OCC

Attachment A
Colorado River Water Basin Typographical/Editorial Comments

Page 10-3

- **Regional Water Quality Control Board (RWQCB):** A California agency that ~~maintains~~ **establishes** water quality standards for a specific geographic jurisdiction and enforces ~~federal and~~ state water quality laws.

Page 3-62

• **Management at IM-3 Facility and TCS Evaporation Ponds**

The DOI's ARARs for the operation of IM-3 treatment and injection facilities authorize the disposal of groundwater generated during well installation, well development, and aquifer testing, and purged groundwater and water generated in rinsing field equipment during sampling events for the area-wide groundwater monitoring program at the IM-3 Facility. The lined TCS Evaporation Ponds receive cooling tower blowdown water and evaporate the water as part of normal Station operations. Solids are removed from the Ponds periodically and as needed. The Ponds are also operating under Waste Discharge Requirements issued by the California Regional Water Quality Control (~~RWQCB~~) Board, ~~Colorado River Basin Region~~ (CRWQCB). Discharge of remedy-produced water to the ponds would require coordinating capacity with the Station operations and authorization by the RWQCB.

Comment [A1]: Global comment- Inconsistent terminology. Sometimes RWQCB is used generically to refer to all regional boards while other times it's specifically used to refer to the Colorado River Basin Water Board.

Page 3-63

• **On-Site Reuse**

Water from hydrostatic testing of conveyance piping may be reused on-site for dust control, backfill moisture control, and other similar uses in accordance with the substantive requirements of the SWRCB Water Quality Order No. 2003-0003-DWQ, Statewide General Waste Discharge Requirements for Discharges To Land With A Low Threat To Water Quality.

Page 3-99

- Additionally, the Project may obtain coverage under the General Construction Activity Stormwater National Pollutant Discharge Elimination System (NPDES) permit ~~(33 U.S. Code Section 13412)~~.
- The NPDES General Construction Permit is issued by the SWRCB. In order to obtain coverage under this permit, a Notice of Intent and Storm Water Pollution Prevention Plan must be submitted ~~to the RWQCB~~. The RWQCB may also ~~use~~ **consider** this EIR as the CEQA document for any other approvals that may be required for response and remediation activities as a responsible agency and pursuant to the CEQA Guidelines Section 15096.

Comment [A2]: 1341 is section 401 of the CWA (Water Quality Certifications)

Comment [A3]: Following Natural Resources Defense Council v. USEPA (9th Cir. 1992) 966 F.2d 1292, 1308, the GGP no longer requires the Regional Board to review and approve SWPPPs.

Pages 4.3-45 - 4.3-46

• **Clean Water Act, Section 402**

CWA Section 402 regulates ~~point source discharges, including~~ construction-related stormwater discharges, to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by the U.S. Environmental Protection Agency (USEPA). In California, the State Water Resources Control Board ~~and the nine Regional Water Boards, in this case, the Colorado River Basin Water Board, are~~ is authorized by USEPA to oversee the NPDES program ~~through the RWQCB, in this case, the Colorado River (Region 7) RWQCB.~~

Page 4.3-46

• **Clean Water Act, Section 401**

- CWA Section 401(a)(1) specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal licensing

Attachment A
Colorado River Water Basin Typographical/Editorial Comments

or permitting agency with a certification that any such discharge will not violate state water quality standards. The ~~SWRCB and the~~ RWQCBs administer the Section 401 program with the intent of prescribing measures for projects that are necessary to avoid, minimize, and mitigate adverse effects on water quality and ecosystems.

Page 4.3-49

- **Porter-Cologne Water Quality Control Act**

Under the Porter-Cologne Water Quality Control Act, waters of the state fall under the jurisdiction of the ~~SWRCB and the~~ appropriate RWQCB. ~~The SWRCB adopts statewide policy and regulations for water quality control.~~ The RWQCBs must prepare and periodically update water quality control plans (basin plans). Each basin ~~plan~~ establishes numerical or narrative water quality objectives to protect established beneficial uses, which include wildlife, fisheries, and their habitats. Projects that affect wetlands or waters of the state must meet discharge requirements of the RWQCB, which may be issued in addition to a water quality certification ~~or waiver~~ under Section 401 of the CWA.

Comment [A4]: Regional Boards do not have the discretion to waive 401 certification. State regulations require us to affirmatively approve or deny all 401 certification applications.

Page 4.5-10

- In accordance with the CERCLA exemption from permits (see Chapter 3, "Project Description," Section 3.10, and Section 4.5.4.1 of this SEIR), PG&E would not be required to submit a Notice of Intent (NOI) or a Stormwater Pollution Prevention Plan (SWPPP) ~~to the Regional Water Quality Control Board (RWQCB) for their review and approval~~ to comply with ~~the requirement of the~~ state Construction General Permit (CGP). This does not, however, remove the requirement to meet the substantive provisions of applicable laws. Therefore, as part of the Project, PG&E will develop and implement an erosion control plan that is in conformance with the substantive requirements of the CGP. Because the erosion control plan will fulfill the requirements of the CGP, it will have substantive components similar to those that would be included in an SWPPP. The general CGP requirements are summarized below.

Comment [A5]: No longer a requirement

The ~~RWQCB administers~~ ~~implements and enforces~~ the National Pollutant Discharge Elimination System (NPDES) ~~construction~~ stormwater permitting program in the Colorado River Basin region. Construction activities disturbing one acre or more of land are subject to the permitting requirements of the NPDES Construction General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (CGP; Order 2009-0009-DWQ). Project activities such as clearing, grading, stockpiling, and excavation would be subject to the statewide general construction activity NPDES permit.

Page 4.6-2

- The general description of surface water in the vicinity of the Project Area has not changed since certification of the Groundwater FEIR; for an in-depth discussion, please see the Groundwater FEIR Section 4.7.1.2.

Comment [A6]: EPA approved the 2012 Integrated Report on July 30, 2015. As part of this process the Colorado River Water segment from the Nevada Border to Lake Havasu was listed as impaired for toxicity.

For more info:
http://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir/reports/01861.shtml#30551

Page 4.6-4

- **Surface Water Quality**

Water quality samples were routinely collected between July 1997 and October 2007 from 18 surface water monitoring locations along the Colorado River during the Resource Conservation and Recovery Act (RCRA) facility investigation/remedial investigation (RFI/RI) characterization activities. The results are summarized in Table 4.7-1 in the Groundwater FEIR. The samples were analyzed for hexavalent chromium Cr(VI) and total chromium Cr(T), along with trace metals, general chemistry parameters, and perchlorate analyses. Although total chromium has been

Attachment A
Colorado River Water Basin Typographical/Editorial Comments

detected at some sampling locations in river water, Cr(VI) has only been confirmed once in the over 700 samples that have been taken. Cr(VI) was detected on September 18, 2008, at a concentration of 0.23 micrograms per liter (µg/L) in a small, placid, pond-like inlet connected to the Colorado River. No concentrations have exceeded the chemical-specific action levels developed for this Project for Cr(T) (50 µg/L), or Cr(VI) (11 µg/L) or any other surface water analytes. Colorado River sampling activities have continued under the quarterly monitoring program, discussed below in Section 4.6.3.

- **Potential Surface Water Receptors**

The beneficial uses for surface water in the Colorado River Basin are specified in the Colorado River Basin Regional Water Quality Control Board's (CRWQCB's) Water Quality Control Plan (Basin Plan; CRWQCB 2006).

Page 4.6.4

- **Federal Clean Water Act**

In accordance with the CERCLA exemption, PG&E would not be required to apply for or obtain Clean Water Act (CWA) permits as long as the Project actions are implemented in compliance with the substantive elements of the guiding principles associated with the relevant sections of the CWA, described further below.

The CWA (33 USC 1251-1387⁷⁶) is the major federal legislation governing water quality. The CWA established the basic structure for regulating discharges of pollutants into the waters of the United States and regulating water quality standards for Waters of the United States. The CWA also gave the USEPA the authority to implement pollution control programs, such as setting wastewater standards for industry. The CWA sets federal water quality standards for all contaminants in surface waters where no state-specific water quality standards have been developed or approved. Sections 401 and 404 provide for water quality standards, criteria, and guidelines. The statute employs a variety of regulatory and nonregulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. The CWA gave the U.S. Army Corps of Engineers (USACE) authority to administer the permitting for discharges of dredge and fill material into has jurisdiction over all waters of the United States, including but not limited to perennial and intermittent streams, lakes, and ponds, as well as wetlands in marshes, wet meadows, and side hill seeps.

- **Section 401 Water Quality Certification Section**

401 of the CWA states that any person applying for a federal permit or license (e.g. 404 permit or Section 10 Rivers and Harbors Permit) that may result in the discharge of pollutants into waters of the United States must obtain a state certification that the activity complies with all applicable water quality standards, limitations, and restrictions. In California, this certification is administered in California by the State Water Resources Control Board (SWRCB) via the RWQCBs. In Arizona, this certification is administered by the Arizona Department of Environmental Quality. No license or permit may be granted by a federal agency until certification required by Section 401 has been granted. Further, no license or permit may be issued if certification has been denied. An entity seeking a Section 401 water quality certification typically must obtain a CWA Section 404 permit from USACE.

Comment [A7]: It's the federal permit that drives the 401 certification not the other way around.

Page 4.6-10

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- The SWRCB letter clarifies that if these conditions occur, then PG&E must immediately re-assess its modeling calculations and identify interim actions, including the construction and activation of the contingent arsenic pretreatment system to limit the migration of arsenic.

Page 4.6-28

- Water Quality Criteria and Standards**

Under federal law, the USEPA has published water quality regulations under Volume 40 of the Code of Federal Regulations. Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, federal water quality standards consist of two elements: identified designated beneficial uses of the water body in question and criteria that protect the designated uses. Section 304(a) requires USEPA to publish advisory water quality criteria on the kind and extent of all effects on health and welfare caused by pollutants in water. The criteria must accurately reflect the latest scientific knowledge. Where multiple uses of a water body exist, water quality standards must protect the most sensitive use. In California, USEPA has granted SWRCB and its nine RWQCBs the authority to are responsible for identifying beneficial uses and adopting applicable water quality criteria objectives. In Arizona, water quality is regulated by the Arizona Department of Environmental Quality.

- Section 303(d) Impaired Waters List**

Under Section 303(d) of the CWA, states must develop lists of water bodies that would not attain water quality standards objectives for specific pollutants after implementation of required levels of treatment by point-source dischargers (e.g., municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality standards objectives. It can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality standards objectives. The TMDL prepared by the state must include an allocation of allowable loadings to point and nonpoint sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows the linkage between loading reductions and the attainment of water quality standards objectives. USEPA must either approve a TMDL prepared by the state or, if it disapproves the state's TMDL, issue its own. NPDES permit limits for listed pollutants implement waste load allocations and must be consistent with the waste-load-allocation-prescribed-in assumptions and requirements of the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated. The section of the Colorado River adjacent to the Project Area is not listed as impaired for toxicity on the impaired waters list (USEPA 2007¹⁵).

Page 4.6-31

- Porter-Cologne Water Quality Control Act**

The Porter-Cologne Water Quality Control Act (Division 7 of the California Water Code) provides the basis for water quality regulation within California and defines water quality objectives as the limits or levels of water constituents that are established for reasonable protection of beneficial uses or the prevention of nuisance. The SWRCB administers water rights, water pollution control, and water quality functions throughout the state, while the Colorado River Basin nine RWQCBs conducts planning, permitting, and enforcement activities within specific watersheds. The Porter-Cologne Act requires the RWQCBs to establish a regional basin plan with

Comment [A8]: SWRCB/RWQCB's have independent state authority to set these standards.

Comment [A9]: "Water Quality Objective" is Porter Cologne Terminology.

Comment [A10]: EPA approved the 2012 Integrated Report on July 30, 2015. As part of this process the Colorado River Water segment from the Nevada Border to Lake Havasu was listed as impaired for toxicity.

For more info:
http://www.waterboards.ca.gov/water_issues/programs/tmdl/2012state_ir_reports/01861.shtml#30551

Comment [A11]: While true, water right laws are set forth primarily in Division 2 of the California Water Code. May not make sense to include this reference to water rights in the section of the Draft SEIR discussing State Board's authorities under Porter Cologne (division 7).

Attachment A
Colorado River Water Basin Typographical/Editorial Comments

water quality objectives, while acknowledging that water quality may be changed to some degree without unreasonably affecting beneficial uses. ~~Beneficial uses, together with the corresponding water quality objectives, are defined as standards, per federal regulations. Therefore, the regional basin plans form the regulatory references for meeting state and federal requirements for water quality control.~~ Changes in water quality are allowed if the change is consistent with the maximum beneficial use of the state, does not unreasonably affect the present or anticipated beneficial uses, and does not result in water quality less than that prescribed in the water quality control plans ~~and policies. This project is within the jurisdiction of the Colorado River Basin RWQCB.~~ The basin plan for this location is discussed below.

Comment [A12]: Not quite sure what this is trying to say, but this isn't entirely accurate because federal water quality standards protect only surface waters whereas water quality objectives are in the Basin Plan for surface and groundwater.

- **Water Quality Control Plan for the Colorado River Basin**

The Colorado River Basin RWQCB, under the authority of the state Porter-Cologne Water Quality Control Act ~~and pursuant to the CWA,~~ is responsible for authorizing and regulating activities that may discharge wastes to surface water or groundwater resources. The preparation and adoption of water quality control plans (Basin Plans) are required by the California Water Code (Section 13240). According to Section 13050 of the California Water Code, Basin Plans consist of a designation or establishment for the waters within a specified area of beneficial uses to be protected, water quality objectives to protect those uses, and a program of implementation needed for achieving the objectives. ~~Because beneficial uses, together with their corresponding water quality objectives, can be defined per federal regulations as water quality standards, the Basin Plans are regulatory references for meeting the state and federal requirements for water quality control.~~

Comment [A13]: No federal authority to regulate groundwater.

Comment [A14]: See comment 12

Page 4.6-32

- The Basin Plan for the Colorado River Basin, originally adopted by the Colorado River Basin RWQCB in 1993 and last amended in ~~June 2006~~ **January 2017**, identifies the beneficial uses of water bodies and provides water quality objectives ~~and standards~~ for waters of the Colorado River Basin. The beneficial uses for ~~each type of relevant water bodies~~ in the Basin are:

~~Surface Waters of~~ The Colorado River – municipal and domestic water supply, agricultural supply, aquaculture, industrial service supply, groundwater recharge, contact and noncontact water recreation, warm and cold freshwater habitats, hydropower generation, and preservation and enhancement of rare, threatened, or endangered species

Washes (ephemeral streams) – potential² municipal and domestic, groundwater recharge, contact and noncontact water recreation, warm freshwater habitats, and preservation and enhancement of rare, threatened, or endangered species

Groundwater in the East Colorado Basin, Piute Hydrologic Unit (713.00) – municipal and domestic water supply, industrial service supply, and agricultural supply

The Colorado River Basin Plan identifies specific narrative and numeric water quality objectives for a number of physical properties (e.g., temperature, turbidity, and suspended solids), biological constituents, and COPCs, including inorganic parameters, trace metals, and organic compounds. Water quality objectives for toxic priority pollutants (i.e., select trace metals and synthetic organic compounds) are also identified in the Basin Plan.

Attachment A
Colorado River Water Basin Typographical/Editorial Comments

Page 4.6-33

See previous comments for page 4.5-10

Page 4.6-50

- **Discharge of Remedy-Produced Water to the TCS Evaporation Ponds**

As described in the Final Remedy Design and summarized above in the Approach to Analysis, although most if not all of the remedy-produced water would be injected back into the aquifer or reused in the existing Station cooling towers, the Project would discharge some remedy-produced water to the TCS Evaporation Ponds during construction, long-term operation and maintenance, and remedy decommissioning. The remedy-produced water treatment system would be constructed and used to treat the water prior to injection back into the aquifer, used in the cooling towers, or discharged to the evaporation ponds. As discussed in Section 4.6.4, "Regulatory Background," the current WDRs for the evaporation ponds do not include the discharge of the remedy-produced water to the ponds and would require a revision of the WDR and acceptance by the CRWQCB. The CRWQCB would review the pond improvements (physical and chemical changes), and approve the revised WDR if consistent with the CRWQCB standards for WDRs. The CRWQCB would use the Revised Report of Waste Discharge (PG&E 2016⁷) and this SEIR in support of their review and revision of the WDR. Compliance with the WDR requirements would ensure that the Project would not result in any new significant impacts or substantially more severe impacts on water quality than previously identified in the Groundwater FEIR and no mitigation measures would be required.

Letter**A9****Response****Colorado River Basin Regional Water Quality Control Board****Robert Perdue****February 27, 2017**

A9-001

The commenter states that the reach of the Colorado River from the California-Nevada border to Lake Havasu, which would include the section of the Colorado River adjacent to the Project Area, was included on California's 303(d) list of impaired waters for toxicity, as of July 30, 2015.

The source of the toxicity is unknown and Total Maximum Daily Load (TMDL) has not yet been developed. In response to the comment, the text on page 4.6-28 of the Draft SEIR has been modified in the Final SEIR as follows:

The section of the Colorado River adjacent to the Project Area is not listed on the impaired waters list (USEPA 2007) from the California-Nevada border to Lake Havasu, which would include the reach of the Colorado River within the Project Area, was included on California's 303(d) list of impaired waters for toxicity as of July 30, 2015. The source of the toxicity is unknown and TMDL has not yet been developed.

A9-002

The commenter requests that DTSC consider whether the Project would have the potential to contribute to the toxicity impairment of the Colorado River and cites the potential release of chemicals associated with the contingent arsenic treatment plant identified in Mitigation Measure HYDRO-5 as an example.

The arsenic treatment plant, if ever built, would be located within the general footprint of the Remedy-Produced Water Conditioning Plant within the fence line of the operating Topock Compressor Station, which is a significant distance away from the Colorado River. It would be built with similar or identical spill prevention and containment measures.

Nevertheless, there is a potential for the Project to contribute to the toxicity impairment of the Colorado River if the groundwater remedy does not operate as expected. For example, if manganese byproduct production was much larger than currently modeled, then the Project could potentially affect Colorado River water quality. However, there is a groundwater monitoring program associated with the remedy. Operational adjustments could be made to reduce or eliminate the possibility of toxicity contribution should contaminants be detected beyond anticipated levels or locations, in monitoring wells downgradient of the in situ reactive zone (IRZ). If needed, the groundwater remedy would be modified using a number of options that could include changing extraction and injection well rates, modifying the type or

quantity of reductant injected into the aquifer, and adding additional extraction wells to the remedy.

A9-003

The commenter expresses concern that sediment from construction areas may transmit pollutants with the potential to cause or contribute to toxicity, including but not limited to metals, oil, and grease.

The Project does have the potential for runoff during construction activities; however, because of the construction site runoff control measures discussed in Section 4.6.5.3, Impact HYDRO-1 and Mitigation Measure HYDRO-1, potential impacts associated with this runoff would be reduced to a less than significant level. Mitigation Measure HYDRO-1 requires the preparation and implementation of a project-specific Stormwater Best Management Practice (BMP) Plan (essentially a Stormwater Pollution Prevention Plan) that would control surface water runoff during construction activities.

A9-004

The commenter states that if the Project has the potential to cause or contribute to the toxicity impairment of the reach of the Colorado River adjacent to the Project Area, then DTSC should require mitigation and monitoring to avoid or minimize the potential adverse impact.

As discussed above in the response to Comment A9-002, components of the Final Remedy Design and Mitigation Measure HYDRO-1 have been required to address and prevent toxicity impairment of the Colorado River from the Project. The groundwater and surface water monitoring program established for the remedy should be able to identify and address any potential threats to both groundwater resources and Colorado River quality.

A9-005

The commenter provided a number of typographical and editorial corrections of a non-technical nature in an attachment titled Attachment A.

DTSC agrees with these editorial revisions and has accepted and made them in the various sections of the Draft SEIR.

CHAPTER 4

Individual Responses

This chapter contains the comment letters received from members of the public on the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Final Groundwater Remediation Project (Final Groundwater Remedy Project, or proposed Project) draft subsequent environmental impact report (Draft SEIR) and the Department of Toxic Substances Control's (DTSC's) responses to significant environmental points that were raised in those comments. Each letter, as well as each individual comment within the letter, has been given an assigned letter and number for cross-referencing. In some instances, Master Responses presented in Chapter 2 of this final subsequent environmental impact report (Final SEIR) may be referenced in response to comments. Responses are sequenced to reflect the order of comments within each letter. **Table 4-1** lists all individuals who submitted comment letters on the Final Groundwater Remedy Project, including the individual comments submitted at the two public hearings, during the public review period. This chapter includes the transcripts of the comments on the Draft SEIR that were provided during the two public hearings and responses to those comments. The parts of the transcripts that did not include public comments were removed in the attempt to be more concise, but the full transcripts are included in the public record and in Appendix TRANS to this Final SEIR.

TABLE 4-1
LIST OF INDIVIDUAL COMMENTERS

Letter #	Commenter	Date of Comment	Comment Page Number	Response Page Number
I1	Ron Letcher	January 12, 2017	4-2	4-3
I2	John K. Ziegler	January 14, 2017	4-5	4-6
I3	Russell Morse	February 7, 2017	4-7	4-8
I4	Ruth Musser-Lopez	January 31, 2017	4-10	4-17
I5	Don Oswell	February 1, 2017	4-22	4-24
I6	Cox, Castle & Nicholson LLP, on behalf of Pacific Gas and Electric Company (PG&E)	February 27, 2017	4-25	4-46
I7	Ruth Musser-Lopez	February 27, 2017	4-98	4-119

Letter I1: Ron Letcher

Comment Letter I1

-----Original Message-----

From: Ron Letcher [<mailto:teamletcher@msn.com>]

Sent: Thursday, January 12, 2017 6:59 AM

To: Yue, Aaron@DTSC

Subject: Contamination

Mr. Yue; after reading about the upcoming public meeting regarding water contamination in the Topock/Golden Shores area, I am very alarmed. My wife and I are on the brink of signing a purchase agreement for a home in Golden Shores. This home is on a city water service, and is not equipped with a water filtration system of any kind.

I am retiring this year, and this home is intended to be our final home purchase. It is disturbing to hear that the ground water is contaminated by a PG&E compressor station. This brings to mind the whole hex-chromium pollution issue that went on in Hinckley Ca. I need to know if the city water in Golden Shores is safe to consume, or if I'm investing our retirement savings into a home that will be worthless later because of contamination. Can you explain to me the details of this water safety issue? Thank you, Ron Letcher. 707-718-0026.

teamletcher@msn.com Sent from my iPhone

I1-001

**Letter
I1
Response****Ron Letcher
January 12, 2017**

I1-001

The commenter expresses concern over the groundwater contamination in the Topock/Golden Shores area, particularly related to purchasing a home in the area.

DTSC appreciates the commenter's question, and the fact that the commenter took the time to share their concerns with DTSC. DTSC wishes to thank the commenter for participating in this process and provides the response below to address the commenter's questions and concerns. DTSC responded to the commenter in an email on January 12, 2017, as represented below, stating the Golden Shores community, as well as its water supply, is upgradient of the groundwater contamination at the Topock site and therefore not affected by the groundwater contamination associated with the proposed Project. This is based on years of active groundwater and surface water sampling and monitoring. The eastern boundary of the contaminated groundwater plume is shown in various figures throughout the Draft SEIR (see for example Figure 3-3) that illustrate that the contamination has been controlled within California and has not reached the Colorado River or Golden Shores, Arizona, or the community's water supply. DTSC also suggested that the commenter reach out to Golden Shores Water Company and the Arizona Department of Environmental Quality regarding groundwater quality in Golden Shores.

From: Yue, Aaron@DTSC <Aaron.Yue@dtsc.ca.gov>
Sent: Thursday, January 12, 2017 10:52 AM
To: 'Ron Letcher'
Cc: Nichole Osuch, ADEQ (nso@azdeq.gov)
Subject: RE: Contamination
Attachments: Topock_Flier_Color_12-19-16 Final.pdf; Figure1-2_Q2016.pdf; Composite_Plume_4Q2014.pdf

Dear Mr. Letcher,

Thank you for reaching out to me and congratulations on your impending retirement. The California Department of Toxic Substances Control (DTSC) is a California government agency overseeing the investigation and cleanup of the PG&E Topock Compressor Station. We have spent years investigating and mapping the extent of the hexavalent chromium plume attributable to PG&E. This was not done randomly but by systematically installing groundwater monitoring wells (see attached map of monitoring well locations and frequency) and observing detected concentrations over time at various depths. Since initiating the investigation in 1996, we have mapped the contamination and have been monitoring it carefully. I have attached a figure depicting the boundary of the contamination from PG&E's historical operation based on our investigation. Golden Shores is located several miles from the boundary of the PG&E hexavalent chromium plume contamination. In 2006, PG&E began capturing the plume under DTSC's direction to ensure that the plume does not migrate further towards the Colorado River.

Please note that the Colorado River divides California and Arizona. Although political boundaries do not dictate the spread of contamination, in this case, the river does have a major effect because groundwater on both sides actually flows toward the river. Golden Shores is located up gradient (upstream), and on the opposite side of the river from the contamination. These factors as well as our monitoring well data over the years allowed us to conclude that contamination from PG&E did not impact the Golden Shores water supply. Please be aware, however, that there are many factors that can affect water quality aside from contamination by local industries. Water quality varies with naturally occurring minerals and metals from the water source, as well as the water delivery system. I would recommend that you contact your local water supplier (Golden Shores Water Company) about the water quality that is being delivered to your property and/or have your water tested to ensure it is within regulatory standards for drinking water. You may also contact the Arizona Department of Environmental Quality with environmental concerns regarding Golden Shores. Finally, if you want to find out more about the PG&E site, DTSC has set up a website at www.dtsc-topock.com to provide information on the PG&E cleanup project. On the website, you can download and review groundwater and surface water monitoring reports and learn about the latest activities on that project.

I believe you are doing the right thing by reaching out and learning about the environment of your future home. Finally, please join us in an open house regarding the investigation and cleanup that is taking place at the PG&E Topock facility. The open house will provide an opportunity for interaction and discussion about what we know of the PG&E site. It will be hosted by DTSC in Needles, California on Tuesday, January 31, 2017 and Golden Shores on Wednesday, February 1, 2017. The open house will be from 5:30 to 6:30 local time followed by a public hearing on the available groundwater remedy Subsequent Environmental Impact Report. Please see the attached flier for detailed information.

With Regards,

Aaron Yue
 Project Manager
 Department of Toxic Substances Control

Letter I2: John K. Ziegler

Comment Letter I2

1-14-17

Hi Aaron,

Just received the notification about the DRAFT SEIR for Topock and would like to know if you could send me a printed copy of this report, as I do not have a computer and am very interested in environmental issues in California. If the report isn't too big or if you would have a condensed version, that would be fine.

I2-001

Hope you had a nice holiday season and thanks!

Sincerely,



John K. Ziegler
20 Hillery Court
Apt. A41
York, PA 17402-7891

**Letter
I2
Response**

**John K. Ziegler
January 14, 2017**

I2-001

The commenter requests a printed copy of Final Groundwater Remedy Project Draft SEIR.

DTSC wishes to thank the commenter for participating in this process. DTSC responded to the commenter in a letter on February 17, 2017, with a hard copy of the “Chapter 1, Summary” to the Draft SEIR, which includes a summary of the proposed Project and all impacts and mitigation measures included in the Draft SEIR, as well as links to the Draft SEIR on the Project website.

Letter I3: Russell Morse

Comment Letter I3

Russell Morse Sr.

4861 Riverview dr
Phone (951) 682-6055
Rmorse7290@aol.com

February 7, 2017

Arron Yue ,
Project Manager
Department of Toxic Substance Control
5796 Corporate Ave., Cypress CA 90630
Fax: Fax 714-484-5329

Dear Sir,

I have the Property in upper portion of Section 16 on the Bureau of land Management land maps, which is the right next to Section 9 (The PG&E Compressor Station) which is listed as a Hazard Waste Site, My property is with in a mile from this site and my property consist of water rights and I feel that the contamination could migration into land or ground water. The significant effects on the environment would also affect me and my 20 acre property. The Value of my property is also going to be affected. I would like to know if any criminal charges will be brought against PG &E for the contamination.

I3-001

Signature:

Russell Morse

**Letter
I3
Response**

**Russell Morse
February 7, 2017**

I3-001

The commenter expresses concern that the value of his property, located within one mile south of the PG&E property, might be decreased due to the listing of the PG&E Topock Compressor Station (Station) as a hazardous waste site and due to contamination migrating to his property. The commenter stated his property is in the upper (assumed north) portion of Section 16, which, according to U.S. Bureau of Land Management (BLM) maps, is about one mile southwest of the Station.

DTSC appreciates the commenter's thoughtful questions and that the commenter took the time to share their concerns with DTSC. DTSC wishes to thank the commenter for participating in this process and provides the response below to address the commenter's questions and concerns.

Soil contamination at the Station has been adequately characterized and the soil data collected does not suggest that the commenter's property could be affected by the remediation activities at the Station. There is, therefore, no evidence gathered from the soil and groundwater investigations, to date, that the commenter's property has, or will be, affected by the contamination at the Station.

The groundwater hexavalent chromium plume attributed to releases in the 1950s and 1960s from the Station is not known to exist in close proximity to the commenter's property. As shown on Figure 3.6 and Figures 4.6-4, 4.6-5, and 4.6-6 of the Draft SEIR, the approximate extent of hexavalent chromium contamination from PG&E resides within about 3,000 feet of the Station. As shown in Figure 4.6-2 and explained in Section 4.6.3.1 of the Draft SEIR, the direction of groundwater flow in the "Shallow Zone" is east from the Station toward the Colorado River except where extraction wells just northwest of the railroad river crossing are removing groundwater. Furthermore, the distribution of the highest chromium contaminant concentrations begins on the Station and extends to the northeast suggesting that a northern component of groundwater flow away from the commenter's property existed in the past. In summary, the flow direction of the contaminated groundwater plume is not toward the commenters' property. Additionally, a groundwater computer model utilized to simulate groundwater flow and contaminant transport during the anticipated 30-year life of the groundwater remedy does not indicate that the contaminant plume will migrate toward the commenter's property.

Groundwater and surface water monitoring will continue as part of the Project to ensure that flow direction and contaminant transport are under control and behave as anticipated.

No criminal charges are warranted as PG&E is working cooperatively with DTSC under a Corrective Action Consent Agreement to clean up the contamination.

Letter I4: Ruth Musser-Lopez

Comment Letter I4

PUBLIC MEETING January 31, 2017

29

1 Now, we will receive the verbal comments; but
 2 before we do that, I -- I want to check. I have received
 3 only one card.

4 Does anybody else have a card right now? You
 5 can please give it to Joan Isaacson.

6 (No audible response.)

7 MS. AKULA: Okay. So I have only one. Okay.

8 There's only one card, so when I call your
 9 name, Joan will bring a microphone to you.

10 Please state your --

11 MS. MUSSER-LOPEZ: I don't need a microphone.

12 MS. AKULA: The court reporter and -- They
 13 would need it so they can capture your comments, so if
 14 you could please state your name and spell your name.

15 MS. MUSSER-LOPEZ: Okay.

16 MS. AKULA: And state the comment very clearly.
 17 And you have to speak slowly so she can capture your
 18 comment.

19 MS. MUSSER-LOPEZ: Okay.

20 MS. AKULA: Okay?

21 MS. MUSSER-LOPEZ: Thank you. My name is Ruth,
 22 R-u-t-h. My last name is hyphenated. It's Musser,
 23 hyphen, Lopez. M-u-s-s-e-r, hyphen, L-o-p-e-z. I live
 24 in Needles, California.

25 I think the card that I gave you had a couple

I4-001

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PUBLIC MEETING January 31, 2017

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1 questions on it, but I have some more questions. .

2 First of all, some of you were here when I
3 objected to the idea that Needles wasn't impacted by this
4 project.

5 Unfortunately, that attitude that was expressed
6 during the presentation has been a problem with this
7 project from day one.

8 We're -- We're like we don't exist; and the
9 fact that I never got -- received anything in the mail
10 when I attended the first meeting and had my name there
11 with my address. I've never received anything.

12 Everything I've received has been through
13 somebody in Needles who knows that I'm interested. I
14 received notice of this meeting because of somebody in
15 Needles who sent me the notice when they found out I
16 wasn't getting them.

17 Our landfill totally costs the community, and
18 we've never been compensated; the community has not.
19 Maybe a few people in city hall have, but the people of
20 Needles still don't have a landfill.

21 The -- The maze; there's always been a
22 controversy, and that's what -- that's always been
23 something that has brought visitor tourism.

24 Never once did you talk about the land status,
25 if there's going to be changes to the land status on

I4-001

I4-002

I4-003

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1 these properties down here, although I have read some
2 that there might be -- some indication that there might
3 be a change of land status and ownership.

4 We have no idea if that -- I have had
5 experience where visitors have not been allowed to go
6 there, to that historic -- prehistoric controversy site;
7 a controversial site has that has been bringing tourism
8 to this area for over a hundred years.

9 And now, there's not even a mention made why
10 it's not open to the public to look at? That impacts us.
11 That impacts our tourism industry.

12 And whether you think it's prehistoric or
13 historic, it does not matter. It impacts us because that
14 is tourism.

15 Plus the beauty of, you know, to us, the
16 locals, who enjoy visiting, getting out to the desert and
17 visiting, the wonderment and amazement. They don't call
18 it a maze for nothing. It's amazing.

19 Who has the power to prove -- approve this
20 plan? Who stamps their name on it and approves it? We
21 do not know that. Who's the one who can say yea or nay?

22 I see Aaron -- Aaron's name there, but is he
23 the one who signs off on the plan and decides? Who --
24 Who's the one who can give an extension on the comment
25 period?

I4-003

I4-004

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PUBLIC MEETING January 31, 2017

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1 You can't tell us that?

2 MS. BAKER: Actually, I am the one who will
3 sign off on the project.

4 MS. MUSSER-LOPEZ: And what is your name?

5 MS. BAKER: I'm Karen Baker with Department of
6 Toxic Substance Control.

7 MS. MUSSER-LOPEZ: Okay. And who pays for all
8 the testing? Does the public pay for all the testing?
9 What is the impact of this project to the taxpayers?
10 Does PG&E raise its rates in order to remediate this
11 project?

12 Were the local residents of Needles involved in
13 the -- in the design? I know maybe part of the local
14 community. You said that the Tribes, but there's others
15 in the community. Were they a part of this design?

16 What did you learn from the City of Needles
17 itself, from the leaders there?

18 I personally would like to have more
19 information, and I think that our -- our council would
20 like to have a presentation; and, especially, I could not
21 quite understand what you were saying about the whole
22 remediation scheme.

23 It was very confounding and confusing to me,
24 the way it was explained; but it looked to me like -- and
25 I -- I wish you could tell me if I'm wrong, but you're

I4-004

I4-005

I4-006

I4-007

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1 not saying -- can't even answer our questions here.

2 But it sure looked like to me that you're
3 recycling this right back into the dirt you're taking it
4 out of.

5 MS. FARRELL: Maybe --

6 MR. YUE: Yeah, maybe after.

7 MS. MUSSER-LOPEZ: I'm gonna -- We're
8 remediating -- remediating using soil that was clean
9 once.

10 MS. AKULA: So --

11 MS. MUSSER-LOPEZ: This whole area has been
12 screwed up, and now you're gonna just recycle it through
13 so that it eventually just concentrates right here in
14 that area? And how are you gonna -- Are you ever gonna
15 be able to take out -- It's like a cat in a hat. Where
16 do you take this stuff?

17 So what -- Or does it just stay and here and
18 we're stuck with it? And what about the rain? What
19 about the water? What about the hundred year floods? Is
20 that all in there?

21 I -- I just got this volume, huge volume.

22 I want to put on the record too that I object.
23 I object to -- to the archaeological firm that did -- I
24 don't know if they did this last -- if they did any more
25 work; but Earth Works.

I4-007

I4-008

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1 That group came up to Needles, and they were
2 doing some inventory along Route 66 where we had the I-40
3 interconnect project, building it right now.

4 Totally ignored all the historic properties
5 alongside the route, the settings of which are being
6 impacted as we speak. You can go there today. Historic
7 wall taken down right across from Jack-in-the-Box.

8 They ignored every hundred year -- older than
9 hundred year -- hundred years and more homes that are
10 that old. Okay?

11 And they -- they totally just ignored that.
12 They made a deal. They said, Oh, we'll just look at the
13 road. We'll just look at the side of the road.

14 You can read it in their report. That is not
15 professional archaeology work. It doesn't even comply
16 with -- with the law.

17 It doesn't comply with CEQA. It doesn't comply
18 with NEPA. How can we trust this -- this company down
19 there -- doing that work down there?

20 I don't -- I don't trust a word they say.
21 They're gonna make a deal with the managers? How much
22 did they get paid to make deals like that?

23 They got to knock -- They -- They wouldn't --
24 Normally have to do a task care report, a historic
25 architectural building survey and report, on every single

I4-008

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PUBLIC MEETING January 31, 2017

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1 one of those hundred-year-old homes.

2 We have an old mansion there on the corner.

3 You can go up there. The green mansion. It's built out
4 of the old technology used by the Mojaves. It's a
5 arrowweed structure, and that was a -- a building that's
6 going to be impacted, the setting's gonna be impacted.

7 You know what they did? The city and this
8 organization sent out -- mailed out requests for comment
9 to every Tribe, excuse me, between here and Timbuktu,
10 every Tribe, and did not once come to the property owners
11 living on that project site. Not once did they contact
12 the property owners whose properties were gonna be
13 impacted.

14 That arrowweed home is like three stories.
15 There's nothing like it that we know of. It goes back to
16 traditional architecture of the Mojave Indian Tribe. It
17 wasn't even documented. This is that company, same
18 company that did your study. Why should we believe them?

19 I object to the scoping, 'cause you didn't send
20 it out to people in Needles. I want to -- I want you to
21 extend the time, and I think you need to go back and
22 start over.

23 That's all I got to say.

24 MS. ISAACSON: Thank you. Are there any
25 other -- Would anyone else like to speak? We don't have

I4-008

I4-009

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**Letter
I4
Response****Ruth Musser-Lopez
January 31, 2017**

I4-001

The commenter states that the City of Needles will be impacted by the proposed Project, and expresses concern that the commenter never received notice in the mail about the proposed Project and Draft SEIR.

DTSC appreciates the commenter's thoughtful questions and that the commenter took the time to share their concerns with DTSC. DTSC wishes to thank the commenter for participating in this process and provides the responses below to address the commenter's questions and concerns. Needles is approximately 12 miles north of the Project Area and is also upgradient of the groundwater contamination at the Topock site and therefore not affected by the groundwater contamination associated with the proposed Project. This knowledge is based on years of active groundwater and surface water sampling and monitoring. The boundary of the contaminated groundwater plume, which is the object of this investigation and cleanup project, is shown on various figures throughout the Draft SEIR (see for example Figure 3-3) that illustrate the extent of the known hexavalent chromium release and contamination from the PG&E Topock Compressor Station (Station). DTSC cannot comment whether there are other sources or release mechanisms (i.e., the Needles Landfill) that could potentially impact the City of Needles. Since DTSC does not have the authority or jurisdiction over the use and closure of the Needles landfill, DTSC suggests that the commenter inquire with the Colorado River Basin Regional Water Quality Control Board (RWQCB) and the County of San Bernardino for information associated with the closed landfill.

With respect to the hexavalent groundwater plume at the Station, DTSC has concluded that the contamination released from the Station as a result of PG&E's historic operation has not impacted the City of Needles.

DTSC wishes to thank the commenter for their active involvement on the proposed Project and for attending the public meeting. We regret that the commenter did not receive DTSC's direct mailing of the Notice of Availability (NOA) at the beginning of the 47-day Draft SEIR comment period on January 12. However, immediately upon request from the commenter on January 26, 2017, DTSC did send a hard copy of the Draft SEIR via overnight mail, which the commenter received on January 27, 2017, according to FedEx records. Regarding the comment period extension, in an email from DTSC dated February 28, 2017, DTSC agreed to accept additional comments no later than March 8, 2017, giving the commenter the same 47-day review period as was given for the Draft SEIR. A letter was sent by Ms. Musser-Lopez dated February 27, 2017, within the comment period (see letter and responses to Letter I7 below). DTSC has updated the master contact list for this Project to

ensure the commenter receives all general public CEQA-related notices in the future.

I4-002

The commenter states that residents of Needles have not been compensated for the closed landfill and that the City of Needles does not have a landfill.

As stated above, DTSC cannot comment whether there are other sources or release mechanisms (i.e., the Needles Landfill) that could have potentially impacted the City of Needles. Since DTSC does not have the authority or jurisdiction over the use and closure of the Needles Landfill, DTSC suggests that the commenter inquire with the Colorado River Basin RWQCB and the County of San Bernardino for information associated with the closed and existing landfill.

I4-003

The commenter states that the Topock Maze is controversial and has brought tourism to the area, but that there have been instances where people have not been able to visit the Topock Maze. The commenter also states that no mention was made about any land status change to the properties in the Topock area, and questions why the Topock Maze is no longer open to the public, and says that it affects the tourism industry regardless of whether it is historic or prehistoric.

The history of the Topock Maze can be found in Section 4.4, “Cultural Resources,” of the Draft SEIR. The Topock Maze is located on lands owned and managed by the federal government, and as such it is the entity that can either allow or restrict access. Access to the Topock Maze and associated roadways has not been modified as a result of the proposed Project and DTSC does not have authority to grant or deny access to federal property.

I4-004

The commenter questions which entity has the power to approve or deny the proposed Project and to grant an extension of the Draft SEIR comment period.

As indicated in the response provided by DTSC at the public hearing, DTSC is the entity responsible for approving the Project and granting comment period extensions, and Karen Baker serves as the DTSC Branch Chief of the Office of Geology and the lead person for the project approval.

I4-005

The commenter questions who pays for the [remediation-related] testing, and whether it is taxpayers or whether PG&E raises rates.

In response, PG&E is the party responsible for the cleanup cost. DTSC does not know and is not in control of the mechanism for PG&E to cover the cost of their cleanup action. For informational purposes, the Final Remedy Design does include a cost estimate for the remedial action; please see Appendix H to the Final Remedy Design (within Appendix BOD to this SEIR).

I4-006

The commenter questions whether residents of Needles were involved in the development of the Final Remedy Design, similar to how the Tribes were involved. The commenter also questions what information was gleaned from the City of Needles regarding the Final Remedy Design.

The general public and the City of Needles were kept informed of the progress of the investigation, remedial alternatives evaluated, remedy selected, and the general remediation approach through DTSC's factsheets issued on July 2009, March 2010, June 2010, January 2012, July 2014, September 2015, and November 2016. DTSC also held open houses/public meetings in May 2008, June 2010, December 2012, July 2014, May 2015, and January 2017. The public and the City of Needles were given opportunities to provide comments during the comment periods for the environmental impact report (EIR) Notice of Preparation, Draft EIR review, SEIR Notice of Preparation, and Draft SEIR review. Responses to all comments received are part of the respective final documents.

I4-007

The commenter states that the information presented at the public hearing was confusing and that DTSC did not answer any questions posed at the public hearing. The commenter further states that it seems like the Project is recycling the soil for cleanup, and questions whether the material stays at the site and whether the contamination is then impacted by the rain and flood events.

DTSC apologizes that the commenter did not understand the meeting format and found the remedial approach confusing. As explained at the beginning and repeated during the public meeting, there were two parts to the meeting held on January 31, 2017, which consisted of an open house and a public hearing. The open house portion was an open format that encouraged information sharing and discussion between DTSC, technical experts, and the public. This was the format in which DTSC staff was available for question and answer. The purpose of the public hearing portion of the meeting was to provide a more formal presentation of the Project by DTSC and to receive public comments that were documented by a court reporter for the record, so that DTSC as the lead agency could prepare comprehensive responses in the Final SEIR.

DTSC hopes that the commenter's discussion with Mr. Aaron Yue, DTSC project manager, after the public hearing portion of the meeting was helpful to the commenter's understanding of the remedy approach. Regarding the handling of soils, any soils that would be excavated as a result of Project Activities within the Project Area are sensitive to the Tribal Nations and contributes to their ties to the Traditional Cultural Property (TCP). Therefore, the excavated soil would be taken to the on-site Soil Processing Area/Clean-Soil Storage Area (see pages 3-48 and 3-51 of the Draft SEIR for a description) for further evaluation. There is the potential that some excavated soils might contain contaminants of concern. The Soil Management Plan included in Appendix BOD to this SEIR (*Construction/Remedial Action Work Plan for the Final Groundwater Remedy, PG&E Topock Compressor Station*,

Needles, California (C/RAWP, Appendix L, Soil Management Plan)) describes the handling, sampling, and disposal procedures for both contaminated and uncontaminated soil. Figure 4.5-1 of the Draft SEIR illustrates those areas of known soil contamination. All soils that are excavated as part of the Final Groundwater Remedy Project would be screened for hazardous materials and would be handled appropriately as defined by waste-characterization sampling results. If soils are shown to have contamination that defines the material as hazardous, the hazardous materials would be containerized, labeled, and transported to an off-site disposal facility permitted to accept hazardous material. Hazardous materials would not be recycled on-site. However, soil that is not contaminated will be retained for future use within the general area.

I4-008

The commenter objects to the use of the archaeological firm responsible for work at the Topock site [Applied Earthworks] and gives reasons based on past experience. The commenter goes on to explain the firm's involvement in the archaeological site evaluation of a green mansion and arrowweed home in Needles.

DTSC appreciates the commenter's thoughts and experience with Applied Earthworks. However, DTSC would like to note that Environmental Science Associates (ESA), not Applied Earthworks, is the consulting firm responsible for the independent evaluation and preparation of the Draft SEIR cultural resources section. Although Applied Earthworks is hired by PG&E to conduct the necessary site surveys and report on the conditions of the cultural resources, DTSC notes that Applied Earthworks does meet the definition of a Qualified Cultural Resources Consultant as defined in Mitigation Measure CUL-1a-3 from the 2011 Groundwater FEIR, which states: "The Qualified Cultural Resource Consultant shall be a person who is acceptable to DTSC and who is also a qualified archaeologist with a graduate degree in archaeology, anthropology or closely related field, plus at least 3 years of full-time professional experience in general North American archaeological research and fieldwork, with expertise/experience in the Southwest preferred." The commenter's concerns regarding Applied Earthworks have been forwarded to PG&E. DTSC is unfamiliar with the findings by Applied Earthworks on the green mansion and arrowweed home in the City of Needles. Since DTSC does not have involvement with that project under the City of Needles' direction, DTSC cannot comment on the findings by Applied Earthworks and DTSC cannot reject PG&E's use of Applied Earthworks based on the statements made by the commenter.

I4-009

The commenter objects to the scoping process conducted for the Project because notice was not sent to people in Needles, and requests a comment period extension. The commenter further states that DTSC needs to start the Project over.

The commenter is referred to response to comment I4-001 regarding the scoping process and comment period extension. Additionally, public notices for the comment period and the scoping meeting for the SEIR

were provided, in addition to direct mailing, at the Needles Public Library as well as published in the Needles Desert Star newspaper, which is circulated within the City of Needles. DTSC believes it has met the notice obligations required under the CEQA Guidelines Section 15087 and no further action is necessary.

Letter I5: Don Oswell

Comment Letter I5

PUBLIC MEETING February 1, 2017

29

1 All comments must be received by DTSC or
2 postmarked by 5 p.m. Monday, February 27, 2017.
3 DTSC will review and evaluate the comments.
4 DTSC will respond to all the comments, and these
5 responses will be included in the final SEIR.
6 The SEIR can be -- You can access it at the
7 DTSC website, www.dtsc-topock.com; and the SEIR is also
8 available at the seven locations listed on the slide; and
9 the addresses, if you need them, we have them on a fact
10 sheet, and we can provide it to you.
11 Okay. Next slide.
12 As I mentioned earlier, you may submit your
13 written comments today or mail it or Email it. Today we
14 will not respond to any verbal comments.
15 That ends our presentation and now we will
16 receive your verbal comments.
17 Do we have any cards, Joan?
18 (No audible response.)
19 MS. AKULA: Does anybody have any comments?
20 Questions?
21 UNIDENTIFIED SPEAKER: Do you have an estimated
22 or target date for completion where this will all be
23 taken care of?
24 MS. AKULA: I'm sorry. Do you have a comment
25 card? We will not be able to respond to your comments.

I5-001

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PUBLIC MEETING February 1, 2017

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1 We --

2 UNIDENTIFIED SPEAKER: Okay. Okay. Okay.

3 Okay.

4 THE COURT REPORTER: Can I have your name, sir,
5 please?

6 (No audible response.)

7 THE COURT REPORTER: Sir, can I get your name?

8 UNIDENTIFIED SPEAKER: Don Oswell (phonetic).

9 MS. AKULA: Nobody has comments?

10 (No audible response.)

11 MR. YUE: Maya, since there are no -- There is
12 a comment card.

13 MS. AKULA: No, they don't have.

14 MR. YUE: Since there's no -- no additional
15 comments, let me just respond to that quick question that
16 you've asked, how long will this take.

17 We anticipate the cleanup action to take
18 between 30 to 50 years; and after that particular cleanup
19 action, we're gonna continue to monitor the site for
20 another 10 to 20 years.

21 MS. AKULA: Okay. Nobody else has comments;
22 right?

23 (No audible response.)

24 MS. AKULA: Next slide.

25 I would like to remind you again the public

I5-001

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**Letter
I5
Response**

**Don Oswell
February 1, 2017**

I5-001

The commenter asks whether DTSC has an estimated target date of completion of the remediation activities.

DTSC wishes to thank the commenter for participating in this process. As indicated in the response provided by DTSC at the public hearing, as well as the information provided in the SEIR (see page 3-86 of the Draft SEIR), the groundwater remediation is anticipated to last 30 to 50 years, with monitoring of the groundwater plume to occur for 10 to 20 years.

Letter I6: Cox, Castle & Nicholson LLP, on behalf of PG&E

Comment Letter I6



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Michael H. Zischke
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File No. 055016

February 27, 2017

VIA E-MAIL AARON.YUE@DTSC.CA.GOV

Mr. Aaron Yue
Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630

Re: Draft Subsequent Environmental Impact Report for the Topock Compressor Station Final Groundwater Remediation Project

Dear Aaron:

The Pacific Gas & Electric Company ("PG&E") writes regarding the Draft Subsequent Environmental Impact Report ("Draft SEIR") for the Topock Compressor Station Final Groundwater Remediation Project (the "Project") recently published by the Department of Toxic Substances Control ("DTSC"). The Project has undergone years of planning and environmental studies, and PG&E understands that synthesizing all of that information into the Draft SEIR has been difficult.

While the Draft SEIR meets the requirements of the California Environmental Quality Act ("CEQA"), PG&E offers clarifications and minor modifications that would improve the readability of the Draft SEIR and ability of PG&E to implement the mitigation measures. PG&E's comments can be grouped into four categories: (1) clarifications regarding the analysis and conclusions in the 2011 Final EIR, (2) clarifications about the Project, (3) suggestions to make the Draft SEIR more uniform in its presentation of information, and (4) questions PG&E has regarding its mitigation measure obligations. For Categories 1 and 2, PG&E has suggested text edits shown in **Attachment A**.

I6-001

Category 3 consists of the following global comments:

- Please be sure to put the scientific names of species in parenthesis after the common name the first time the common name appears, and then refer to the species by its common name in subsequent text (see Draft SEIR pages 4.3-3, 4.3-4, 4.3-23, 4.3-24, and 4.3-33);

I6-002

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- Please include the word “approximately” before any reported acreage obtained from GIS data to reflect the fact that GIS data is an approximation (see Draft SEIR pages 4.3-23, 4.3-24, and 4.3-25); I6-003
- For clarity, please reference documents to the date they were finalized, rather than the date when they were subsequently included as Appendices in the C/RAWP; and I6-004
- Throughout the Draft SEIR, it is sometimes uncertain whether the text is referring to mitigation measures in the Draft SEIR or the 2011 Groundwater Final EIR (“FEIR”). Thus, at each mention of a mitigation measure from the Groundwater FEIR, PG&E suggests that text be included, such as “(FEIR),” after the name of the mitigation measure. (See Attachment A, Comment 102, for an example.) Such an identifier would make it absolutely clear whether a mitigation measure is from the Draft SEIR or the Groundwater FEIR. I6-005

Category 4 consists of questions about mitigation measures. PG&E appreciates DTSC’s effort in creating Appendix GWMM (Groundwater FEIR and SEIR Mitigation Measures Comparison Table), finding it useful for reviewing the draft mitigation measures. To ensure PG&E understands its obligations, PG&E would like a complete list of all mitigation measures that apply to the Project and seeks reassurance that Table 1-3 in the Draft SEIR provides that list. In addition, PG&E has questions about how to implement certain mitigation measures for noise and biological resources. I6-006

Regarding noise, please confirm that the list of five sensitive receptors on pages 4.7-6 through 4.7-7 of the Draft SEIR is complete and supersedes any prior list. PG&E would like this clarification so that it understands how to implement the noise mitigation measures that require certain actions within certain distances of sensitive receptors. PG&E also has suggested specific text edits in the **Attachment A** that would add the clarity needed for field workers to understand how to implement mitigation measures NOISE-2 and NOISE-3. (Attachment A, Comments 8 and 9.) Please confirm that PG&E’s understanding of how to implement these measures is correct, and if it is incorrect, please provide additional detail about how to implement the measures. I6-007

Regarding biological resources, PG&E seeks clarification that compliance with the *Topock Groundwater Remediation Project Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats* (Appendix V to the C/RAWP) satisfies the requirements of Mitigation Measure BIO-1a(a). (Attachment A, Comment 4.) If not, please provide additional information regarding the new impact to jurisdictional waters that could not have been known when DTSC prepared the Groundwater FEIR and the mitigation measure needed to address that new impact. In addition, why does mitigation measure BIO-2h require two focused special status plant surveys within five years? Protocols from the United States Fish and Wildlife I6-008
I6-009

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Page 3

Service (USFWS) and California Department of Fish and Wildlife (CDFW) require only one such survey within a five year period. (Attachment A, Comment 5.) Please provide substantial evidence supporting the need for more than one survey. Absent such evidence, PG&E requests that Mitigation Measure BIO-2h be modified to require one survey every five years.

I6-009

PG&E looks forward to constructing the groundwater remedy that been in the design process since 2011 as soon as possible so that the historic contamination in the Topock area can finally be remediated.

I6-010

Sincerely,



Michael H. Zischke

CC: Isabella Alasti, Esq., Counsel, DTSC

Attachments: Attachment A, Comments and Clarification Requests Regarding the Draft SEIR

055016/8594107v3

ATTACHMENT A: Comments and Clarification Requests Regarding the Draft SEIR

Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment
Chapter 1			
1	1.4, p. 1-4	This SEIR evaluates, at a project level, the environmental effects associated with the construction, operation and maintenance, and decommissioning of the Final Groundwater Remedial Project, including the layout and decommissioning of the IM3 Facility, based on the Final Remedial Design and as further described in Chapter 3 of this SEIR, relative to the program-level impact analysis in the certified Groundwater FEIR.	PG&E notes that in the SEIR also evaluates the layout and decommissioning of IM3 Facilities as described in Chapter 3, subsection 3.8.1.
2	1.4.3, p. 1-6	More information about the Project features and details can be found in Chapter 3 "Project Description," Section 3.6 Subsection 3.6.1 and Table 1-1 and Table 1-2 provide a summary of the main components that comprise the Project, and that are evaluated in this SEIR.	Since this section is intended as an abbreviated description of key project components, it is understandable that certain project features (such as temporary informational outreach trailer, equipment decontamination pad at TCS, security equipment, etc.) presented in Section 3.6.1 (Final Groundwater Remedial Project Components) are not included. For clarity and emphasis, "G&E suggests adding the text shown to the left."
3	1.8, p. 1-11	Information in Table 1-3 "Summary of Impacts and Mitigation," has been organized to correspond with the environmental issues discussed in Chapter 4, "Environmental Analysis" and Chapter 6, "Cumulative Analysis."	Please confirm that Table 1-3 includes all mitigation measures for the proposed Project. Currently, it appears the mitigation measures GEO-1a and GEO-1b, mentioned in the cumulative analysis section of the Draft SEIR, are missing. Please see Comments 110 and 111, below, regarding suggestions to clarify mitigation measures GEO-1a and GEO-1b.
4	1.8, p. 1-16-1-17, Table 1-3 (text also found in § 4.3.5.3, p. 4-3-72-4-3-73)	Mitigation Measure BIO-1a: No-net-loss of Jurisdictional Wetlands/Waters Function or Value (New Measure). ... a) ... The first phase of restoration shall begin within 1 year of completing construction. In-place restoration would require grading of impacted areas to pre-impacted contours and conditions. Any vegetation replacement would be completed at the mitigation planting areas identified in the Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedial Impacts, included as Appendix V to the C/RAMP (CH2M Hill 2015b). 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). b) ... 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-leu fee program.	Measure BIO-1 of the FEIR states that, "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 habitat restoration plan submitted to DFG, BLM, and USFWS that is agreeable to these agencies, or, alternatively, through the implementation of a habitat restoration plan consistent with the substantive policies of DTSC, DFG, BLM, and USFWS." CDFW, DOI and USFWS have already reviewed and concurred with the plan titled, "Topock Groundwater Remediation Project Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats" that stipulates the mitigation for impacts to wetlands, riparian, and ephemeral wetland that were addressed in FEIR BIO-1. The same agencies also have already reviewed and concurred with the "Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedial Impacts," a report that identified locations for mitigation plantings. Therefore, it should be clarified in BIO-1(a) that revegetation is not a requirement at the disturbance sites for in-place restoration. Grading of impacted areas to pre-impacted contours and vegetation replacement following previously approved agency plans remain appropriate. In addition, it seems appropriate that the mitigation bank could be a CDFW and/or USACE approved bank since both potential banks would provide appropriate mitigation for impacted resources. Also, it seems appropriate that one option for mitigation would be participation in a CDFW and/or USACE-approved in-leu fee program. If DTSC agrees, please add that option as shown to the left.
5	1.8, p. 1-25-4-27, Table 1-3 (text also found in § 4.3.5.3, pp. 4-3-116-4-3-117)	Mitigation Measure BIO-2b: Disturbance of Special-Status Plants (New Measure) ... The locations of identified special-status plants shall be flagged and mapped using GPS, and an 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 around disturbing activities that may adversely impact areas within 50 feet of special-status plants without first conferring with CDFW.	Because it may be possible to avoid plant impacts even for activities within 50 feet of known plants, suggest the edits shown to the left to allow the possibility to consult with CDFW on the plant avoidance measures within these buffers. In addition, PG&E recommends the other changes shown to the left to provide further clarification and increase the workability of the mitigation measure and to make the measure more proportional to the impacts of the Project. Suggest revising the mitigation measure to require only one survey within the previous 5 years to be consistent with plant survey protocols from CDFW and USFWS, neither of which require more than one survey. Without further support, the requirement of two surveys is not roughly proportional to and lacks a nexus with the impact

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment	
		... <ul style="list-style-type: none"> 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 14 years of focused surveys within the previous 5 years. ... If disturbance within 50 feet of a special-status plant species cannot be avoided, PG&E shall contact CDFW prior to removing individuals to determine appropriate minimization and mitigation measures.	being mitigated. Suggest deleting the phrase "prior to removing individuals" because it is duplicative with the following sentence, which states: "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." It is also confusing and could be interpreted as directing PG&E to remove plants if a 50-foot buffer is infeasible.	IS-016 IS-017
6	1.8, p. 1-42-1-43, Table 1-3 (text also found in § 4.4.5.3, p. 4-122)	CUL-1A-19: Implement Treatment Plan for the Topock TCP (New Measure). All activities associated with construction, operation and maintenance, and decommissioning of the Final Remedy Design shall be implemented consistent with provisions of the Cultural and Historical Property Treatment Plan for the Topock Compressor Station (Hanes and Price 2017) in progress , which is being has been prepared pursuant to requirements of the Stipulation VII.8 and Appendix B of the 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 "Cultural Property-Specific Treatment Measures" of the CHIPMP, which can be used to satisfy the requirements of this mitigation measure). PG&E shall submit the Treatment Plan to DTSC for review and approval. PG&E shall submit the Treatment Plan to DTSC for review and approval. PG&E shall also distribute the Treatment Plan to the Interested Tribes for tribal review consistent with Section 2.3 "Protocols for the Review of Cultural Resources-Related Documents" of the CIMP and Section 6.7 "Protocols for Tribal Notification and Consultation in Advance of Certain Activities" of the CHIPMP (as described above in Mitigation Measure CUL-1A-8g).	Text edits are suggested to improve accuracy. PG&E submitted a draft Treatment Plan to the agencies and the tribes in 2014. PG&E responded to comments on the draft and submitted a final Treatment Plan to DTSC and BLM on February 15, 2017.	IS-018
7	1.8, p. 1-43, Table 1-3 (text also found in § 4.4.5.3, p. 4-134)	CUL-1B/C-3: Prepare and Implement a Treatment Plan for Historical Resources other than the Topock TCP (Groundwater FEIR Measure with Revisions). Prior to the start of construction, PG&E shall has prepared and will implement a Treatment Plan that identifies 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 - Cultural and Historical Property Treatment Plan for the Topock Compressor Station (Hanes and Price 2017) in progress). PG&E shall submit the Treatment Plan to DTSC for review and approval. PG&E shall also distribute the Treatment Plan to the Interested Tribes for tribal review consistent with Section 2.3 "Protocols for the Review of Cultural Resources-Related Documents" of the CIMP and Section 6.7 "Protocols for Tribal Notification and Consultation in Advance of Certain Activities" of the CHIPMP (as described above in Mitigation Measure CUL-1A-8g).	Text edits are suggested to improve accuracy. PG&E submitted a draft Treatment Plan to the agencies and the tribes in 2014. PG&E responded to comments on the draft and submitted a final Treatment Plan to DTSC and BLM on February 15, 2017.	IS-019
8	1.8, p. 1-65, Table 1-3 (text also found in § 4.7.5.3, p. 4-7-32)	Mitigation Measure NOISE 2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions). ... 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) which will be	Under CIMP section 2.11 (protocols to accommodate tribal ceremonies or activities involving Topock Cultural Area), any tribe wishing to perform a ceremony may contact PG&E's Site Manager at the Topock Compressor Station by telephone, email, or in writing to discuss the specific request. For the purpose of CIMP section 2.11, key tribal ceremonies include any ceremonies or activities for which the tribes choose to notify and/or ask for assistance. For consistency with Bullet #3 under NOISE-2 and clarity, PG&E suggests adding the text shown to the left or similar text to the reference text.	IS-020

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment	
		recommended by PG&E for the extent practicable.		16-020
9	1.8, pp. 1.68-1-69, Table 1-3 (text also found in § 6.5.11, p. 6-42)	Mitigation Measure NOISE-3: Cumulative Noise Increases from Remedial Activities (New Measure). Coordination between teams implementing soil remedial activities (including investigation, pilot testing, and remediation) and groundwater remediation shall occur as to avoid cumulative noise impact to any sensitive receptors (as defined in Chapter 4.7 of this document). If concurrent activities must occur near sensitive within 1,850 feet and 5,830 feet from sensitive California receptors and 330 feet and 735 feet from sensitive Arizona receptors for daytime and nighttime noise, respectively sensitive receptors, real time noise measurements of representative the activities shall be conducted by a qualified acoustical consultant (or contractor 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 or Type 2).	Please explain what is meant by "any sensitive receptor" as that phrase is used in the first sentence. PG&E assumes that in the context of this mitigation measure, sensitive receptors would be those defined in the Groundwater SEIR and suggests the text edit shown to the left to provide clarification. Also, please explain what is meant by "near" in the second sentence. This is important for the purpose of compliance with the required mitigation measure. The requirements of Mitigation Measure NOISE-3 would be clearer if it included more specific language such as that shown to the left.	16-021
Chapter 2				16-022
10	2.4.6, p. 2-17	The design review process began in 2011 after DTSC and PG&E <u>PG&E</u> certified the final <u>approved certified the final</u> Groundwater EIR and approved Alternative 1 as the groundwater remedy project .	DTSC alone certified the Final Groundwater EIR.	16-022
Chapter 3				16-023
11	3.6.1.5, p. 3-31, last bullet	Permitted transportable treatment units -- if needed, permitted transportable treatment processes for hazardous and non-hazardous remedially-produced water would consist of one or more of the following treatment processes, depending on the produced water chemistry . . .	The suggested edit would better describe the Project, which also mentions processing of non-hazardous remedially-produced water using portable treatment unit.	16-023
12	3.6.1.7, p. 3-33, 2 nd bullet	These interim actions may include triggering activation of the contingency plan for arsenic pretreatment PG&E was directed by DTSC to include in its 60 percent groundwater remedy design.	For clarity, suggest adding a footnote after the text shown to the left to explain that the Draft SEIR analyzes the contingency plan for arsenic pretreatment that was submitted as part of the 90 percent and final design document, which reflects DTSC's directives to PG&E regarding the contingency plan made during the 60 percent design comment process.	16-024
13	3.6.1.9, p. 3-45, Table 3-3, 1st bullet	Compressor Station subheading, first bullet: Existing Auxiliary Building	The existing Auxiliary Building is not a remedy building but rather is used to house remedy equipment. Since Table 3-3 is titled "Remedy Buildings and Structures," PG&E suggests that the text about the "Existing Auxiliary Building" be moved to a footnote that clarifies that it is not a remedy building, but will be used to house remedy equipment.	16-025
14	3.6.3.1, p. 3-76	The Final Remedy Design includes contingencies in the event that the treatment methodology results in generating manganese, an in-situ byproduct, at concentrations above baseline <u>baseline</u> quality objectives those 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 IR2, or above baseline mg/L at California wells downgradient of the IR2, or above baseline concentrations in Arizona wells).	Text edits suggested so the statement quoted to the left is consistent with SEIR Mitigation Measure HYDRO-4, which states in relevant part: "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 IR2, 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."	16-026
Chapter 4				16-027
15	4.1.2.1, p. 4-1-4	Since 2011, however, additional Tribal perspectives regarding the Topock Mescal and Topock Cultural Area, which were not previously considered by the Bureau of Land Management (BLM) but previously determined that the area within the Area of Potential Effect boundaries (which includes the Topock Mescal and Overlays in large part with the Project Area) have been provided. The Bureau of Land Management (BLM) had previously determined that the area within the Area of Potential Effect boundaries (which includes the Topock Mescal and Overlays in large part with the Project Area)	Text revision needed to clarify that BLM determined the APE constitutes a TCP eligible for listing on the NHP in 2010.	16-027

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SER Comment	
16	4.1.3.1, p. 4.1-29	constitutes a TCP and is eligible for the National Register of Historic Places (NRHP). The Project Area and vicinity is considered by Tribes to be part of a broader cultural landscape and, since 2014, the BLM has been determined by the area within the APE (which overlaps in large part with the Project Area) to constitute a TCP and is eligible for the NRHP, as described in further detail in Section 4.4, "Cultural Resources," subsection 4.4.3.2.	Text revision needed to clarify that BLM determined the APE constitutes a TCP eligible for listing on the NRHP in 2010.	16-027 16-028
17	4.1, p. 4.1-68	Improvements at the Station include construction of infrastructure associated with the Topock Compressor Station Recirculation Loop (TCS Recirculation Loop), the contingent Dissolved Metals Removal System, and a Remedy-Produced Water Conditioning Plant and associated tanks and chemical storage. The existing Auxiliary Building would be used for new power generators and the existing Hazardous Materials Storage Building for storage of hazardous materials and wastes. Improvements at the Transwestern Bench include construction of a 2,200-square-foot Operations Building, concrete pads, stormwater catch basins, and a fence surrounding the perimeter, and remedy wells/pumps associated with the TCS Recirculation Loop.	Edits are suggested to improve the clarity and accuracy of the text.	16-029
18	4.1.5.3, p. 4.1-68 (also 4.1.7.5, 4.1-81, 4.3-58)	The Groundwater FEIR assumed subsurface trenches for piping at the northern and southern crossing under Bar Cave Wash. However, the majority of the piping proposed for the remedy was below the ground.	The Groundwater FEIR assumed that the majority of the pipelines would be constructed underground, as acknowledged elsewhere in the SER (see page 7-16), and that electrical conduits would be underground. (See Groundwater FEIR, Vol. 2, at pp. 1-6, 1-73, 3-16, 3-17, 3-18, 3-19, 3-25, 3-28, 3-30, 4.1-6, 4.1-28, 4.1-29-4.1-45, 4.5-48, 4.7-27, 4.8-9, 4.8-10, 4.8-12, 4.8-14, 8-3.)	16-030
19	4.1, p. 4.1-69	With the exception of security lighting in the Construction Headquarters area and other permanent remediation facilities, including the MW-20 Bench, TW Bench, and INWR-1A areas, temporary lighting would be supplied by portable generators and lights, as needed and consistent with any applicable mitigation measures and conditions of approval.	Edits are suggested to improve the clarity and accuracy of the text.	16-031
20	4.1, p. 4.1-71	Operation and maintenance activities at the TCS Evaporation Ponds would include ongoing maintenance of the drainage system and additions, the power system, the natural gas loading, unloading, the containment area for truck loading/unloading, and remote sensing equipment.	Edits are suggested to improve the clarity and accuracy of the text.	16-032
21	4.1.5.3, p. 4.1-80	Mitigation Measure AES-1: Substantial Adverse Effects on Scenic Views (Groundwater FEIR Measure with Revisions). Allow changes to the proposed Project, including the Future Activity Allowance, shall be designed and those changes, as well as the proposed Project, implemented to adhere to the design criteria presented below. . . .	Text revision requested to clarify that the Project has already been designed to meet the requirements of AES-1.	16-033
22	4.1.5.3, p. 4.1-85	Mitigation Measure AES-2: Substantial Damage to Scenic Resources within a Scenic Corridor (Groundwater FEIR Measure with Revisions). The proposed Project shall be designed and 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. . . .	Text revision requested to clarify that the Project has already been designed to meet the requirements of AES-2.	16-034
23	4.1, p. 4.2-5, 2nd sentence	No known odor sources are in the immediate vicinity of the Project Area, except for existing Station operations such as oil-based gases and natural gas odors (mercaptans).	PG&E has never had any odor complaints concerning the Topock Compressor Station, with the exception of very infrequent odor complaints related to natural gas odorant. PG&E does not refer such odorants as "mercaptans" because various mercaptan compounds are just one of many possible components of typical natural gas odorants, which are typically a blend of multiple organic sulfur compounds.	16-035

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikethrough format)	Draft SEIR Comment													
24	4.2.5.1, p. 4.2-27	Based on the MDAQMD Guidance (MDAQMD 2014+2016) the proposed Project would have a significant impact on air quality and climate change if it exceeds the thresholds in Table 4.2-7.	Edits provided so text reflects MDAQMD's most recent guidance.	IE-036												
25	4.2.5.1, p. 4.2-28, Table 4.2-7	<p>TABLE 4.2-7</p> <p>MDAQMD SIGNIFICANT EMISSIONS THRESHOLDS</p> <table><tr><th>Pollutant</th><th>Annual Threshold (tons/year)</th><th>Daily Threshold (lb./day)</th></tr><tr><td>...</td><td></td><td></td></tr><tr><td>PM_{2.5}</td><td>44.32</td><td>4265</td></tr><tr><td>CO₂e (GHGs)</td><td>100,000 (90,719 MT)</td><td>548,000</td></tr></table> <p>SOURCE: MDAQMD 2014+2016</p>	Pollutant	Annual Threshold (tons/year)	Daily Threshold (lb./day)	...			PM _{2.5}	44.32	4265	CO ₂ e (GHGs)	100,000 (90,719 MT)	548,000	Edits provided so text reflects MDAQMD's most recent guidance.	IE-037
Pollutant	Annual Threshold (tons/year)	Daily Threshold (lb./day)														
...																
PM _{2.5}	44.32	4265														
CO ₂ e (GHGs)	100,000 (90,719 MT)	548,000														
26	4.2.5.2, p. 4.2-29	The Final Remedy Design incorporates design details and plans called for under mitigation measure ALQ-1 to reduce fugitive dust emissions in the Project Area.	The reference to AQ-1 appears to be a typo, as the SEIR Mitigation Measure to control fugitive dust is named ALR-1. Edit suggested to for clarification.	IE-038												
27	4.2.5.1, p. 4.2-36, Table 4.2-8	<p>TABLE 4.2-8</p> <p>PEAK DAILY UNMITIGATED CONSTRUCTION EMISSIONS</p> <table><tr><th>Pollutant</th><th>Lb./day</th></tr><tr><td>PM_{2.5}</td><td>4265</td></tr><tr><td>...</td><td>...</td></tr></table>	Pollutant	Lb./day	PM _{2.5}	4265	Suggest updating the threshold for PM _{2.5} from 82 lb./day to 65 lb./day to reflect current Air District 2016 guidance. The Project's PM _{2.5} emissions are below this new threshold.	IE-039						
Pollutant	Lb./day															
PM _{2.5}	4265															
...	...															
28	4.2.5.3, p. 4.2-44	The proposed Project is incorporating solar-generated electricity to offset some of the on-site electrical uses and therefore, although the proposed Project is not a project type identified under the CARB Scoping Plan, it would further the intent of the Plan in that it would use renewable energy to offset electrical usage.	Suggested revision to clarify text.	IE-040												
29	4.2.5.3, p. 4.2-48	However, because even though there are emissions of TACs during construction activities and some of the receptors are closer to activities in the proposed Project than were identified in the Groundwater FEF, there are no provided exposure thresholds for construction activities and some of the receptors are closer to activities in the proposed Project than were identified in the Groundwater FEF, the proposed Project identifies these impacts as less than significant because only a few individual activities would occur closer than 1,000 feet to any receptor and these activities would be temporary (less than 30 months).	Suggest revising the text as shown to the left to make this summary more consistent with the preceding analysis on page 4.2-47 of the Draft SEIR.	IS-041												
30	4.3.2.1, p. 4.3-1	These deserts are roughly separated by the Colorado River; portions of the Project Area east of the Colorado River (in Arizona) are located within the Colorado Desert while portions of the Project Area west of the Colorado River are located within the Mojave Desert.	Suggested edit to clarify that the Colorado River forms an approximate boundary between these two deserts.	IE-042												
31	4.3.2.1, p. 4.3-2	Interstate 40 (I-40) and the Burlington Northern Santa Fe (BNSF) Railway roughly bisect the Project Area in an east-west direction.	The railway separates the Project Area into approximate halves. Edits shown would clarify the sentence and make it more accurate.	IE-043												

[illegible]

Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment	
42	4.3.3.1, p. 4.3-25	was identified as desert fly (Dasyporodius undulatus) on Figure 4.3-1, through 4.3-14. Along the Colorado River and its inlets are patches of wetlands with various marsh plants forming three principal wetland communities, from the moist-submerged emergent , broad-leaved cattail (<i>Typha latifolia</i>) meadow and California bulrush (<i>Schoenoplectus californicus</i>) marshes, to the adjacent but somewhat drier common reed (<i>Phragmites australis</i>) marshes.	Edits suggested for clarity. Both cattails and CA bulrush are "emergent" plants that should not be confused with "submerged" aquatic plants.	16-053 16-054
43	4.3.3.1, p. 4.3-25	It is assumed that the wetlands and other waters of the United States mapped within the Project Area are considered jurisdictional under Section 404 of the Clean Water Act (CWA) and therefore also qualify for jurisdiction under Section 401 of the CWA administered by the Regional Water Quality Control Board (RWQCB), and, in California, Section 1600 of the California Fish and Game Code administered by CDFW (CH-2M Hill 2013).	Suggest clarifying that the requirements in California Fish and Game Code section 1600 apply in California.	16-055
44	4.3.3.1, p. 4.3-33	Excavated bat surveys identified maternity roosting habitat within the crevices along slopes associated with Bat Cave Wash south of the project area, within a culvert at L-50 and Bat Cave Wash, beneath the western end of the BNSF Railway Bridge over the Colorado River and under a BNSF Bridge and culvert near 20th Model (H. T. Jiracek & Associates 2016b). Suitable bat roosting habitat occurs within the crevices and small mammal burrows along cliff faces and slopes associated with the desert washes, and bat surveys confirmed day-roosting activity within Bat Cave Wash and beneath the western end of the BNSF Railway Bridge in addition to suitable maternity roosting habitat was documented on the Project Area.	Edit provided to enhance the Draft SEIR's accuracy. The text suggested to be deleted is derived from a bat habitat assessment report that was based on visual surveys and acoustic work (inhabitat detectors), and discussed potential bat habitat such as small mammal burrows and crevices. Subsequent focused bat surveys completed by HT Jiracek identified the actual on-site maternity roosts based on results from mist-netting and radiotelemetry in addition to acoustic monitoring. As that report indicates, bats are mainly using the culverts and bridges, rather than small animal burrows, for maternity roosts. The maternity roost south of the Project area is in a crevice on the slope of Bat Cave Wash.	16-056
45	4.3.3.1, p. 4.3-43	However, since certification of the Groundwater FEIR, presence of the species in and immediately adjacent to the Project Area has been confirmed (GANDA 2009a, 2009b, 2012, 2014, and 2015).	Suggest revising text as shown to the left. Reports available at the time the Groundwater FEIR was prepared should not be included as examples of information learned since certification of the Groundwater FEIR.	16-057
46	4.3.3.1, p. 4.3-43	Within the California portion of the Project Area, potentially suitable Lacey's warbler habitat occurs within the mouth of Bat Cave Wash (CH-2M Hill & Transcon Environmental, Inc. 2016).	Text as edited is more accurate because it is not certain that this habitat is actually suitable in composition and size.	16-058
47	4.3.3.1, p. 4.3-44	A single male Townsend's big-eared bat was observed on the Project Area during a 2015 bat survey (H.T. Jiracek & Associates/Brown and Balliet 2015).	The single male Townsend's big-eared bat was found on April 30, 2015, in a spring survey by Drs. Brown and Rainey.	16-059
48	4.3.4.1, pp. 4.3-45-4.3-46	CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by the U.S. Environmental Protection Agency (USEPA). In California, the State Water Resources Control Board is authorized by USEPA to oversee the NPDES program through the RWQCBs. In this case, the Colorado River (Region 7) RWQCB, in Arizona, the Arizona Department of Environmental Quality (ADEQ) is authorized by the USEPA to oversee the NPDES program. Clean Water Act, Section 401 CWA Section 401(a)(1) specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal licensing or permitting agency with a certification that any such discharge will not violate state water quality standards. In California, the RWQCBs administer the Section 401 program with the	Suggest adding information about how Clean Water Act sections 401 and 402 are administered in Arizona since part of the Project is in Arizona.	16-060

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		intent of prescribing measures for projects that are necessary to avoid, minimize, and mitigate adverse effects on water quality and ecosystems. In Arizona, the ADISQ administers the Section 401 program (except on tribal lands) with the intent of ensuring that a project will not violate surface water quality standards, adversely impact instream waters (water that do not meet water quality standards) and that a project complies with applicable water quality improvement plans (total maximum daily loads).	16-0600
49	4.3.4.4, p. 4.3-50	The LCR MSCP outlines a 50-year effort to conserve 25 <u>federally-listed and state-listed</u> candidate and sensitive species along the Lower Colorado River, including birds, fish, small mammals, bats, reptiles, amphibians, insects, and plants.	16-0601
50	4.3.5.2, p. 4.3-58	This results primarily from additional roadways and facility footprints (described above), <u>and the fact that remedial pipelines are to be constructed underground (trenches aboveground which was assumed in the Groundwater FEIR). Additionally, while subsurface trenching for fluid conveyance piping at the northern and southern cesspools under Bat Cave Wash was envisioned in the Groundwater FEIR, an analysis of potential impacts to biological resources was not included in the Groundwater FEIR.</u>	16-0602 16-0603
51	4.3.5.3, p. 4.3-61	... for the following known Project facilities: Inner Rectification Loop Well (IL-4, remedy and monitoring wells and associated piping) located in Bat Cave Wash; <u>Remedial supply well NW-14, contingent site-specific well-associated equipment and a portion of the freshwater pipeline within the 100-year floodplain of the Colorado River; and Riverbank Extraction Well RB-5, monitoring well MW-W, a portion of Pipelines C, and a portion of an access road within the 100-year floodplain of the Colorado River. Other facilities within USACE jurisdiction, but not CDWR jurisdiction, include the freshwater supply well HWWE-1b, the contingent site 3 well and associated equipment in Arizona.</u>	16-0604
52	4.3.5.3, p. 4.3-69	... and describe the approach for restoration in the HNR and broader Project Area for the duration of the construction and operation and maintenance phases of the proposed Project. <u>In place restoration would require grading of impacted areas to pre-impacted contours and conditions. Any vegetation replacement would be completed at the mitigation planting areas identified in the Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts, included as Appendix V to the C/RAWP (CH2M Hill 2015b).</u>	16-0605
53	4.3.5.3, p. 4.3-73	... PG&E shall prepare a mitigation plan prior to the start of construction to specify methodology, <u>success criteria for meeting the 2:1 mitigation requirements</u> , and monitoring and reporting for compensatory mitigation. ... Restoration of jurisdictional areas within the Project Area shall be guided by the <u>Houma National Wildlife Refuge Habitat Restoration Plan (CH2M Hill and E2 Consulting Engineers, Inc. 2014a) and Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats (CH2M Hill and E2 Consulting Engineers, Inc. 2014b) included as Appendices G and Q to the C/RAWP (CH2M</u>	16-0606

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		Hill (2015b) and 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 Remediation Impacts</i> (CH2M Hill 2015b) included as Appendix V to the C/RAMP (CH2M Hill 2015b), which provides preliminary information on the condition within fourteen proposed mitigation planting areas.		16-098
54	4.3.5.3, p. 4.3-75	Critical habitat for the bonytail chub exists within the Project Area, specifically within the Colorado River and its 100-year floodplain. However, as discussed in the 2014 PBA (CH2M Hill 2014), that was included as Appendix U to the C/RAMP (CH2M Hill 2015b) . . .	For clarity, suggest referencing the 2014 PBA document here as (CH2M Hill 2014). The full reference is: "CH2M Hill 2014. Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Final Groundwater Remediation, April 28. The 2014 PBA addresses the Final Remedial Groundwater Impacts and is the appropriate PBA for the analysis in the Draft SER to reference.	16-097
55	4.3.5.3, p. 4.3-76	<ul style="list-style-type: none"> Appendix U, 2014 Programmatic Biological Assessment (PBA), identifies specific species and habitat of interest and describes specific measures such as habitat surveys and limiting activities in certain areas to certain times of the year. 	Insert: "2014" to clarify that the reference is for the 2014 PBA.	16-098
56	4.3.5.3, p. 4.3-77	However, additional special-status bird species were confirmed to be present or determined to likely occur within the Project Area, including the federally listed western yellow-billed cuckoo and non-listed Lucy's warbler and loggerhead shrike (both California Species of Special Concern). Focused studies and incidental observations during pre-construction surveys to date have not confirmed active bird nesting within the Project Area.	Suggest adding the sentence shown to the left to clarify that there has been no evidence of any active bird nesting in the Project area. Construction impacts are less likely to occur to transient birds.	16-099
57	4.3.5.3, p. 4.3-83	To address significant impacts on desert tortoise and its habitat, Mitigation Measure B10-2b as included in the Groundwater FEIR and revised herein, would require implementation of avoidance and minimization measures identified in the 2014 PBA (CH2M Hill 2014). Additionally, skeletal and fur remains of an unknown large ungulate (possibly a bison or a bighorn sheep) was observed on the Project Area in April 2015 during a focused desert tortoise survey.	For clarity, suggest adding 2014 and including a reference to the 2014 PBA as shown to the left.	16-070
58	4.3.5.3, p. 4.3-84		<p>Suggest revising the sentence shown to the left because, as currently written, it is not supported by the observations of biologist Will Lee from Transcon in his study, "Desert Tortoise Habitat Survey, PG&E Topock Compressor Station Evaporation Ponds and Access Roadway, Transcon Environmental, Inc.," dated April 2, 2015. Lee wrote the following in the Incidental Species Observations Section:</p> <p>An approximately 12-inch-long tail with bone and fur still attached of an unknown ungulate species was discovered (Photo 6) in one of the dry washes northeast of the evaporation ponds. Additionally, the remains of a large ungulate, believed to be a separate carcass not associated with the tail, were also found within the Survey Area. Two large, 5- to 6-inch-wide vertebrae were found about 30 meters down the wash (Photo 7), and the remainder of the backbone with dried skin/fur still attached was discovered further downstream (Photo 8). These remains were located at E0728722 N3844473 (North American Datum 83) and were not positively identified. At 1-40 to the north of the Project site and up the slope, the group observed a pile of bones, likely those of an animal hit on the highway. The bones were off the bank of the east-bound lane of I-40. The pile consisted of at least eight long (approximately 18 inches) thin rib bones. The bones were not inspected because of safety concerns associated with scaling a barbed-wire fence and working alongside the highway. The pile of bones was located at approximately E0728709 N3844570 (see Figure 1). It is believed that a vehicle hit the animal on the highway, and the remains were hauled up the wash by scavengers.</p>	16-071
59	4.3.5.3, p. 4.3-96	In addition, activities adjacent to slipways and off-levee known maternity roasts in the Project Area could result in disturbance to roosting bats during the maternity roosting season of March 15 through August 31.	This text appears to reference an older bat report that is less comprehensive than the subsequent, focused bat surveys completed by HT Harvey, which identified the actual on-site maternity roosts in the Project Area. Since the sites of maternity roosts are known, suggest making the clarification shown to the left.	16-072
60	4.3.5.3, p. 4.3-102	Indirect disturbance of individuals resulting from construction activities could include generating dust which can adversely impact plants by coating the surfaces of the leaves and reducing the	Please include a reference supporting that dust coating could create a significant impact. If the impact is unsupported, please delete it.	16-073

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61	4.3.5.3, p. 4.3-102	Indirect disturbance could also occur from the use of water from the IM-3 Facility for dust suppression during construction which has higher salt loading that could potentially damage, reduce or impede growth by changing the native soil composition and causing it to be far less favorable to native plants.	Include a reference supporting the use of IM-3 Facility water for dust suppression as an impact. Otherwise impact unsupported and should be deleted.	IS-073 IS-074
62	4.3.5.3, p. 4.3-105	Recurring focused botanical surveys may also be performed for construction of additional facilities under the Future Activity Allowance. BSEs shall not proceed with sound disturbing activities that may directly or indirectly impact areas within 50 feet of special status plants without first consulting with CDWR.	Insert sentence to left for consistency with text in the second paragraph on page 4.3-117.	IS-075
63	4.3.5.3, p. 4.3-110	Pre-activity clearance surveys shall be in full accordance with the substantive requirements of USFWS protocols other than the timing requirement and the recommendation to confer with USFWS.	Absent clarification, the requirement to conduct protocol surveys could be interpreted as requiring surveys only in April and May or September and October, which is inconsistent with the requirement to do the surveys immediately prior to ground disturbance, which may occur any time of year. In addition, because these are pre-activity surveys, there should be no requirement to confer with USFWS.	IS-076
64	4.4.2.1, p. 4.4-9	Table 4.4-1 briefly summarizes concerns expressed during the environmental review process for the Groundwater FEIR. As noted in Table 4.4-1, six of the tribes are designated as "Interested Tribes," which for the purposes of the Groundwater FEIR indicated the six tribes that substantially participated in the various administrative processes surrounding remediation of the site with DTSC, PG&E, and DOI, including throughout the development of the Groundwater FEIR. Since the Groundwater FEIR was prepared, the Fort Yuma-Quechan Indian Tribe has become a less active participant. Additional meetings, information, and materials have occurred since certification of the Groundwater FEIR and were provided in Section 4.4.3 of this SEIR.	Edits suggested to clarify the meaning of "Interested Tribes."	IS-077
65	4.4.3.1, p. 4.4-15	Cultural and Historical Property Treatment Plan for the Topock Compressor Station Groundwater Remediation Project (Hines and Price, 2012) in progress .	The final Treatment Plan was submitted to DTSC and BLM in February 2017.	IS-078
66	4.4.3.1, p. 4.4-24	A total of 19 segments of the National Old Trails Highway/Route 66 have been documented within the Project Area (Table 4.4-4) (Wead & Hunt 2015; BLM 2015). Of these 19 segments, six (A, J, L, U, X, and Y) were determined eligible for BLM for the NHP under Criteria A and C.	Edit suggested to clarify that the State Historic Preservation Officer (SHPO) did not make a determination; the eligibility determination was made by BLM.	IS-079
67	4.4.3.1, p. 4.4-31	AZ L7-16 (ASV) consists of a multicomponent archaeological site originally documented by MacNider and Pedro in 1990 and updated by Applied Earthworks, Inc. in 2010 and 2013 (McDougall and Voloney 2010).	The text indicates that the evaluation was updated in 2013, but there is no reference to a 2013 update. Please add the missing reference.	IS-080
68	4.4.3.2, p. 4.4-61	Topock Traditional Cultural Property In 2010, the U.S. Bureau of Land Management (BLM) determined that the area within the Area of Potential Effect (APE) boundaries, which overlaps in large part with the <u>the</u> boundaries of the <u>boundaries of the</u> Groundwater FEIR <u>the Topock Cultural Area (TCA)</u> , was formally designated <u>was formally designated</u> as a TCP, <u>which is eligible for the NHP.</u> BLM made this determination as a result of Section 105 consultation for the Topock Remediation Project (directed by the U.S. Bureau of Land Management) to include remedial investigations and groundwater and soil removal and response actions pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Through the Section 105 process, a Programmatic Agreement (PA) (BLM et al. 2010) and a Cultural and Historical Properties Management Plan (CHMP) (BLM 2012) were prepared and the BLM determined that there was a TCP of religious and cultural significance to	Edits suggested for accuracy. In addition, PG&E suggests that the SEIR include a figure that shows the boundaries of the APE and the boundaries of the SEIR Project Area, which would clarify how these two areas relate to one another.	IS-081

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		several interested tribes within the <u>Area of Potential Effects (APE)</u> for the Groundwater Remediation Project, <u>an</u> <u>large</u> <u>area</u> of approximately 1,500 acres that is larger than the Project Area and <u>surrounds and encompasses the Project Area</u> <u>with the Project Area</u> to a great extent. The BLM defined the boundaries of the TCP as corresponding to the then identified APE. However, the BLM also acknowledged that "Tribal members believe that the area known as the Topock TCP is part of a broader cultural landscape that includes the Colorado River, extending beyond the limits of the currently designed APE, and should not be understood as a discrete or detached site, but as part of a larger area of cultural significance" (BLM 2012). The BLM determined that the TCP was eligible for inclusion in the NRHP under Criterion A (BLM et al. 2010). Because the TCP has been determined eligible for inclusion in the NRHP, it is automatically listed in the CRRH (Public Resources Code Section 5024.1(d)(1)) and is considered a historical resource per CEQA Guidelines Section 15064.5(a). The resource identified in the Groundwater FEIR (OTSC 2011) as the TCP <u>correlates to a great extent with the</u> <u>and part of the</u> TCP defined by the BLM.	16-081
69	4.4.3.2, p. 4-4-63	The TCVA concluded that the entire area is associated with spiritual and religious beliefs and traditional cultural practices. . . . The Tribes recommended that a TCVA be completed for the entire area (McDowell et al., 2014).	Please clarify what is meant by "area" as used in these two sentences.
70	4.4.3.2, p. 4-4-63	All TCVA resources are considered contributing elements to the Topock TCP.	Please clarify who considers all TCVA resources to be contributing elements to the Topock TCP. Also, please explain why all of the TCVA resources are considered to be contributing elements to the Topock TCP.
71	4.4.3.3, p. 4-4-68	. . . Paleontology Division of Geological Sciences Museum of San Bernardino County (SBCV), Review of online databases included the Natural History Museum of Los Angeles County Invertebrate Paleontology Section and of the University of California Museum of Paleontology database (Arcadis and Coststone 2015). <u>Bureau of Land Management Manual 8100 and 3780, Handbook 1780, 1-4330-1</u> Sections 8110 through 8140 of this BLM Manual provide specific guidance for the BLM concerning cultural resources, which may include TCPs. Section 8100 provides a general summary of the framework for managing cultural resources. Specific objectives include, among others, the recognition of the public uses and values attributed to cultural resources on public lands, the preservation of cultural resources on public lands for current and future generations, and the assurance that proposed land uses would avoid inadvertent damage to cultural resources. Section 8110 outlines the procedures recommended for the identification and description of cultural resources. Specific objectives of Section 8120 include the assurance that Tribal issues and concerns are given consideration during the planning and decision-making process. Objectives of consultation should also include input from Native American Tribes as to proper collection, evaluation, and protection methodologies employed during the consultation process. Guidelines for this process are specifically outlined in BLM Handbook 8120-1, BLM Handbook 8120-3, also outlines the process for determining Tribal eligibility for a TCP and states that eligibility must be based on application of the TCP criteria, that only places fulfilling one or more of the criteria may be found eligible, and that no type of property is automatically eligible for the NHP, including TCPs. Section 8130 provides planning guidance for the BLM that	16-082 16-083 16-084
72	4.4.4.1, p. 4-4-78		Edits suggested to provide a more complete overview of current federal guidance.

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		<p>considers the current and future use of cultural resources with the aim to resolve use allocation conflicts that have the potential to affect cultural properties. Finally, Section 8140 outlines objectives for the preservation of cultural resources, including the safeguarding of cultural resources from improper use and responsibly maintained in the public interest. Section 8140 also outlines the BLM's responsibility to adequately consider the effects on cultural properties from land use decisions.</p> <p>In December 2016, the BLM officially released Manual 1780 and accompanying Handbook (H) 1780-1, which replaces Manual Section 105-8120 and H-9120-1. This new guidance presents a comprehensive and coordinated approach to tribal consultation across all federal agency program areas and stresses the importance of formal agreements and working partnerships with tribes. Manual 1780 and H-1780-1 reflect extensive discussions the BLM held with tribes, including discussions held through a working group of tribal and departmental officials that explored new approaches to tribal consultation and resulted in issuance of Secretarial Order 3317, the DOI Policy on Consultation with Indian Tribes. Manual 1780 and H-1780-1 provide centralized guidance that federal programs can turn to for instructions on how to carry out tribal consultation and partner effectively with Indian tribes. H-1780-1 is composed of individual program chapters, including energy, mining, forestry, range management, and fire management, which describe how tribal consultation is carried out for each of these programs under the program's respective legal authorities.</p>		IS-085
73	4.4.5.3, p. 4-4-108	<p>Mitigation Measure CU-1a-19 requires implementation of a Treatment Plan for the Topock TCP, which would include an informational kiosk to educate the public on the importance of the area, inclusion of Tribal perspectives on documentation (site records) for prehistoric archaeological resources to ensure that Tribal values and interpretation of those resources is considered beyond that which is scientifically important, an updated NRHP nomination package for the Topock Maze (CA-SER-219, Locs A, B, and C) that considers the Tribal perspectives of the Topock TCP, and that captures the intrinsic value of the TCP to interested Tribes such that this resource is preserved in perpetuity through documentation, updated site documentation for sites that have not been updated in over 10 years to assess the current conditions, support for a site stewardship program to help preserve and monitor the Topock Maze and other special values sites that contribute to the significance of the Topock TCP, and protective measures for site & Topock-210 (prehistoric trail).</p>	<p>PG&E recommends removing activities under federal control or that depend on tribal desires (i.e., the manner that tribal perspectives will or will not be included in an updated NRHP nomination package for the Topock Maze and the Site Steward Program) from Mitigation Measure CU-1a-19. Regarding the nomination package, BLM has told PG&E that the tribes have indicated a desire to revise the nomination to treat the property as an archaeological property only. In addition, as BLM has stated in at least one comment letter, the Site Steward Program is a BLM program, wholly under the control of BLM.</p>	IS-086
74	4.4.5.3, p. 4-4-119	<p>These positions shall be inclusive of those referenced by CR-1c-9 in the Topock Soil Investigation Project EIR and MMRP and not additive to this mitigation measure superstacks FE-3 Mitigation Measure CU-1a-11.</p>	<p>Suggest adding the text to the left to clarify the mitigation measure requirements.</p>	IS-087
75	4.4.5.3, p. 4-4-131	<p>However, for historical resources that are eligible to the NRHP/CHR under Criteria A/1, B/2, or C/3, for as a contributor to the Topock TCP data recovery may not adequately mitigate impacts to those aspects of the resource that convey its significance and make it eligible for listing in the NRHP/CHR, and even with the implementation of these mitigation measures, impacts to such resources from the Project may not be mitigated to a less than significant level.</p>	<p>Suggested edit to clarify that the analysis is of unknown historical resources other than the Topock TCP.</p>	IS-088
76	4.5.2.1, p. 4-5-2	<p>Groundwater from the Arizona wells would provide a sufficient water quality for the remedy purpose; however, naturally occurring arsenic was found at levels above background levels in the proposed injection areas in the Project Area in California.</p>	<p>Since background levels of arsenic in certain portion of the Project Area in California are higher than arsenic concentrations in groundwater from Arizona wells: HNW-1 and HNW-1A, PG&E suggests this edit for improved accuracy.</p>	IS-089
77	4.5.3.2, p. 4-5-6, Figure 4-5-1		<p>There is a small orange area (undesignated area or UA) just to the southeast of ACC-28c. PG&E is not aware of an UA in this area; please verify and remove from the figure, as appropriate.</p>	IS-090

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78	4.6.3.1, p. 4.6-11	The extent and concentrations of molybdenum, nitrate, and selenium in wells that are included in the site-wide groundwater monitoring program as of the fourth quarter of 2015 are shown on Figures 4.6-7, 4.6-8, and 4.6-9, respectively (Arcadis 2016a). Since these three COPCs occur at concentrations above background and higher concentrations are located at or downgradient of the Station, the distribution continues to indicate that these three constituents cannot be ruled out as COPCs in groundwater and that the historical activities at the Station may have been the <u>one of</u> the source of these elevated COPCs.	As stated in the SEIR in the sentence prior to the text to the left and the RCRA Facility Investigation/Remedial Investigation Report (RF/R) Volume 2 Addendum Reports, the nature and extent of other chemicals of potential concern (COPCs), molybdenum, nitrate, and selenium was further investigated because the initial sampling results of these other COPCs were above regional background concentrations and higher at and downgradient of the Station, suggesting that historical activities at the Station may have been the source. As part of these investigations, molybdenum has been monitored on a frequent basis at wells away from the Cr(VI) plume, in particular the wells at the TCS Ponds. This monitoring indicates that molybdenum has frequently been above its background UTL concentration of 36.3 micrograms per liter. In addition, nitrate has historically been above its UTL near the TCS Ponds. Note that total dissolved solids content of these groundwater samples is very low and therefore does not reflect the influence of the water in the lined ponds but rather demonstrates the natural concentrations of nitrate and molybdenum. These data provide evidence of locally elevated molybdenum and nitrate concentrations that are not associated with the TCS. Notably, these data are not included in reports to DTSC because these wells are not monitored as part of the groundwater monitoring program under DTSC's oversight. For clarity, PG&E recommends that the text be revised as shown to the left.
79	4.7.3.1, pp. 4.7-6-4.7-7, 4.7-9, Figure 4.7-1	The following have been identified as non-sensitive land uses in and around the Project Area for the Final Groundwater Remedy Project, beyond those identified in the Groundwater FEIS and/or present non-sensitive information regarding distances from Project elements that were not known at the time that the Groundwater FEIS was certified: 1) Single-family residences between Park Meabi Road and National Trails Highway in California, located approximately 1,100 feet to the northeast of the closest project-related activity; the proposed Construction Headquarters/Long-Term Remedy Support Area and Soil Processing/Clean-Soil Storage Area. 2) Pirata Cove Resort in California, located approximately 2,300 feet to the northeast of the closest project-related activity; the proposed Construction Headquarters/Long-Term Remedy Support Area and Soil Processing/Clean-Soil Storage Area. 3) Topock 66 Spa & Resort and adjacent residences located approximately 180 feet from the closest project-related activity; the proposed freshwater pipeline located along the Quimman Topock Highway and 225 feet to the northwest of Staging Area 27. 4) Residences located on the south side of I-40 in Arizona, approximately 800 feet to the southwest of Topock 66 Spa & Resort and approximately 220 feet from the closest Project-related activity, Staging Area 26. 5) There are three Tribal sensitive receptors. Boring activities would be located approximately 57 feet, 112 feet, and 160 feet from each of these Tribal sensitive receptors. The locations of these sensitive receptors, with the exception of confidential Tribal sensitive receptors, are shown in Figure 4.7-1. Some of the listed sensitive receptors and some of the information regarding distances from Project elements were not known at the time that the Groundwater FEIS was certified.	The sentence with the "and/or" is confusing. The edits shown to the left would clarify the text. To provide additional clarity, please confirm that the list to the left is the complete list of sensitive receptors. As PG&E has noted, the Groundwater FEIR lacks a figure to show the locations of sensitive receptors, and appreciates the inclusion of Figure 4.7-1 in the Draft SEIR, which helps clarify exactly where sensitive receptors are located in the Project area. To further clarify how PG&E should treat the identified sensitive receptors, PG&E requests that DTSC indicate for each receptor whether it is sensitive to noise, vibration, or both. In addition, although PG&E understands and respects the confidentiality of the locations of the sensitive tribal receptors, PG&E requests their location so that PG&E knows how to comply with the SEIR's noise mitigation measures.
80	4.7.5.2, p. 4.7-23	Appendix D (Construction Health and Safety Plan) of the C/RAMP provides health and safety	As Section 4.7.5.2 primarily addresses noise, PG&E suggests the edits to the left to add clarity.

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		procedures that would be applied during construction activities. Section 7.4.6.2 of this Construction Health and Safety Plan requires noise level monitoring and the use of hearing protection when noise levels exceed the action level of 85 decibels over an 8-hour work day.		IS-093
81	4.7.5.3, p. 4.7-29; Table 4.7-11	1 st line/2 nd column (Operation Activity & Noise Source): Pump 6a (Compressor at the Station)	Please explain what is meant by "Compressor at the Station."	IS-094
82	4.7.5.3, p. 4.7-29	The TCS Evaporation Ponds contain agitators and dip systems ponds that would filter, reduce the volume of contaminated wastewater through evaporation.	Proposed text revisions provided for clarity and accuracy.	IS-095
83	Table 4.7-14, p. 4.7-39	Footnote 2 in the body of the table	There is no footnote 2 at the end of the table. Please review and revise as appropriate.	IS-096
84	4.8.2.1, pp. 4.8-2-4.8-3	At the time the Groundwater FEIR was certified, the Station PG&E Topock interim Measure No. 3 operated under Order No. 97-03-DWQ (General Permit No. CAS000001 [General Industrial Permit]), At the time the Groundwater FEIR was certified, the Station PG&E Topock interim Measure No. 3 was operating under Waste Discharge Identification Number 7356Q19443.	Edits suggested to reflect the facility name as listed in the Industrial Storm Water General Permit.	IS-097
85	4.8.2.1, p. 4.8-3	In 2011, the Station primarily generated and still generates its own electricity on-site, but can self-on-backup-on-supply-from-the-city-of-Moabi-as-needed.	The text is not entirely accurate because even though the PG&E Topock Compressor Station does receive some electrical power from the City of Needles, city electricity does not act as backup power for the Station. The Station has a backup diesel generator for use if the main natural gas fired generators fail. PG&E thus suggests the edits shown to the left.	IS-098
86	4.8.2.1, p. 4.8-4	This sludge is considered a non-RCRA hazardous waste because of its toxicity, and was sent on a monthly basis for disposal at the Kettleman Hills Landfill in Kings County, California.	Edit suggested for added clarity.	IS-099
87	4.8.3.2, p. 4.8-8	This building is used for the management processing of solid waste, excluding soil, for recycling, disposal, or salvaging. The Project would share the existing use of this building for storage of hazardous wastes and hazardous materials, the recycling or salvage of materials from the IM-3 Facility structures (trailer and mobile warehouse units, equipment, and tank systems) and other uncontaminated materials with potential recycle, reuse, or resale value (e.g., steel, iron, non-ferrous copper, stainless steel, plastic, and concrete).	Edit suggested for added clarity.	IS-100
88	4.8.5.2, p. 4.8-16	The Project would also include construction of a Contingent Freshwater Pre-Injection Treatment System, if necessary, to treat freshwater from water supply wells located in the HNMW in Arizona in the event that the freshwater contains arsenic at concentrations above the water quality objective of 33 micrograms per liter , as described in Section 3.6.1.7 of this SEIR.	PG&E understands that the water quality objective for arsenic is not 32 micrograms per liter, and instead is as described on page 3-34 of the Draft SEIR. If that is correct, please revise the sentence to the left as shown.	IS-101
89	4.8.5.2, p. 4.8-16	The Project would include construction of improvements at the Topock Compressor Station (TCS) Evaporation Ponds, namely a small structure to house a natural gas generator, a containment pad for truck loading/unloading, drip evaporation system (including agitators), valves, and remote monitoring instrumentation, as described in Section 3.6.1.9 of this SEIR.	Edits suggested for added clarity.	IS-102
90	4.8.5.2, p. 4.8-17	Station and TCS Evaporation Ponds ... The existing generators at the Station would be supplemented by two new 480 volt natural gas generators with a new switchgear and auxiliary system (e.g., lighting controls, sensors, security	The deleted text pertains to the use of solar panels at the Construction Headquarters west of Moabi Regional Park and therefore does not belong in the description of the Station and TCS Evaporation Ponds.	IS-103

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment	
91	4.8.5.3, pp. 4.8-21-4.8-22	cameras, and valve actuators) that would be housed in the existing Auxiliary Building. The project also includes the use of photovoltaic solar panels at the workshop buildings and parking shade structure to provide additional power supply.	The septic tanks are proposed to be located within the footprint of the CHQ, which is in a previously disturbed area. Text edits shown to the left are proposed for accuracy.	IS-103
92	4.8.5.3, p. 4.8-25	However, the two septic tanks at the CHQ would <u>be</u> located at a previously undisturbed area.	Section 4 (Decommissioning Procedures) and Section 5 (Waste Management Plan) of the IM3 Decommissioning Work Plan (CRAWP, Appendix F and CIMP, Appendix B) discusses five anticipated types of wastes and likely methods of disposition: 1. Non-hazardous solid waste, which may be recovered or disposed of. 2. Cleaning liquid and solid waste generated from cleaning components/materials in Category 1 above. 3. Hazardous solid waste, which will likely not be decontaminated prior to disposal. 4. Components or materials that will be decontaminated and managed as non-hazardous if decontamination is successful, which may be recovered or disposed of. 5. Decontamination liquid or solid waste generated from decontaminating components, or materials in Category 4. Therefore, not all of the waste generated would be disposed of at a hazardous waste facility. Suggested edits make the text reflect the proposed Project.	IS-104
93	4.9.3.2, p. 4.9-11	The decommissioning of the IM-3 Facility would generate up to 5,000 cubic yards of solid waste and up to 2 million gallons of liquid waste. Depending on quality and quantity, the material would be recovered, disposed onsite at the TCS ponds, or disposed <u>offsite</u> at a licensed hazardous waste disposal facility permitted to accept the waste.	1. Non-hazardous solid waste, which may be recovered or disposed of. 2. Cleaning liquid and solid waste generated from cleaning components/materials in Category 1 above. 3. Hazardous solid waste, which will likely not be decontaminated prior to disposal. 4. Components or materials that will be decontaminated and managed as non-hazardous if decontamination is successful, which may be recovered or disposed of. 5. Decontamination liquid or solid waste generated from decontaminating components, or materials in Category 4. Therefore, not all of the waste generated would be disposed of at a hazardous waste facility. Suggested edits make the text reflect the proposed Project.	IS-105
Chapter 5		The water quality at well HNW-1A deteriorates to unacceptable levels. In particular, if the concentration of arsenic increases to and remains above the water quality objective of 10 micrograms per liter (µg/L).	Since its installation, as evidenced by subsequent sampling events in 2010 and 2011, well HNW-1A has had arsenic concentrations above 10 µg/L. Edit proposed to clarify that water quality at well HNW-1A already is above the water quality objective.	IS-106
94	5.1.2, p. 5-2-5-3	New direct impacts, not analyzed in the Groundwater FEIR, could occur as a result of: the importing of groundwater potentially containing increased levels of arsenic from Arizona to California; construction and operation of the Construction Headquarters, Long-Term Remedial Support Area and Soil Processing Area near Moabi Regional Park; the use of portable generators and lighting to accommodate limited nighttime work activities and the use of <u>certain</u> staging areas.	The Groundwater FEIR considered the use of portable generators and limited nighttime work activities. (For analysis of portable generators, see FEIR Vol. 2, pages 4.1-37, 4.2-6, 4.2-7, 4.2-27, 4.2-31, 4.2-33, 4.4-59, 4.9-17, 4.9-18, 4.9-19, 4.9-21, 4.9-22, 4.11-7, 4.11-6, 4.11-7, 6-29, 6-31, 6-32, 6-41,); for analysis of nighttime work activities see FEIR Vol. 2, pages 4.1-29, 4.1-34, 4.1-37, 4.1-39, 4.1-47, 4.1-50, 4.2-27, 4.4-55, 4.9-23, 5-4, 5-16.) The Groundwater FEIR also considered the use of some of the staging areas considered in the SEIR. (See FEIR Vol. 2, p. 3-11, Exhibit 3-5.) See the edits to the left, which are suggested to increase the clarity and accuracy of the text.	IS-107
95	5.1.2, p. 5-4	Direct and indirect impacts could occur as a result of: . . . and increased disturbance of soil from trenches for pipelines resulting from the fact that remedy pipelines are to be constructed underground beneath aboveground which was assumed in the Groundwater FEIR , which will result in approximately 127,500 linear feet of underground piping. Installed in 43,200 feet of trenches, plus a Future Activity Allowance, all of which would result in a substantially more severe significant impact on unknown historical resources than was previously identified in the Groundwater FEIR.	As noted above, the Groundwater FEIR assumed the majority of pipelines would be placed underground. The proposed edits also clarify the length of trenching, which is the key number when considering soil disturbance.	IS-108
96	5.1.3, p. 5-9	Land Use Compatibility of Future Project Noise Levels with the Topock Traditional Cultural Property ... In order to reduce this impact, Mitigation Measure NOISE-1 and NOISE-2 shall be implemented (see Section 4.7). Mitigation Measures NOISE-1 and NOISE-2 would <u>not</u> require noise monitoring. If construction of Project features occur within 1,850 feet and 5,830 feet from sensitive California receptors and 350 feet and 735 feet from Arizona receptors for daytime and nighttime noise.	PG&E notes that mitigation measure NOISE-1 pertains to short-term groundborne vibration caused by Project activities, not noise. Similarly, the cited distance of 45 feet pertains to limit of construction due to vibration, not noise. Further, neither NOISE-1 nor NOISE-2 limits construction within certain distance due to noise. Lastly, there is no reference to the requirement for the disturbance coordinator to consider the timing of project activities in relation to tribal ceremonies in accordance with the CIMP. For the reasons above, PGE suggests the edits shown to the left.	IS-109

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SER Comment
		... respectively fact of sensitive receptors (Topock TSP) , implementing acoustic shields to limit noise to sensitive receptors. If noise levels are still determined to exceed noise standards, and require a disturbance coordinator. The disturbance coordinator will be required to 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 section 2.11 (CIMP); see Appendix H to the C/RAWP. In addition, CU-1a-12 would ensure specifically that accommodations for Tribal ceremonies are provided for before and after damages -construction activities.	IS-109
97	5.2, p. 5-11	The consumption and use of nonrenewable resources, as contemplated in CEQA Guidelines Section 15126.2, subdivision (c), is not considered irreversible/irretrievable justified, since resources are justified to ensure protection of the environment through remediation of the contaminated groundwater plume. The Project does not commit substantial amounts of resources compared to existing annual allotments, and the amount of energy and equipment to be used is limited to that needed for the remedy. The Project also includes decommissioning, and thus would not commit future generations to similar uses. So there is no irreversible commitment of nonrenewable resources or related-significant impact.	IS-110 Suggested edits intended to clarify the text.
Chapter 6			
98	6.3.1, p. 6-4	6.3.1 Pre-Construction, Construction, Start-Up & IM-3 Decommissioning ... Phase 2 may overlap the end of Phase 1 by a month or two, depending on the progress of construction. In addition, upon receipt of DTSC approval for decommissioning of IM No. 3 Facility, with concurrence from DOI, PG&E will decommission the facility in accordance with the IM No. 3 Decommissioning Work Plan (Appendix F of C/RAWP). All components of IM No. 3, except for monitoring wells, brine storage and loading facility at MW-20 Bench, and utilities in National Trails Highway, will be decommissioned and removed. Subsequent to decommissioning, PG&E will submit a site-specific restoration plan for review and comment. Restoration will be conducted in accordance with an approved restoration plan. Project 1C, project location: "Immediate vicinity of the Station and in Arizona near Topock Valley "	IS-111 PG&E notes that the SER also evaluated the layout and decommissioning of IM No. 3 Facility as part of construction activities, as well as subsequent restoration. Therefore, PG&E suggests adding the sentence shown to the left to Section 6.3.1.
99	6.4.2, p. 6-7, Table 6-3	Project 1C, project location: "Immediate vicinity of the Station and in Arizona near Topock Valley "	IS-112 Edit suggested for clarity.
100	6.4.2.1, p. 6-15	This work is planned for 2016, 2017 or in subsequent years, as historic wells are identified.	IS-113 Edit suggested for accuracy.
101	6.4.2.1, pp. 6-16-6-17	... The Soil Work Plan sampling began in November 2015 and continued through March 2017. Additional activities, similar to those described above associated with investigation have not yet been completed, and will depend on the results of soil sampling. If additional activities are to be completed, they would occur from 2016 to 2018 2017 to 2018. ... Soil Remediation and Potential High-Tech Project (1F) ... For the purposes of this analysis, it is assumed that early phases of soil remediation likely pilot studies could overlap with the construction activities associated with the proposed	IS-114 Edits to the dates are provided for accuracy. Based on the description provided, the pilot studies in Project 1F do not appear to be different than those included in the Soil Investigation Activities Project 1E. Therefore, PG&E suggests that pilot studies be struck from Project 1F.

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SER Comment	
		Project."		IS-114
102	p. 5-28	In addition, the Soil Remediation and Remedial Plan Task Project (1F) would also require compliance with CEQA, including preparation of an EIR, . . .	Because soil-related pilot tests are part of Project 1E (Soil Investigation Activities), they have already been evaluated in the Soil Investigation EIR. Therefore, PG&E believe that they do not need to be re-evaluated in another EIR. In addition, even if additional CEQA may be required, it is premature for DTSC to commit to preparing an EIR before DTSC determines whether there could be a new, significant environmental impact.	IS-115
103	6.5.6, p. 6-36	However, each of these individual projects would likely require implementation of similar measures and would be required to be in compliance with federal, state, and county standards, thereby reducing the potential for these potential impacts to be significant from a cumulative perspective.	Edit suggested to clarify text.	IS-116
104	6.5.8, p. 6-39	The Project would implement SDPs and the BVP Plan for construction activities, as well as adhere to the substantive provisions of the state Construction General Permit to avoid and/or minimize the potential for impacts related to hydrology and water quality.	Mitigation Measure HYDRO-1a/2a/3a states that the BVP Plan for construction activities (C/BAMP, Appendix M) 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 CEQA, for purposes of ensuring the protection of existing water quality. Therefore, PG&E suggests the edits shown to the left for clarity and consistency with HYDRO-1a/2a/3a.	IS-117
105	6.5.11, p. 6-41	Mitigation Measure NOISE-3 would ensure that the cumulative noise impacts resulting from simultaneous construction of the proposed Project and the Soil Remediation and Remedial Plan Task Project remain below the applicable noise threshold, however, because the specific locations and timing of overlap is unknown, impacts are considered significant and unavoidable.	This sentence is confusing as written. The sentence suggests that Mitigation Measure NOISE-3 would ensure that noise from the Project and Soils Remediation Project would be less than significant because DTSC would control how those projects interact with each other (i.e., if overlap creates problematic noise, DTSC would require noise barriers or modifications). But the sentence also suggests that Mitigation Measure NOISE-3 would not ensure that noise impacts from the combination of the Project and Soils Remediation Project would be less than significant. Please clarify this text. PG&E sees no reason why NOISE-3 would be ineffective, however, and suggests deleting the portion of the sentence suggesting that the mitigation measure would not effectively reduce cumulative noise from the Project and Soils Remediation Project. Perhaps DTSC concluded that cumulative noise impacts would be significant and unavoidable because DTSC cannot control other, non-PG&E projects that may occur while the Groundwater and Soils Remediation Projects are occurring or for another reason.	IS-118
106	6.5.11, p. 6-42	The impact would remain significant and unavoidable after implementation of the mitigation measures detailed above. The Project in combination with other projects in the area would continue to contribute considerably to a cumulatively significant impact related to construction noise and vibration.	The analysis does not identify a cumulative vibration impact.	IS-119
107	6.5.16, p. 6-47	Wastewater at the Project Area is currently processed on-site and reinjected into the ground (IM No. 3 Facility), disposed of at the TCS evaporation ponds, or trucked off-site when necessary.	Edits suggested to clarify the text and make it more complete.	IS-120
Chapter 7				
108	7.5.3, p. 7-14	Elimination of Project Components in the Moabi Regional Park Area Project Objectives: The objectives of the Project would mostly be met by this alternative. One of the project objectives is to "consider public safety" and to "ensure efficiency," which would not be met if the main Construction Headquarters and long-term Remedial Support Area were to be located further from the Project activities, which would require longer worker trips to additional potential for hazardous material spills, and increased construction duration, site-in-idleness, locating the Construction Headquarters and long-term Remedial Support Area near the TW Bench would increase visual impacts, and potentially biological resource impacts, in the Colorado River floodplain, which would not meet DTSC's objective to minimize aesthetic impacts and	Edits suggested to make the text accurate.	IS-121

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Comment No.	Section, Page, Table/Bullet	Reference Text and Suggested Edits (shown in underline/strikeout format)	Draft SEIR Comment	
		IMPACTS TO BIOLOGICAL RESOURCES		IS-121
109	7.7, p. 7-42	It is important to note that the Aboveground Pipeline Alternative would not achieve goals of the basic fundamental project objectives, but not even single objectives. . . . Since the construction and long-term maintenance and operation of the Aboveground Pipeline Alternative would result in greater risks to worker and public safety issues as well as greater aesthetic impacts, this alternative would not meet two of the environmental objectives of the Project.	Suggested to clarify text and make it clear that the Aboveground Pipeline Alternative would meet most of the basic Project objectives.	IS-122
Appendix G:WMM				
110		<p>Mitigation Measure GEO-1a</p> <p>b) . . . PG&E shall develop a SWPPP as discussed in mitigation measure HYDRO-1 (EIR) and the Hydrology and Water Quality section of the EIR. The SWPPP shall identify best management practices (BMPs) that would be used to protect stormwater runoff and minimize erosion during construction.</p> <p>. . .</p> <p>d) Regarding the potential for contaminated soils to be eroded and contribute contamination into receiving waters, Mitigation Measures GEO-2 and HAZ-2 (EIR) provides the provisions for safe work practices and handling of contaminated soils as investigation derived wastes.</p> <p>Mitigation Measure GEO-1b</p> <p>. . .</p> <p>c) . . . The habitat restoration plan outlined prepared in compliance with mitigation measure BIO-1 (EIR) shall include 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.</p>	<p>The SEIR Table 1-3 includes mitigation measure HYDRO-1a/2a/3a which states that PG&E prepared a BVP Plan (C/RAMP, Appendix M) for construction activities that complies with all requirements. HYDRO-1b/2b/3b states that PG&E prepared a SWPPP (O&M Plan, Appendix D) for O&M to meet the 2015 California General Permit. Please confirm that the BVP Plan is C/RAMP and the SWPPP is O&M Plan have met the requirements of GEO-1a/b). If so, please revise the text as shown to the left.</p> <p>GEO-1a(d) refers to GEO-2, however, the Groundwater FEIR never included a mitigation measure called GEO-2. PG&E requests that DTSC use the SEIR as an opportunity to clarify this mitigation measure as shown to the left.</p> <p>The habitat restoration plan required by Mitigation Measure BIO-1 (FEIR) has been completed. Please update Mitigation Measure GEO-1b as indicated to reflect that fact. In addition, the bolded, red text shown to the left was cut off in the Draft SEIR and should be added back. For clarity, PG&E also has suggested deleting the comma between "inadequate" and "for."</p>	IS-123
111				IS-124
Appendix IS				
112	IS-5	. . . the Final Remedy Design provides new detail regarding light and glare sources, such as the use of solar panels, which were not previously analyzed in the EIR and provides additional detail about the need for activities during nighttime hours that may have additional lighting.	The FEIR analyzed the impacts from the use of solar panels (see Vol. 1, page 4-142, vol. 2, page 4-4-65) as well as lights during nighttime work (see Vol. 2, pages 4-1-29, 4-1-34, 4-1-37, 4-1-39, 4-1-42, 4-1-44, 4-1-47, 4-1-50, and 4-1-1-7).	IS-125
113	IS-42	In addition, details of various components of the Final Remedy Design were not known at that time and were therefore not available for analysis. The Groundwater FEIR addressed the potential for elevated levels of arsenic and other byproducts that could result from reductive processes. The Groundwater FEIR also proposed implementation of Mitigation Measure HYDRO-1. . . .	For completeness, please add the sentence to the left. This sentence is supported by FEIR, Volume 1, page 4-189 (response to Comment T3-6) and page 4-212 (response to Comment T7-8).	IS-126

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**Letter
I6
Response**

Cox, Castle & Nicholson LLP, on behalf of PG&E

February 27, 2017

- I6-001 The commenter gives an introduction to their comments and indicates that comments will be broken down into four categories that consist of clarifications and minor modifications.
- DTSC appreciates the commenter’s thoughtful questions and that the commenter took the time to share their concerns with DTSC. DTSC wishes to thank the commenter for participating in this process and provides the responses below to address the commenter’s questions and concerns. The comment is noted for the record.
- I6-002 The commenter states that scientific names of species should be put in parenthesis after the common name the first time it is used, and then only referred to by the common name thereafter.
- Based on the page numbers provided, it appears as if the commenter is referring to scientific names for habitat types. ESA, the preparer of the Draft SEIR, does not typically use scientific names when referencing habitat types/vegetation communities. For example, the scientific name for creosote is not typically provided when referring to Creosote Bush Scrub; the scientific name would be provided when identifying creosote specifically as a dominant plant species in that community. The changes proposed do not affect the accuracy or adequacy of the analysis within the Draft SEIR, and as a result no changes to the text are made.
- I6-003 The commenter requests that all geographic information system (GIS) acreage data include the word “approximately” before its use in the Draft SEIR because GIS data itself is an approximation.
- Specific habitat acreages were calculated for the proposed Project on pages 4.3-23 through 4.3-25. To indicate that these acreages are an approximation based on GIS data, the introductory text to that section on page 4.3-3 of the Draft SEIR is modified in the Final SEIR as follows:
- Section 4.3.3 provides updated vegetation and habitat information for this SEIR (all acreages presented in this section are approximate).
- I6-004 The commenter requests that documents be referenced on the date they were finalized, rather than the date they were subsequently included as appendices to the *Construction/Remedial Action Work Plan for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California*. The commenter does not give a specific example for this comment.

Because the Final Remedy Design and C/RAWP are appended to the Draft SEIR, DTSC decided to cite any appended reference documents under the Final Remedy Design or C/RAWP Appendix BOD so that the public would have an easier time accessing the referenced documents.

I6-005

The commenter requests that any references to the Groundwater FEIR mitigation measures in this Draft SEIR be identified as such so that it is clear which mitigation measures apply to which EIR. The commenter does not provide any specific examples of this comment (the reference to comment 102 in Appendix A does not clearly indicate an example of this comment).

DTSC made an effort to be very clear about which mitigation measures applied to the Groundwater FEIR (and whether they may still be applicable to the Draft SEIR) and which new measures are included in the Draft SEIR. DTSC advises the reader to pay attention to the subsection headings, which indicate if the section is a summary of the Groundwater FEIR mitigation measures, a comparison between Groundwater FEIR and Draft SEIR mitigation measures, etc. The reader can also access Appendix GWMM, which clearly indicates in ~~strikeout~~ underline which measures from the Groundwater FEIR are still applicable and the new mitigation measures proposed as part of the Draft SEIR.

I6-006

The commenter thanks DTSC for including Appendix GWMM in the Draft SEIR, which the commenter states is a useful tool. The commenter wants clarification that Table 1-3 in the Draft SEIR is a complete list of all mitigation measures that apply to the project.

Table 1-3 does include all mitigation measures that are applicable, and DTSC recommends that the commenter use the version published as part of the Final SEIR to see the changes made as a result of the response to comment process. In addition, a Mitigation Monitoring & Reporting Program (MMRP) is included as Chapter 11 of this Final SEIR, which does present the final full set of mitigation measure requirements that DTSC has approved.

I6-007

The commenter requests confirmation that the list of noise-sensitive receptors on pages 4.7-6 through 4.7-7 of the Draft SEIR is complete and supersedes any other list.

The commenter is referred to response to comment I6-092, which addresses this topic in detail. The commenter also requests text edits regarding Mitigation Measures NOISE-2 and NOISE-3; the commenter is referred to responses to comment I6-020 and I6-021, respectively, where those are specifically addressed.

I6-008

The commenter seeks clarification that the *Topock Groundwater Remediation Project Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats* satisfies the requirements of Mitigation Measure BIO-1a(a).

Please refer to response to comment I6-014, which addresses the topic in detail.

I6-009

The commenter questions why Mitigation Measure BIO-2h requires two focused special-status plant surveys within 5 years, and states that the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) require only one such survey within a 5-year period. The commenter requests substantial evidence supporting the need for more than one survey.

Please refer to response to comment I6-016, which addresses the topic in detail.

I6-010

The commenter indicates they look forward to constructing the groundwater remedy as soon as possible so that the historic contamination in the Topock area can finally be remediated.

The comment is noted for the record.

I6-011

The commenter requests adding text that describes the “lay-up” process associated with IM-3.

To further clarify the IM-3 treatment process within the purview of the SEIR without introducing that specific term, the text is revised below. In response to the comment, the text on page 1-4 is revised in the Final SEIR as follows:

This SEIR evaluates, at a project level, the environmental effects associated with the cessation of the IM-3 treatment, the decommissioning and removal of the IM-3 Facility, the construction, operation and maintenance, and decommissioning of the Final Groundwater Remedy Project based on the Final Remedy Design and as further described in Chapter 3 of this SEIR, relative to the program-level impact analysis in the certified Groundwater FEIR.

I6-012

The commenter requests a text modification to clarify Project details.

In response to the comment, the text on page 1-6 is revised in the Final SEIR as follows:

More information about the Project features and details can be found in Chapter 3 “Project Description,” Section 3.6: Subsection 3.6.1, and Table 1-1 and Table 1-2 provide a summary of the main components that comprise the Project, ~~and that are~~ evaluated in this SEIR.

I6-013

The commenter notes that Mitigation Measures GEO-1a and GEO-1b, described in the Groundwater FEIR, were not included in Table 1-3 of the Draft SEIR.

Because there were no substantial changes to the 2011 Groundwater EIR Geology section, that section was not brought forward into the Draft SEIR. For completeness, mitigation measures from the Groundwater FEIR are included in Table 1-3. The mitigation measures have been revised as discussed in Comment I6-123.

I6-014

The commenter summarizes Mitigation Measure BIO-1 of the Groundwater FEIR and notes CDFW, the U.S Department of the Interior (DOI), and USFWS have reviewed and concurred with the *Topock Groundwater Remediation Project Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats* and the *Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts*. The commenter recommends clarifying in Mitigation Measure BIO-1a of the SEIR that revegetation for in-place restoration of disturbance sites is not a requirement, and that grading to pre-impacted contours and vegetation replacement in accordance with previously approved restoration plans remain appropriate.

The commenter's recommendation that in-place restoration of disturbance sites be performed in accordance with previously approved restoration plans is consistent with Mitigation Measure BIO-1a. Mitigation BIO-1a does not require "revegetation" for in-place restoration, and the measure notes "[r]estoration of jurisdictional areas within the Project Area shall be guided by the *Havasupai National Wildlife Refuge Habitat Restoration Plan* (Appendix G to the C/RAWP (CH2M Hill 2015b)) and *Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats* (Appendix O to the C/RAWP (CH2M Hill 2015b)), as approved by CDFW, USFWS, and DOI" (page 4.3-73 of the Draft SEIR). The measure further notes "[i]mplementation of these plans will be informed by the technical memorandum, *Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts*, included as Appendix V to the C/RAWP (CH2M Hill 2015b), which provides preliminary information on the condition within fourteen proposed mitigation planting areas" (page 4.3-73 of the Draft SEIR). In response to the comment, the Draft SEIR text on page 4.3-72 is revised in this Final SEIR as follows.

- 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 direct impact to non-disturbed jurisdictional area) shall occur in accordance with the *Havasupai National Wildlife Refuge Habitat Restoration Plan* (Appendix G to the C/RAWP (CH2M Hill 2015b)) and *Habitat Restoration Plan for Riparian Vegetation and Other Sensitive Habitats* (Appendix O to the C/RAWP (CH2M Hill 2015b)).

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

The commenter also recommends revising Mitigation Measure BIO-1a to include an option to purchase credits from a U.S. Army Corps of Engineers (USACE)-approved mitigation bank, as well an option to participate in a CDFW- and/or USACE-approved in-lieu fee program. The recommendations of the commenter are consistent with the intent of Mitigation Measure BIO-1a and, therefore, the suggested additions are incorporated for the purposes of increasing flexibility. In response to the comment, the Draft SEIR text on page 4.3-72 et seq. is revised in this Final SEIR as follows.

- 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...

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

I6-015

The commenter recommends revisions to Mitigation Measure BIO-2h to increase the workability of the measure, make the measure more proportional to potential impacts, and clarify requirements. Specifically, the commenter suggests edits to Mitigation Measure BIO-2h to allow the possibility to consult with CDFW on special-status plant avoidance measures for activities within 50-foot avoidance buffers.

The commenter's recommended revision is consistent with requirements of Mitigation Measure BIO-2h. The measure already states, "[i]f disturbance within 50 feet of a special-status plant species cannot be avoided, PG&E shall contact CDFW prior to removing individuals to determine appropriate minimization and mitigation measures" (page 4.3-117 of the Draft SEIR). In response to the comment, the Draft SEIR text on page 4.3-116 et seq. is revised in this Final SEIR as follows to provide additional clarification.

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

To the maximum extent feasible, additional Project facilities to be constructed under the Future Activity Allowance shall be sited to avoid suitable habitat for special-status plant species. If additional Project facilities to be constructed under the Future Activity Allowance cannot be sited to avoid suitable habitat, one of the following measures shall apply.

- 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).

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.

~~As noted above, if disturbance within 50 feet of a special-status plant species cannot be avoided, PG&E shall contact CDFW prior to removing individuals~~ to determine appropriate minimization and mitigation measures...

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

I6-016

The commenter suggests revising Mitigation Measure BIO-2h to require only one survey within the previous 5 years to be consistent with plant survey protocols from CDFW and USFWS. The commenter suggests that protocols from these agencies do not require more than one survey, and notes the requirement for two surveys is not roughly proportional to and lacks a nexus to potential impacts to special-status plants. The commenter incorrectly asserts CDFW and USFWS plant survey protocols require only one survey within the previous 5 years.

Among other stipulations regarding the timing and need for rare plant surveys, CDFW special-status plant survey guidelines (CDFW 2009) note “[v]isits to the site in more than one year increase the likelihood of detection of a special status plant especially if conditions change.” The CDFW guidelines also include the following footnote: “Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment” (CDFW 2009). In addition, the USFWS guidelines for botanical surveys (USFWS 2000) note, “[p]roject sites with inventories older than 3 years from the current date of project proposal submission will likely need additional survey.” Given that the proposed Project is located in a desert environment that is subject to considerable annual variations in conditions (e.g., rainfall amounts and patterns), one survey every 5 years is not adequate to sufficiently update and maintain a record of known special-status plant populations in the Project Area. This is consistent with the input received from CDFW, a responsible agency, during the development of the mitigation measure, and DTSC notes that CDFW had no comment regarding the measure presented in the Draft SEIR. Consistent with CDFW and USFWS guidelines, Mitigation Measure BIO-2h as currently written is designed to address annual variations in climatic conditions that affect presence and population sizes of special-status plants, as well as uncertainty regarding additional facilities that could be constructed during the operational lifespan of the project.

I6-017

The commenter suggests deleting the phrase “prior to removing individuals” in Mitigation Measure BIO-2h because it is duplicative with the sentence that states “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 commenter also states that the phrase is confusing and could be

interpreted as directing PG&E to remove plants if a 50-foot buffer is infeasible.

Refer to comment response I6-015. The phrase “prior to removing individuals” is deleted from Mitigation Measure BIO-2h and additional edits are provided to increase clarity of the measure.

I6-018

The commenter suggests changes to the text in Mitigation Measure CUL-1a-19 to reflect the fact that PG&E submitted a draft Treatment Plan to the agencies and Tribes in 2014, and that PG&E responded to comments and submitted a final Treatment Plan to DTSC and the Bureau of Land Management (BLM) in 2017.

The Treatment Plan is currently being reviewed by the Interested Tribes and it is possible that there may be further changes to the Treatment Plan. Until DOI and DTSC have considered Tribal input, the Treatment Plan is not considered final. Therefore, the suggested changes have not been made.

I6-019

The commenter suggests changes to the text in Mitigation Measure CUL-1b/c-3 to reflect the fact that PG&E submitted a draft Treatment Plan to the agencies and Tribes in 2014, and that PG&E responded to comments and submitted a final Treatment Plan to DTSC and BLM in 2017.

The Treatment Plan is currently being reviewed by the Interested Tribes and it is possible that there may be further changes to the Treatment Plan. Until DOI and DTSC have considered Tribal input, the Treatment Plan is not considered final. Therefore, the suggested changes have not been made.

I6-020

The commenter requests text modifications to Mitigation Measure NOISE-2 to reflect consistency with CIMP Section 2.11 regarding protocols to accommodate Tribal ceremonies involving Topock Cultural Area.

DTSC concurs with the clarification and, in response to the comment, the text on page 1-65 is revised in the Final SEIR as follows:

Mitigation Measure NOISE 2: Potential Impacts to Noise Levels and Noise Standards (Groundwater FEIR Measure with Revisions)...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)~~which will be accommodated by PG&E to the extent practicable.~~

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a

substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

I6-021

The commenter requests clarification on the term “any sensitive receptor” used in Mitigation Measure NOISE-3. The commenter also requests an explanation of the term “near” in Mitigation Measure Noise-3, and suggests text edits to clarify the term.

The term “near” in the context of cumulative noise is difficult to define, since it is dependent on the noise levels produced by each activity, the geometric arrangement, and the ambient conditions—all of which can vary greatly with field activities such as those proposed. Therefore, the construction contractor must be diligent in performing monitoring whenever the potential for cumulative impacts arises, based on the types of activities proposed, proximity, time of day, etc. The distances recommended by the commenter apply to a single source of noise. The introduction of another source of noise in the vicinity would expand the distances within which the combined noise levels of two or more activities could exceed the noise thresholds. Noise levels from concurrent activities do not combine linearly. For these reasons, a precise distance cannot easily be defined in advance as pertaining to cumulative noise impacts. Best practice indicates that the construction contractor performs in situ noise monitoring when typical, real-life concurrent activities are first begun, and that documentation be provided to DTSC to help establish the appropriate distances at which further monitoring is not required (until and unless a noise complaint is received).

Regarding the comment requesting clarification on what the term “any sensitive receptor” means, DTSC intends for this to apply to any sensitive receptor defined within Chapter 4.7 of the SEIR. As a result, in response to the comment, the Draft SEIR text on page 6-42 is revised in the Final SEIR as indicated below. Notwithstanding the above, additional edits are made to Mitigation Measure NOISE-3 to clarify thresholds and requirements.

Mitigation Measure NOISE-3: Cumulative Noise Increases from Remedial Activities (New Measure). Coordination between teams implementing soil remedial activities (including investigation, pilot testing, and remediation) and groundwater remediation shall occur as to avoid cumulative noise ~~impact~~ levels to exceed ambient noise levels by 5 dBA or greater, or to exceed applicable County standards at ~~to~~ 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 ~~representative~~ activities shall be conducted by a qualified acoustical consultant (or contractor 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.

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.

I6-022

The commenter requests text modifications to reflect the fact that DTSC alone, and not the U.S. Department of the Interior (DOI), certified the 2011 Groundwater FEIR.

In response to the comment, the Draft EIR text on page 2-17 is revised in the Final SEIR as follows:

The design review process began in 2011 after DTSC ~~and DOI approved~~ certified the Final Groundwater EIR, DOI issued their Record of Decision, and both agencies jointly approved Alternative E as the groundwater remedy project.

I6-023

The commenter notes that the remedy-produced water portable treatment unit may also process non-hazardous remedy-produced water and requested the addition of the underlined text below.

In response to the comment, the Draft EIR text on page 3-31 is revised in the Final SEIR as follows:

- Permitted transportable treatment units – if needed, permitted transportable treatment processes for hazardous and non-hazardous remedy-produced water would consist of one or more of the following treatment processes, depending on the produced water chemistry.

I6-024

The commenter requests adding a footnote to better explain the contingency plan for arsenic.

Instead of adding a footnote, clarification has been added by referencing the discussion of the arsenic pretreatment system. In response to the comment, the Draft SEIR text on page 3-33 is revised in the Final SEIR as follows:

- If the leading edge of the arsenic plume extends more than 150 feet away from the injection well locations, PG&E

must immediately reassess its modeling calculations and quickly identify interim actions it can take to limit the migration of the arsenic plume. These interim actions may include triggering activation of the contingency plan for arsenic pretreatment PG&E was directed by DTSC to include in its 60 percent groundwater remedy design. See Section 6, “Hydrology and Water Quality,” Subsection 4.5.6.3, “Impact Analysis” for discussion of the arsenic pretreatment system.

I6-025

The commenter suggests moving the description of the Auxiliary Building to a footnote since it is not a groundwater-remedy-related building.

Because the Auxiliary Building will house equipment that will support the remedy, DTSC believes it is appropriate to describe this use in the table and describe the structure as existing. This is similar to staging areas’ uses being defined in the remedy. Additional description on the use of the existing Auxiliary Building and the impact considerations in the cumulative analysis are presented in Section 3.6.1.9, under “Compressor Station, Existing Auxiliary Building.”

I6-026

The commenter requests that the text in Section 3.6.3.1, page 3-76, be made consistent with the text in Mitigation Measure HYDRO-4, which provides more detail on the manganese concentrations that would prompt contingencies to mitigate exceedance in manganese concentrations.

In response to the comment, the Draft SEIR text on page 3-76 is revised in the Final SEIR as follows:

The Final Remedy Design includes contingencies in the event that the treatment methodology results in generating manganese, an in-situ byproduct, at concentrations above ~~basin water quality objectives~~ those 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).

I6-027

The commenter requests that the text in Section 4.1.2.1 be revised to clarify that the BLM determined the Area of Potential Effect (APE) constitutes a TCP eligible for listing on the National Register of Historic Places (NRHP) in 2010.

DTSC notes that during preparation of the Draft Groundwater EIR in 2010, the BLM had not yet designated the Topock Cultural Area as a TCP; the Draft Groundwater EIR assumed eligibility of the Topock Cultural Area for purposes of the analysis. Following completion of the Draft Groundwater EIR, but prior to certification of the Groundwater FEIR, the Topock TCP was determined eligible for listing in the NRHP. This was acknowledged on page 4.4-58 of the Groundwater FEIR; however, the analysis was focused on the Topock Cultural Area. In

response to the comment, the text on page 4.1-4 is revised in the Final SEIR as follows:

Since 2011, however, additional Tribal perspectives regarding the Topock Maze and Topock Cultural Area, ~~which was subsequently determined by the Bureau of Land Management (BLM) to constitute a Traditional Cultural Property (TCP),~~ have been provided. The U.S. Bureau of Land Management (BLM) had previously determined that the area within the Area of Potential Effect boundaries (which includes the Topock Maze and overlaps in large part with the Project Area) constitutes a TCP and is eligible for the National Register of Historic Places (NRHP).

In addition, the text on page 4.4-10 is revised in the Final SEIR as follows:

This historical resource was referred to as the “Topock Cultural Area” (TCA) in the Groundwater FEIR and its boundaries corresponded to the Groundwater FEIR Project Area. Following completion of the Draft Groundwater EIR, but prior to ~~Since~~ certification of the Groundwater FEIR, the U.S. Department of Interior (DOI), Bureau of Land Management (BLM) determined that the area within the Area of Potential Effects (APE) (which overlapped in large part with the Groundwater Project Area), constitutes ~~Topock Cultural Area has been designated by the U.S. Department of the Interior (DOI) a traditional cultural property (TCP) eligible for listing in the NRHP,~~ known as the Topock TCP, and detailed information about this process and the Topock TCP is provided below in Section 4.4.3.1 of this SEIR.

I6-028

The commenter requests that the text in Section 4.1.3.1 be revised to clarify that the BLM determined the APE constitutes a TCP eligible for listing on the NRHP in 2010.

See response to comment I6-027. In response to the comment, the text on page 4.1-29 is revised in the Final SEIR as follows:

The Project Area and vicinity is considered by Tribes to be part of a broader cultural landscape and, ~~since in 2014, the BLM has been determined by the area within the APE (which overlaps in large part with the Project Area) BLM to constitute a TCP and is eligible for the NRHP,~~ as described in further detail in Section 4.4, “Cultural Resources,” subsection 4.4.3.2.

I6-029

The commenter suggests text additions to improve the clarity and accuracy of the text.

In response to the comment, the Draft SEIR text on page 4.1-68 is revised in the Final SEIR as follows:

Improvements at the Station include construction of infrastructure associated with the Topock Compressor Station Recirculation Loop (TCS Recirculation Loop), the contingent Dissolved Metals Removal System, and a Remedy-Produced Water Conditioning Plant and associated tanks and chemical storage. The existing Auxiliary Building would be used for new power generators and the existing Hazardous Materials Storage Building for storage of hazardous materials and wastes.

Improvements at the Transwestern Bench include construction of a 2,200-square-foot Operations Building, concrete pads, stormwater catch basins, ~~and~~ a fence surrounding the perimeter, and remedy wells/piping associated with the TCS Recirculation Loop.

I6-030

The commenter notes an error regarding the descriptions of the Groundwater FEIR aboveground/belowground pipelines.

In response to the comment, the Draft SEIR text on pages 4.1-68, 4.1-75, 4.1-87, and 4.3-58 are revised in the Final SEIR as follows:

Page 4.1-68: The Groundwater FEIR assumed subsurface trenches for piping at the northern and southern crossing under Bat Cave Wash; ~~however and~~ the majority of the piping proposed for the remedy was below ~~above~~ground.

Page 4.1-75: In particular, aboveground conveyance piping has generally been replaced with underground piping, ~~which results in removal of most of the aboveground piping that was envisioned in the Groundwater FEIR.~~

Page 4.1-87: ~~In addition, aboveground conveyance piping has generally been replaced with underground piping.~~

Page 4.3-58: This results primarily from additional roadways and facility footprints (described above), and the fact that remedy pipelines are to be constructed underground ~~(versus aboveground which was assumed in the Groundwater FEIR).~~

I6-031

The commenter suggests text additions to improve the clarity and accuracy of the text regarding security lighting.

In response to the comment, the Draft SEIR text on page 4.1-69 is revised in the Final SEIR as follows:

With the exception of security lighting in the Construction Headquarters area, and existing lighting at MW-20 Bench and TW Bench, temporary lighting would be supplied by portable generators and lights, as needed and consistent with any applicable mitigation measures and conditions of approval.

- I6-032 The commenter suggests text additions to improve the clarity and accuracy of the text regarding facilities at the Topock Compressor Station Evaporation Ponds (TCS Evaporation Ponds).
- In response to the comment, the Draft SEIR text on page 4.1-71 is revised in the Final SEIR as follows:
- Operation and maintenance activities at the TCS Evaporation Ponds would include ongoing maintenance of the drip system and agitators, the power system, the natural gas pipeline extension, the containment area for truck loading/unloading, and remote sensing equipment.
- I6-033 The commenter requests clarification to text in Section 4.1, “Aesthetics,” regarding the fact that the Project has already been designed to meet the requirements of Mitigation Measure AES-1.
- DTSC recognizes that PG&E may have fully explored ways and means to reduce aesthetics impacts during completion of the Final Remedy Design. However, the basis of DTSC’s Final Remedy Design approval is that the Project will adhere to all adopted mitigation measures. In the event any conflicts are discovered during construction or subsequent implementation of the project, including implementation of any additional Project elements as necessitated by the Future Activity Allowance, PG&E must use the mitigation measures as the governing factor on the path forward.
- I6-034 The commenter requests clarification to text in Section 4.1, “Aesthetics,” regarding the fact that the Project has already been designed to meet the requirements of Mitigation Measure AES-2.
- In response to the comment, the Draft SEIR text on page 4.1-85 is revised in the Final SEIR as follows:
- Mitigation Measure AES-2: Substantial Damage to Scenic Resources within a Scenic Corridor (Groundwater FEIR Measure with Revisions).** The proposed Project shall be ~~designed and~~ 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:
- This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.
- I6-035 The commenter states that “mercaptans” should not be referred to as odorants as done in the Draft SEIR, as this is just one of many components of typical natural gas odorants, and requests text changes to the Draft SEIR accordingly.

In response to the comment, the Draft SEIR text on page 4.2-5 is revised in the Final SEIR as follows:

No known odor sources are in the immediate vicinity of the Project Area, except for existing Station operations such as ~~exhaust gases and~~ natural gas odorants (~~mercaptan~~).

I6-036

The commenter suggests text edits to reflect the Mohave Desert Air Quality Management District's (MDAQMD's) most recent guidelines. The MDAQMD's 2016 guidelines were adopted in August of 2016.

The analysis for the project and the Notice of Preparation were completed prior to the adoption of the 2016 Guidelines; therefore, the 2011 guidelines were the applicable guidelines for use in the Draft SEIR. Nevertheless, the Final SEIR will incorporate the 2016 Guidelines that have stricter emission thresholds for fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less (PM_{2.5}) (reducing the annual threshold from 15 to 12 tons per year and the daily threshold from 82 to 65 pounds per day). As shown in the Draft SEIR (Table 4.2-8 on page 4.2-38 and Table 4.2-10 on page 4.2-42), the maximum daily construction emissions are 10.73 pounds per day and 0.78 tons per year. These are well below both the 2011 and 2016 thresholds. Therefore, the incorporation of the 2016 thresholds does not alter either the less than significant finding or the mitigation measures as presented in the Draft SEIR. In response to the comment, the Draft SEIR text is revised to incorporate these newer thresholds in the Final SEIR on the indicated pages as follows:

Page 4.2-10 (Table 4.2-3): SOURCE: MDAQMD 2016a.

Page 4.2-15 (Table 4.2-6): SOURCE: MDAQMD 2016a.

Page 4.2-27: Based on the MDAQMD Guidance (MDAQMD ~~2011~~ 2016b) the proposed Project...

Page 4.2-28 (Table 4.2-7): SOURCE: MDAQMD-~~2011~~ 2016b.

Page 8-5:

———. 2016a. *Rules & Plans*. Available at:
<http://www.mdaqmd.ca.gov/index.aspx?page=13>.
Accessed on April 2016.

———. ~~2011~~ 2016b (August). California Environmental Quality Act (CEQA) and Federal Conformity Guidelines.

I6-037

The commenter suggests text edits to reflect MDAQMD's most recent guidelines.

As detailed in response to comment I6-036, the incorporation of the 2016 Guidelines, which make the emissions thresholds for PM_{2.5} more

restrictive, does not change the less than significant findings for the Project or require new mitigation measures. In response to the comment, the Draft SEIR text is revised in the Final SEIR as follows:

Page 4.2-28 (Table 4.2-7):

PM _{2.5}	45 <u>12</u>	82 <u>65</u>
CO ₂ e (GHGs)	100,000 (90,719 MT)	548,000
SOURCE: MDAQMD 2014 2016b .		

Page 4.2-38 (Table 4.2-8):

<i>MDAQMD Threshold</i>	<i>137</i>	<i>137</i>	<i>548</i>	<i>137</i>	<i>82</i>	82 <u>65</u>
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Page 4.2-42 (Table 4.2-10):

<i>MDAQMD Threshold</i>	25	25	100	25	15	45 <u>12</u>
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I6-038

The commenter identifies an inconsistency in the nomenclature used for identifying mitigation measures.

In response to the comment, the Draft SEIR text on pages 4.2-29 to 4.2-30, and 4.2-36 are revised in the Final SEIR as follows:

Pages 4.2-29 to 4.2-30: Specifically, the Final Remedy Design incorporates design details and plans called for under Mitigation Measure ~~AQ~~AIR-1 to reduce fugitive dust emissions in the Project Area. Project details and plans that address Mitigation Measure ~~AQ~~AIR-1 are contained in the Final Remedy Design Table 6.1-1.

Page 4.2-36: Additionally, the Final Remedy Design incorporates design details and plans called for under Mitigation Measure ~~AQ~~AIR-1 from the Groundwater FEIR to reduce fugitive dust emissions (which further enforced compliance with MDAQMD's Rule 403).

I6-039

The commenter suggests that the thresholds for PM_{2.5} be updated from 82 lbs/day as reported in the Draft SEIR to 65 lbs/day to correspond with the 2016 updated air district guidance.

The thresholds have been updated to correspond to the new guidelines that were issued in August 2016. The change in thresholds does not change the significance findings as identified in the Draft SEIR. Changes are made to the text as identified in response to comment I6-037 above.

I6-040

The commenter suggests a revision to the text for clarification.

In response to the comment, the Draft SEIR text on pages 4.2-44 is revised in the Final SEIR as follows:

The proposed Project is incorporating solar-generated electricity to offset some of the on-site electrical uses and therefore, although the proposed Project is not a project type ~~intended~~ regulated under the CARB Scoping Plan, it would further the intent of the Plan in that it would use renewable energy to offset electrical usage.

I6-041

The commenter suggests revisions to the text to improve document consistency in the air quality discussion with regard to the toxic air contaminants (TACs) analysis.

In response to the comment, the Draft SEIR text on page 4.2-48 is revised in the Final SEIR as follows:

However, ~~because even though~~ there are emissions of TACs during construction activities and some of the receptors are closer to activities in the proposed Project than were identified in the Groundwater FEIR, there are no provided regulatory thresholds for construction activities, and some of the receptors are closer to activities in the proposed Project than were identified in the Groundwater FEIR, the proposed Project identifies these impacts as less than significant. This less than significant finding remains because only a few individual activities would occur closer than 1,000 feet to any receptor and these activities would be temporary (lasting days to months).

I6-042

The commenter recommends an editorial revision to page 4.3-1 of the Draft SEIR to clarify that the Colorado River forms an approximate boundary between the Colorado and Mojave Deserts.

This revision does not materially affect or clarify the Draft SEIR's analysis of biological resources. Thus, no revision is made to the SEIR in response to this comment.

I6-043

The commenter requests a text edit to clarify a description of Interstate 40 (I-40) and the Burlington Northern Santa Fe (BNSF) Railway in relation to the Project Area.

The proposed change is unnecessary because the I-40 and the BNSF Railway alignments do not contribute to an actual geographical distinction in the Project Area. Thus, no revision is made to the SEIR in response to this comment.

I6-044

The commenter recommends replacing "*Scirpus*" with "*Schoenoplectus*" to reflect most recent naming convention for bulrush.

The use of "*Scirpus*" on page 4.3-3 of the Draft SEIR is a relic of its reference in the Groundwater FEIR, and is used purposefully in Section

4.3.2.1, which is a summary of the setting identified in the Groundwater FEIR. The more current naming convention is correctly used in Section 4.3.3.1 (see page 4.3-25), and is the current (2016) baseline condition information. Thus, no revision is made to the SEIR in response to this comment.

I6-045 The commenter recommends replacing “western pipistrelle (*Pipistrellus hesperus*)” with “western canyon bat (*Parastrellus hesperus*)” to reflect most current naming convention per CDFW.

The use of “western pipistrelle (*Pipistrellus hesperus*)” on page 4.3-4 of the Draft SEIR is a relic of its reference in the Groundwater FEIR, and is used purposefully in Section 4.3.2.1, which is a summary of the setting identified in the Groundwater FEIR. The more current naming convention is correctly used in Section 4.3.3.1 (see page 4.3-33), and is the current (2016) baseline condition information. Thus, no revision is made in the SEIR in response to this comment.

I6-046 The commenter recommends adding references for the updated wetland delineation survey noted on page 4.3-6 of the Draft SEIR.

The applicable discussion notes, “Section 4.3.3 of this SEIR provides updated sensitive habitat information.” Section 4.3.3 of the Draft SEIR includes the references noted by the commenter in this comment (i.e., CH2M HILL 2013 and PG&E 2014a). The suggested revision does not materially affect or clarify the Draft SEIR’s analysis of biological resources and no revision is made in the SEIR in response to this comment.

I6-047 The commenter recommends an editorial revision to increase the accuracy of the description of riparian habitat within the Project Area.

The text is presented purposefully in Section 4.3.2.2, which is a summary of the impacts and mitigation measures included in the Groundwater FEIR, and therefore can be summarized, not changed. Therefore, no revision is made in the SEIR in response to this comment.

I6-048 The commenter recommends an editorial revision to clarify a statement on page 4.3-12 of the Draft SEIR regarding the reports and data summarized in Section 4.3.3, “Existing Setting.”

The suggested revision is not made because there are reports listed on page 4.3-13 et seq. that were not referenced in the Groundwater FEIR and which pre-date finalization of that document. Thus, it would not be accurate to revise the statement on page 4.3-12 suggesting that the list contained only documents not available at the time the Groundwater FEIR was certified.

I6-049 The commenter recommends adding reference to the 2014 Programmatic Biological Assessment (PBA) to the list of additional reports and data that were reviewed for the Draft SEIR, as listed on page 4.3-13 et seq.

The 2014 PBA was reviewed in preparation of the Draft SEIR and is cited throughout Section 4.3 as “Appendix U to the C/RAWP (i.e., CH2M Hill 2015b).” In response to the comment, the following citation is added to page 4.3-14 of the Draft SEIR in this Final SEIR.

- Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Final Groundwater Remedy. April 28 (CH2M HILL 2014), included as Appendix U to the C/RAWP (i.e., CH2M Hill 2015b)

I6-050

The commenter recommends inserting reference to the 2017 USFWS Concurrence Letter that adds the northern Mexican gartersnake to the 2014 PBA, to the list of additional reports and data that were reviewed for the Draft SEIR, as listed on page 4.3-13 et seq.

While this letter was not available at the time of Draft SEIR preparation, it has been reviewed and added to this list of documents reviewed for completeness. In response to the comment, the following citation on page 4.3-14 of the Draft SEIR is added in this Final SEIR as follows:

- Request to Reinitiate Informal Consultation under Section 7 of the Endangered Species Act Regarding Pacific Gas and Electric Topock Compressor Station Final Groundwater Remedy AESO/SE 02EAAZ00- 2014-I-0335 (RI) (USFWS 2017)

In response to this comment, a reference has been added accordingly to Chapter 8, “Bibliography” on page 8-10 of the Draft SEIR:

———. 2017. Request to Reinitiate Informal Consultation under Section 7 of the Endangered Species Act Regarding Pacific Gas and Electric Topock Compressor Station Final Groundwater Remedy AESO/SE 02EAAZ00- 2014-I-0335 (RI) (USFWS 2017).

The following additional revisions are provided in light of recent issuance of the above-referenced document:

Mitigation Measure BIO-2g: Disturbance of Northern Mexican Gartersnake (New Measure). 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).

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a

substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

I6-051

The commenter suggests removing reference to reports prepared prior to 2011 from the list of additional reports and data that were reviewed for the Draft SEIR, as listed on page 4.3-13 et seq.

While prepared prior to the certification of the document, these reports were not referenced in the Groundwater FEIR. They were reviewed for the Draft SEIR and are appropriately listed on page 4.3-13 et seq. of the document. Therefore, no revision is made in the SEIR in response to this comment.

I6-052

The commenter recommends editorial revisions to clarify that Sawyer et al. did not perform vegetation mapping, and that vegetation was instead mapped per standards established by Sawyer et al. (2009).

Chapter 8, Bibliography, of the Draft SEIR correctly cites Sawyer et al. 2009 as “A manual of California vegetation, 2nd ed.” Further, citations provided on page 4.3-14 of the Draft SEIR related to vegetation community mapping (i.e., GANDA and CH2M Hill 2013a, 2013b; CH2M Hill & Transcon Environmental, Inc. 2016) further clarify the source of the data. The Draft SEIR provides an accurate reference for Sawyer et al. 2009 and the proposed revision does not materially affect or clarify the Draft SEIR’s analysis of biological resources. Thus, no revision is made in the SEIR in response to this comment.

I6-053

The commenter recommends editorial revisions to clarify the composition of desert lily (*Hesperocallis undulata*) within portions of the Project Area mapped as creosote bush scrub.

The preceding statement to the statement highlighted by the commenter states, “[c]reosote bush scrub totals 285.2 acres of the Project Area.” Taken in context, the discussion is clear that the total acreage referred to in the statement highlighted by the commenter relates to the total acreage of creosote bush scrub. The proposed editorial revision does not materially affect or clarify the Draft SEIR’s analysis of biological resources. Thus, no revision is made in the SEIR in response to this comment.

I6-054

The commenter recommends a technical revision to clarify the biology of broad-leaved cattail and California bulrush as emergent plants rather than “submerged” aquatic plants.

In response to the comment, the Draft SEIR text on page 4.3-25 is revised in this Final SEIR as follows to increase technical accuracy of the applicable discussion:

Along the Colorado River and its inlets are patches of wetlands with various marsh plants forming three principal wetland communities, from the ~~mostly submerged~~ emergent broad-leaved

cattail (*Typha latifolia*) ~~marshes~~ and California bulrush (*Schoenoplectus californicus*) marshes, to the adjacent but somewhat drier common reed (*Phragmites australis*) marshes.

I6-055

The commenter recommends an editorial revision to page 4.3-26 of the Draft SEIR to clarify that jurisdictional wetlands and other waters subject to California Fish and Game Code Section 1600 include those located within the state of California, as the California Fish and Game Code does not apply outside of California.

The proposed editorial revision does not materially affect or clarify the Draft SEIR's analysis of biological resources as this fact is an underlying assumption of how jurisdictional resources were delineated (i.e., jurisdictional areas subject to California Fish and Game Code Section 1600 were not delineated in Arizona as part of wetland delineation surveys). Nonetheless, the following revisions to page 4.3-48 of the Draft SEIR are provided to clarify the discussion of wetlands and other waters under the CDFW's jurisdiction per Section 1600 of the California Fish and Game Code.

California Fish and Game Code Section 16020 et seq. – Lake and Streambed Alteration Program

Pursuant to Section 1600 et seq. of the California Fish and Game Code, the CDFW regulates activities that would substantially alter the flow, bed, channel, or banks of streams or lakes located within the state of California that support wildlife resources unless certain conditions outlined by CDFW are met. All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person, governmental agency, or public utility to do the following without first notifying CDFW:...

I6-056

The commenter recommends revisions to the discussion of bat habitat within the Project Area on page 4.3-33 of the Draft SEIR. The commenter specifically recommends deleting reference to suitable bat roosting habitat, including small animal burrows, because bats are mainly using culverts and bridges for maternity roosts. The commenter suggests adding results from subsequent focused bat surveys performed by H.T. Harvey & Associates (2016b) that identified actual maternity roost sites based on mist-netting and radiotelemetry in addition to acoustic monitoring, which would increase the technical accuracy.

In response to the comment, the Draft SEIR text on page 4.3-33 is revised in this Final SEIR as follows:

Suitable bat roosting habitat was documented in locations scattered throughout the Project Area, including the sides of Bat

Cave Wash, the East Ravine, and the red rock exposed adjacent to the Lower Colorado River occurs within the crevices and small mammal burrows along cliff faces and slopes associated with the desert washes (Brown 2015a). Focused and bat surveys confirmed 10 roost sites within the Project Area (H.T. Harvey & Associates 2016b). Roosting activity at these sites could include day roosting and/or maternity roosting. In addition, one postlactating female pallid bat was successfully tracked back to her roost in the southern portion of Bat Cave Wash during 2016 surveys day roosting activity within Bat Cave Wash and beneath the western end of the BNSF Railway bridge. In addition, suitable maternity roosting habitat was documented on the Project Area.

It is important to note that results from H.T. Harvey & Associates (2016b) are reflected in Table 4.3-3, and the revised text is consistent with information presented in Section 4.3.5 of the Draft SEIR. Therefore, the analysis and conclusions in the Draft SEIR remain unchanged with these clarifying revisions are provided.

I6-057

The commenter recommends removing reference to survey reports available at the time the Groundwater FEIR was prepared when noting that western yellow-billed cuckoo has been documented within and immediately adjacent to the Project Area.

The referenced reports note observation of the western yellow-billed cuckoo and are appropriate to cite. In response to the comment, the Draft SEIR text on page 4.3-43 is revised in this Final SEIR as follows:

The Groundwater FEIR determined that the species, a candidate for federal listing under FESA at the time of publication, was unlikely to occur given that little suitable nesting and foraging habitat is present in the Project Area (DTSC 2011). However, ~~since certification of the Groundwater FEIR,~~ presence of the species in and immediately adjacent to the Project Area has been confirmed during survey efforts beginning in 2009 (GANDA 2009a, 2010, 2012, 2014, and 2015).

I6-058

The commenter recommends a revision to characterize habitat within the mouth of Bat Cave Wash as “potentially” suitable Lucy warbler habitat given uncertainty that the habitat is large enough and has proper composition to support the species.

The recommendation to clarify the habitat as potentially suitable is consistent with findings presented in CH2M Hill & Transcon Environmental, Inc. 2016, and is added to the Draft SEIR to increase technical accuracy. In response to the comment, the Draft SEIR text on page 4.3-43 is revised in this Final SEIR as follows:

Within the California portion of the Project Area, potentially suitable Lucy's warbler habitat occurs within the mouth of Bat Cave Wash (CH2M Hill & Transcon Environmental, Inc. 2016).

The analysis and conclusions in the Draft SEIR remain unchanged with these clarifying revisions provided.

I6-059

The commenter recommends revising the citation related to documentation of a single male Townsend's big-eared bat to more accurately report the finding.

The current citation included in the Draft SEIR (i.e., H.T. Harvey & Associates 2015) notes the documentation of the Townsend's big-eared bat by Dr. Brown and Dr. Rainey, and is thus not an inaccurate citation. While the commenter suggests a citation that more directly documents the observation of the Townsend's big-eared bat, a report from Dr. Brown and Dr. Rainey was not available for citation. Therefore, in the absence of a standalone report prepared by Dr. Brown and Dr. Rainey, the existing report citation is sufficient to provide evidence of this finding and no revision is necessary.

I6-060

The commenter suggests revisions to page 4.3-45 et seq. of the Draft SEIR to clarify how Sections 401 and 402 of the Clean Water Act are administered in Arizona.

In response to the comment, the Draft SEIR text on page 4.3-45 et seq. is revised in this Final SEIR as follows:

Clean Water Act, Section 402

CWA Section 402 regulates construction-related stormwater discharges to surface waters through the National Pollutant Discharge Elimination System (NPDES) program, which is administered by the U.S. Environmental Protection Agency (USEPA). In California, the State Water Resources Control Board is authorized by USEPA to oversee the NPDES program through the RWQCB, in this case, the Colorado River (Region 7) RWQCB. In Arizona, the Arizona Department of Environmental Quality (ADEQ) is authorized by the USEPA to oversee the NPDES program.

Clean Water Act, Section 401

CWA Section 401(a)(1) specifies that any applicant for a federal license or permit to conduct any activity that may result in any discharge into navigable waters shall provide the federal licensing or permitting agency with a certification that any such discharge will not violate state water quality standards. In California, the RWQCBs administer the Section 401 program with the intent of prescribing measures for projects that are necessary to avoid, minimize, and mitigate adverse effects on

water quality and ecosystems. In Arizona, the ADEQ administers the Section 401 program (except on Tribal lands) with the intent of ensuring that a project will not violate surface water quality standards, adversely impact impaired waters (waters that do not meet water quality standards) and that a project complies with applicable water quality improvement plans (total maximum daily loads).

I6-061 The commenter recommends revisions on page 4.3-50 of the Draft SEIR to clarify the description of the Lower Colorado River Multi-Species Conservation Program.

The existing text refers to “listed and candidate species” without distinguishing between state- and federally-listed species. While the recommended revision would provide added clarity, the existing text is not inaccurate and the proposed revision does not materially affect or clarify the Draft SEIR’s analysis of biological resources. Therefore, no revision is made in the SEIR in response to this comment.

I6-062 The commenter recommends revisions to pages 4.3-58, 4.1-75, and 4.1-87 of the Draft SEIR based on the Groundwater FEIR assuming the majority of pipelines would be constructed underground.

Please refer to Response to Comment I6-030, which responds to this comment in detail.

In response to the comment, the Draft SEIR text on pages 4.1-68, 4.1-75, 4.1-87, and 4.3-58 are revised in the Final SEIR as follows:

Page 4.1-68: The Groundwater FEIR assumed subsurface trenches for piping at the northern and southern crossing under Bat Cave Wash; ~~however and~~ the majority of the piping proposed for the remedy was below ~~above~~ground.

Page 4.1-75: In particular, aboveground conveyance piping has generally been replaced with underground piping, ~~which results in removal of most of the aboveground piping that was envisioned in the Groundwater FEIR.~~

Page 4.1-87: ~~In addition, aboveground conveyance piping has generally been replaced with underground piping.~~

Page 4.3-58: This results primarily from additional roadways and facility footprints (described above), and the fact that remedy pipelines are to be constructed underground ~~(versus aboveground which was assumed in the Groundwater FEIR).~~

I6-063 The commenter recommends revisions to page 4.3-58 of the Draft SEIR regarding impacts of constructing infrastructure in Bat Cave Wash that were identified in the Groundwater FEIR.

The text states that although the subsurface trenching within Bat Cave Wash was identified in the Groundwater FEIR, the specific biological-resource-related impacts resulting from subsurface excavation and soil disturbance were not specifically identified. This is still true. DTSC has clarified in this Final SEIR that the text is specifically related to soil disturbance. In response to the comment, the Draft SEIR text on page 4.3-58 is revised in this Final SEIR as follows:

Additionally, while subsurface trenching for fluid conveyance piping at the northern and southern crossings under Bat Cave Wash was envisioned in the Groundwater FEIR, an analysis of potential impacts to biological resources as a result of soil disturbance from subsurface trenching was not specifically included in the Groundwater FEIR.

I6-064

The commenter recommends revisions to page 4.3-61 of the Draft SEIR to clarify which Project facilities are located in areas subject to both USACE and CDFW jurisdiction versus those in areas subject to USACE jurisdiction only given their location within Arizona.

DTSC agrees with these edits which increase the accuracy of the Draft SEIR. In response to the comment, the Draft SEIR text on page 4.3-61 is revised in this Final SEIR as follows:

In accordance with Mitigation Measure BIO-1 of the Groundwater FEIR, the Final Remedy Design avoids USACE and CDFW jurisdictional areas to the extent feasible. However, avoidance was not feasible for the following known Project facilities within USACE and CDFW jurisdictional areas: Inner Recirculation Loop Well IRL-4; remedy and monitoring wells and associated piping/conduits in Bat Cave Wash; ~~freshwater supply well HNWR-1A, contingent Site B well, associated equipment, and~~ a portion of the freshwater pipeline within the 100-year floodplain of the Colorado River; and Riverbank Extraction Well RB-5, monitoring well MW-W, a portion of Pipeline C, and a portion of an access road within the 100-year floodplain of the Colorado River. Other facilities within USACE jurisdiction, but not CDFW jurisdiction, include the freshwater supply well HNWR-1A, the contingent Site B well and associated equipment in Arizona. Based on the locations of proposed Project facilities, approximately 2.44 acres of ephemeral waters under USACE and CDFW jurisdiction delineated within the Project Area would be directly impacted during construction of the proposed Project. Of these 2.44 acres of potential direct impacts, approximately 1.58 acres of impact would occur to jurisdictional areas that are currently disturbed or developed. Thus, approximately 0.86 acre of non-disturbed jurisdictional ephemeral waters would be impacted during construction activities for installation of proposed Project facilities. Direct impacts to wetlands and CDFW-jurisdictional riparian habitat are not anticipated with construction of proposed

Project facilities. Direct impacts to jurisdictional areas are depicted on **Figure 4.3-4** through **4.3-4d**.

I6-065

The commenter recommends revisions to page 4.3-69 of the Draft SEIR to clarify in-place restoration requirements of habitat restoration plans.

DTSC concurs with these suggested edits which clarify practices and protocols related to habitat restoration included in Appendix V to the C/RAWP. In response to the comment, the Draft SEIR text on page 4.3-69 is revised in this Final SEIR as follows:

These plans were developed with oversight and approval by CDFW, USFWS, and DOI in compliance with Mitigation Measure BIO-1 of the Groundwater FEIR and describe the approach for restoration in the HNWR and broader Project Area for the duration of the construction and operation and maintenance phases of the proposed Project. In accordance with these plans, in-place restoration would require grading of impacted areas to pre-impacted contours and conditions. Any vegetation replacement would be completed at the mitigation planting areas identified in the Assessment of Proposed Mitigation Planting Areas for Final Groundwater Remedy Impacts, included as Appendix V to the C/RAWP (CH2M Hill 2015b). Additional components of these plans, including avoidance and minimization measures, success criteria, monitoring and reporting requirements, and adaptive management guidelines, are summarized in Mitigation Measure BIO-1a below.

I6-066

The commenter suggests revisions to Mitigation Measure BIO-1a to avoid confusion regarding the performance standard for the measure. Also, the commenter suggests revisions to citations in the measure to clarify the referenced habitat restoration document.

In response to the comment regarding performance standards, Mitigation Measure BIO-1a on page 4.3-73 of the Draft SEIR is revised in this Final SEIR as indicated below.

- b) ... PG&E shall prepare a mitigation plan prior to the start of construction to specify methodology, ~~success~~ meeting the 2:1 mitigation requirement, and monitoring and reporting for compensatory mitigation.

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, result in a substantial increase in the severity of the identified impact after mitigation, or preclude meaningful review and comment.

Regarding the citations comment, no revision is made as the referenced version of the C/RAWP (i.e., CH2M Hill 2015b) includes the appropriate specificity of the habitat restoration plans.

- I6-067 The commenter recommends editorial revisions on page 4.3-75 of the Draft SEIR to clarify the PBA citation relating to conservation measures for minimizing impacts to bonytail critical habitat.
- The applicable text on page 4.3-75 of the Draft SEIR appropriately cites “Appendix U to the C/RAWP (CH2M Hill 2015b).” Appendix U to the C/RAWP prepared by CH2M HILL in 2015 is the 2014 PBA. Therefore, no revision is made in the SEIR in response to this comment as the suggested revisions would not provide needed clarity to the Draft SEIR.
- I6-068 The commenter recommends an editorial revision to page 4.3-76 of the Draft SEIR to clarify reference to the PBA.
- Similar to the response provided in I6-067, no revision is made in the SEIR in response to this comment as Appendix U to the referenced version of the C/RAWP (i.e., CH2M Hill 2015b) is the 2014 version of the PBA. Thus, the proposed revision does not provide needed clarity.
- I6-069 The commenter recommends adding text to page 4.3-77 of the Draft SEIR to note that active bird nesting has not been confirmed within the Project Area.
- No revision is made in the SEIR in response to this comment. The suggested addition could be misleading as focused nesting bird surveys have not been completed within the Project Area. While no incidental observations of nests have been made, nests for many birds are generally inconspicuous; thus, the lack of incidental observations does not provide substantial evidence regarding the status of nesting within the entirety of the Project Area.
- I6-070 The commenter recommends an editorial revision to clarify reference to the PBA avoidance and minimization measures for desert tortoise are derived from the 2014 version of the document.
- Similar to the responses provided in I6-067 and I6-068, no revision is made in the SEIR in response to this comment as the applicable discussion subsequently notes, “[t]he PBA is included as Appendix U to the C/RAWP (CH2M Hill 2015b).” Appendix U to the referenced C/RAWP is the 2014 version of the PBA. Thus, the proposed revision does not provide needed clarity.
- I6-071 The commenter recommends revisions to page 4.3-94 of the Draft SEIR to increase the accuracy of statements related to the finding of skeletal and fur remains observed during desert tortoise surveys in April 2015.
- To increase the technical accuracy of the discussion in the Draft SEIR, DTSC concurs with these edits. In response to the comment, the Draft SEIR text on page 4.3-94 is revised in this Final SEIR as follows to increase technical accuracy of the applicable discussion.

Potential impacts to the Nelson's bighorn sheep were not analyzed in the Groundwater FEIR as the species was not previously known to occur. Nelson's bighorn sheep were most recently observed in the Project Area on March 3 and March 7, 2016. Additionally, skeletal and fur remains of an unknown large ungulate (~~possibly a Nelson's bighorn sheep~~) was observed on the Project Area in April 2015 during a focused desert tortoise survey (Transcon Environmental, Inc. 2015).

The analysis and conclusions in the Draft SEIR remain unchanged with these clarifying revisions provided.

I6-072

The commenter recommends revisions to page 4.3-96 of the Draft SEIR to clarify and increase specificity of the discussion of impacts to bat maternity roosts. The commenter specifically suggests revisions to note that activities adjacent to known maternity roosts in the Project Area during the maternity roosting season could result in disturbances to these roost sites.

In response to the comment, the Draft SEIR text on page 4.3-96 is revised in this Final SEIR as follows:

The primary risk to special-status bat species associated with the Final Design include potential disturbances to foraging habitat and active day and maternity roost sites. The operation of machinery in desert washes could disturb the vegetation that attracts insects for bats to prey on, thus impacting their foraging habitat. In addition, activities adjacent to maternity roost sites ~~slopes and cliff faces~~ in the Project Area and during the maternity roosting season of March 15 through August 31 could result in disturbance to female bats and their young ~~roosting bats during the maternity roosting season of March 15 through August 31~~.

The analysis and conclusions in the Draft SEIR remain unchanged with these clarifying revisions provided.

I6-073

The commenter requests adding a reference to support the conclusion that construction-generated dust could adversely impact plants by coating the surfaces of leaves and reducing the rates of metabolic processes.

To increase the technical accuracy of the discussion in the Draft SEIR, DTSC concurs with these edits. In response to the comment, the Draft SEIR text on page 4.3-102 is revised in this Final SEIR as follows:

Construction activities could result in removal or indirect disturbance of special-status plant individuals. Indirect disturbance of individuals resulting from construction activities could include generating dust which can adversely impact plants by coating the surfaces of the leaves and reducing the rates of metabolic processes, such as photosynthesis and respiration

(Wijayratne et al. 2009). Indirect disturbance could also occur from the use of water from the IM-3 Facility for dust suppression during construction which has higher salt loading. Studies have found that high concentrations of salts in soils can ~~that could~~ potentially damage, reduce or impede growth of ~~by changing the native soil composition and causing it to be far less favorable to~~ native plants (Hirpara et al. 2005).

These references are also added to the Draft SEIR Chapter 8, “Bibliography,” to Section 4.3, “Biological Resources” starting on page 8-6:

Hirpara KD, Ramoliya PJ, Patel AD, Pandey AN. 2005. Effect of salinisation of soil on growth and macro- and micro-nutrient accumulation in seedlings of *Butea monosperma* (Fabaceae). An Biol. 2005;27:3–14.

Wijayratne, U.C.; Scoles-Scilla, S.J.; Defalco, L.A. 2009. Dust deposition effects on growth and physiology of the endangered *Astragalus Jaegerianus* (Fabaceae). Madroño 2009, 56, 81–88.

The analysis and conclusions in the Draft SEIR remain unchanged with these clarifying revisions provided.

I6-074

The commenter requests adding a reference to support the conclusion that the use of IM-3 Facility water for dust suppression could potentially damage reduce or impede plant growth.

The commenter is referred to revisions under response to comment I6-073 for a response to this comment.

I6-075

The commenter recommends adding reference to the need to confer with CDFW prior to proceeding with ground-disturbing activities within 50 feet of special-status plants in the summary of Mitigation Measure BIO-2h on page 4.3-105 of the Draft SEIR.

The requirement to confer with CDFW prior to ground-disturbing activities within 50 feet of a special-status plant is clearly outlined in Mitigation Measure BIO-2h. The recommended revision does not materially affect or clarify the Draft SEIR’s analysis of impacts to special-status plants. Therefore, no revision is made in the SEIR in response to this comment.

I6-076

The commenter recommends revisions to Mitigation Measure BIO-2b to note that pre-activity desert tortoise clearance surveys will occur according to USFWS protocols, other than the timing requirement and the recommendation to confer with USFWS.

Mitigation Measure BIO-2b in the Groundwater FEIR notes, “[i]f 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). The preconstruction surveys shall be in full accordance with the substantive requirements of USFWS protocols” (page 4.3-29). In response to the comment, Mitigation Measure BIO-2b in the Draft SEIR on page 4.3-110 is revised in this Final SEIR as indicated below to be consistent with the Groundwater FEIR and to avoid the potential misinterpretation noted by the commenter. Regarding the commenter’s suggestion that there should be no requirement to confer with USFWS, conference with agency staff is required to report desert tortoise encounters and may be required when special circumstances arise (e.g., a desert tortoise in a deep burrow that cannot be excavated without harming the individual). The qualified desert tortoise biologist will determine when to seek input from USFWS. No revision is necessary in response to this specific comment and concern.

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, pPre-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 desert 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.

I6-077

The commenter suggests a clarification to the meaning of the “Interested Tribes” in the text in Section 4.4.2.1.

DTSC notes that the term “Interested Tribes” is defined on page 4.4-40; however, to provide clarity to the reader and, in response to the

comment, the following Draft SEIR text on page 4.4-9 is revised in the Final SEIR as follows:

Table 4.4-1 briefly summarizes concerns expressed during the environmental review process for the Groundwater FEIR. As noted in Table 4.4-1, six of the Tribes are designated as “Interested Tribes,” which for the purposes of the Groundwater FEIR indicated the six Tribes that substantially participated in the various administrative processes surrounding remediation of the site with DTSC, PG&E, and DOI, including throughout the development of the Groundwater FEIR. Since the Groundwater FEIR was prepared, the Fort Yuma-Quechan Indian Tribe has become a less active participant and has subsequently been removed from the list of Interested Tribes. Additional meetings, information, and materials have occurred since certification of the Groundwater FEIR and ~~is~~ are provided in Section 4.4.3 of this SEIR.

I6-078 The commenter notes that the final Treatment Plan was submitted to DTSC and BLM in February 2017.

Please see response to comment I6-027 regarding the status of the Treatment Plan.

I6-079 The commenter suggests clarification to the text in Section 4.4.3.1 regarding the fact that the BLM, not the State Historic Preservation Officer, made the eligibility determination for the NRHP.

DTSC acknowledges this clarification and, in response to the comment, the following Draft SEIR text on page 4.4-24 is revised in the Final SEIR as follows:

A total of 19 segments of the National Old Trails Highway/Route 66 have been documented within the Project Area (Table 4.4-4) (Mead & Hunt 2015; BLM 2015). Of these 19 segments, six (A, J, L, U, X, and Y) were determined eligible for the NRHP under Criteria A and C by the BLM.

I6-080 The commenter requests to add the missing reference to Section 4.4.3.1 regarding the 2013 update of the AZ L:7:16 (ASM) by Applied Earthworks.

DTSC acknowledges this missing reference and, in response to the comment, the following Draft SEIR text on page 4.4-31 is revised in the Final SEIR as follows:

AZ L:7:16 (ASM) consists of a multicomponent archaeological site originally documented by MacNider and Pedro in 1990 and updated by Applied Earthworks, Inc. in 2010 and 2013~~2~~ (McDougall and Moloney 2010; Hearth and Price 2013).

I6-081

The commenter suggests edits to the text in Section 4.4.3.2 regarding the designation of the Topock TCP and APE boundaries. In addition, the commenter suggests that the SEIR include a figure that shows the boundaries of the APE and the boundaries of the SEIR Project Area, which would clarify how these two areas relate to one another.

To provide more clarification regarding the APE, in response to the comment, the following Draft SEIR text on page 4.4-61 is revised in the Final SEIR as follows:

~~Since certification of the Groundwater FEIR, In 2010, the BLM determined that the area within the APE boundaries (which overlapped in large part with the Topock Cultural Area (TCA) as it was defined in the 2011 Groundwater FEIR) was formally designated~~ constitutes a TCP, which is eligible for the NRHP. The BLM made this determination as a result of Section 106 consultation for the Topock Remediation Project (defined by the U.S. Bureau of Land Management [BLM] to include remedial investigations and groundwater and soil removal and response actions pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act [CERCLA]). Through the Section 106 process, a Programmatic Agreement (PA) (BLM et al. 2010) and a Cultural and Historical Properties Management Plan (CHPMP) (BLM 2012) were prepared and the BLM determined that there was a TCP of religious and cultural significance to several Interested Tribes within the ~~Area of Potential Effects (APE)~~ for the Groundwater Remediation Project, ~~an larger area of approximately 1,600 acres that surrounds and encompasses~~ is larger than the Project Area and overlaps the Project Area to a great extent. The BLM defined the boundaries of the TCP as corresponding to the then identified APE. However, the BLM also acknowledged that “Tribal members believe that the area known as the Topock TCP is part of a broader cultural landscape that includes the Colorado River, extending beyond the limits of the currently designed APE, and should not be understood as a discrete or detached site, but as part of a larger area of cultural significance” (BLM 2012).

The BLM determined that the TCP was eligible for inclusion in the NRHP under Criterion A (BLM et al. 2010). Because the TCP has been determined eligible for inclusion in the NRHP, it is automatically listed in the CRHR (Public Resources Code Section 5024.1(d)(1)) and is considered a historical resource per CEQA Guidelines Section 15064.5(a). The resource identified in the Groundwater FEIR (DTSC 2011) as the TCA ~~is within and part of~~ overlaps to a great extent with the TCP defined by the BLM.

I6-082

The commenter requests clarification to the text in Section 4.4.3.2 regarding what is meant by “area” as used on page 4.4-63.

To provide more clarification, the following Draft SEIR text on page 4.4-63 is revised in the Final SEIR as follows:

The TCVA concluded that the entire Topock Maze area is associated with spiritual and religious beliefs and traditional cultural practices. The Tribes recommended that a TCVA be completed for the entire ~~area~~ Topock Landscape (McDowell et al.; 2014).

I6-083

The commenter requests clarification in Section 4.4.3.2 on page 4.4-63 regarding who determines all Tribal Cultural Values Assessment (TCVA) resources to be contributing elements to the Topock TCP and why all TCVA resources are considered to be contributing elements to the Topock TCP.

To clarify DTSC's position on this topic, the following Draft SEIR text on page 4.4-63 is revised in the Final SEIR as follows:

All TCVA resources are considered contributing elements to the Topock TCP by DTSC for the purposes of this Project.

In response to the second part of the comment, the commenter is directed to page 4.4-63 of the Draft SEIR, which indicates that TCVA resources are considered contributing elements to the Topock TCP since they are of importance to the Topock landscape from a Tribal perspective and reveal interconnections reflecting movement of people and materials around the Topock landscape. TCVA resources hold spiritual, religious, natural, and cultural values for Tribes and these values relate to minerals, resource areas, artifacts and features, visual landscapes, and teaching areas.

I6-084

The commenter suggests an edit to the text in Section 4.4.3.3 to clarify that a paleontological report was produced by Arcadis and Cogstone.

DTSC concurs with the suggested clarification. The following Draft SEIR text on page 4.4-68 is revised in the Final SEIR to correct the citation to this report:

A Paleontological Resources Management Plan (PRMP) was prepared for the Project by Arcadis and Cogstone in October 2015 (Appendix J of the C/RAWP). ... Review of online databases included the Natural History Museum of Los Angeles County Invertebrate Paleontology Section and of the University of California Museum of Paleontology database (Arcadis and Cogstone 2015).

I6-085

The commenter suggests edits to the text in Section 4.4.4.1 to provide a more complete overview of current federal guidance from the BLM Manual.

DTSC concurs with the suggested clarifications, as the new BLM manuals were issued in December of 2016, immediately prior to distribution of the Draft SEIR in January 2017. In response to the comment, the following Draft SEIR text on page 4.4-78 is revised in the Final SEIR as follows:

Bureau of Land Management Manuals 8100 and 1780, Handbook 8120-1 1780-1

~~Sections 8110 through 8140 of this BLM Manual 8100 provides~~ specific guidance for the BLM concerning cultural resources, which may include TCPs. Manual Section (MS) 8100 provides a general summary of the framework for managing cultural resources. Specific objectives include, among others, the recognition of the public uses and values attributed to cultural resources on public lands, the preservation of cultural resources on public lands for current and future generations, and the assurance that proposed land uses would avoid inadvertent damage to cultural resources. Section MS 8110 outlines the procedures recommended for the identification and description of cultural resources. Specific objectives of Section 8120 include the assurance that Tribal issues and concerns are given consideration during the planning and decision-making process. Objectives of consultation should also include input from Native American Tribes as to proper collection, evaluation, and protection methodologies employed during the consultation process. Guidelines for this process are specifically outlined in BLM Handbook 8120-1. BLM Handbook 8120-1 also outlines the process for determining NRHP eligibility for a TCP and states that eligibility must be based on application of the NRHP criteria, that only places fulfilling one or more of the criteria may be found eligible, and that no type of property is automatically eligible for the NRHP, including TCPs. Section MS 8130 provides planning guidance for the BLM that considers the current and future use of cultural resources with the aim to resolve use allocation conflicts that have the potential to affect cultural properties. Finally, Section MS 8140 outlines objectives for the preservation of cultural resources, including the safeguarding of cultural resources from improper use and responsibly maintained in the public interest. Section MS 8140 also outlines the BLM's responsibility to adequately consider the effects on cultural properties from land use decisions.

In December 2016, the BLM officially released Manual 1780 and accompanying Handbook (H) 1780-1, which replaces MS 8120 and H-8120-1. This new guidance presents a comprehensive and coordinated approach to Tribal consultation across all federal agency program areas and stresses the importance of formal agreements and working partnerships with Tribes. Manual 1780 and H-1780-1 reflect extensive discussions the BLM held with Tribes, including discussions held through a

working group of Tribal and departmental officials that explored new approaches to Tribal consultation and resulted in issuance of Secretarial Order 3317, the DOI Policy on Consultation with Indian Tribes. Manual 1780 and H-1780-1 provide centralized guidance that federal programs can turn to for instructions on how to carry out Tribal consultation and partner effectively with Indian Tribes. H-1780-1 is composed of individual program chapters, including energy, mining, forestry, range management, and fire management, which describe how Tribal consultation is carried out for each of these programs under the program's respective legal authorities.

I6-086

The commenter recommends removing activities under federal control or that depend on Tribal desires from Mitigation Measure CUL-1a-19. The commenter states that the BLM has indicated that the Tribes have a desire to revise the nomination package to treat the property as an archaeological property only, and that the Site Steward Program is a BLM program.

DTSC concurs with these clarifications and, in response to the comment, the following Draft SEIR text on page 4.4-108 is revised in the Final SEIR as follows:

Mitigation Measure CUL-1a-19 requires implementation of a Treatment Plan for the Topock TCP, which would include additional documentation, interpretation, and protective measures ~~an informational kiosk to educate the public on the importance of the area, inclusion of Tribal perspectives on documentation (site records) for prehistoric archaeological resources to ensure that Tribal values and interpretation of those resources is considered beyond that which is scientifically important, an updated NRHP nomination package for the Topock Maze (CA SBR 219, Loci A, B, and C) that considers the Tribal perspective of the Topock TCP and that captures the intrinsic value of the TCP to Interested Tribes such that this resource is preserved in posterity through documentation, updated site documentation for sites that have not been updated in over 10 years to assess the current condition, support for a site stewardship program to help protect and monitor the Topock Maze and other sensitive sites that contribute to the significance of the Topock TCP, and protective measures for site A Topock 210 (prehistoric trail).~~

I6-087

The commenter suggests adding text to Section 4.4.5.3 to clarify the mitigation measure requirements in Mitigation Measure CUL-1a-11 regarding open grant funding.

DTSC concurs with the clarification and, in response to the comment, the following Draft SEIR text on page 4.4-119 is revised in the Final SEIR as follows:

These positions shall be inclusive of those referenced by CR-1e-9 in the Topock Soil Investigation Project EIR and MMRP and not additive.

I6-088 The commenter suggests editing the text in Section 4.4.5.3 to clarify that the analysis is of unknown historical resources other than the Topock TCP.

DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text on page 4.4-131 is revised in the Final SEIR as follows:

However, for historical resources that are eligible to the NRHP/CRHR under Criteria A/1, B/2, or C/3, ~~(or as a contributor to the Topock TCP)~~ data recovery may not adequately mitigate impacts to those aspects of the resource that convey its significance and make it eligible for listing in the NRHP/CRHR, and even with the implementation of these mitigation measures, impacts to such resources from the Project may not be mitigated to a less than significant level.

I6-089 The commenter suggests a clarification regarding arsenic background levels.

DTSC agrees that the arsenic concentration from the Arizona well is above the localized concentration at the injection points and not above the regional background. In response to the comment, the following Draft SEIR text on page 4.5-2 is revised in the Final SEIR as follows:

Groundwater from the Arizona wells would provide a sufficient water quality for the remedy purpose; however, naturally occurring arsenic was found at levels above background in the proposed injection locations in the Project Area in California.

I6-090 The commenter states that Figure 4.5-1 of the Draft SEIR depicts a small orange area (undesigned area, or UA) just to the southeast of Area of Concern 28c and that the commenter is not aware of a UA in this area.

DTSC notes that the area in question is the Former 300B Pipeline Liquids Tank that has been designated as UA-2. DTSC disagrees with the request to remove this feature from the figure, and has maintained the UA-2 location in addition to other undesigned areas in Figure 4.5-1.

I6-091 The commenter suggests clarifications to the discussion of chemicals of potential concern (COPCs).

As stated in the 2011 Statement of Basis for the adoption of Alternative E in situ treatment with freshwater flushing as the groundwater remedy, molybdenum, nitrate, and selenium are identified as contaminants of potential concern that "...contribute to a total non-cancer risk at localized areas within the plume boundary in excess of risk assessment

guidelines.” DTSC has revised the SEIR to reflect that the source of these COPCs “may have been” from historical activities at the Station but rejects all other suggested revisions. In response to the comment, the following Draft SEIR text on page 4.6-11 is revised in the Final SEIR as follows:

The extent and concentrations of molybdenum, nitrate, and selenium as of the fourth quarter of 2015 are shown on **Figures 4.6-7, 4.6-8, and 4.6-9**, respectively (Arcadis 2016a). Since these three COPCs occur at concentrations above background and higher concentrations are located at or downgradient of the Station, the distribution indicates that the historical activities at the Station may have been ~~were~~ the source of these elevated COPCs.

I6-092

The commenter suggests text edits to clarify the description of sensitive receptors to noise and vibration, and to indicate which sensitive receptor is sensitive to noise, vibration, or both. In addition, the commenter requests the locations of the Tribal sensitive receptors so that the commenter knows how to comply with the SEIR’s noise mitigation measures.

DTSC purposefully included the language (that is suggested to be stricken by the commenter) to explain the reasoning for including additional sensitive receptors above what was included in the 2011 Groundwater FEIR. In addition, the last phrase indicated that new information regarding distances were unknown at the time the 2011 Groundwater FEIR was certified, and this is important criteria upon which sensitive receptors are better understood and defined. For these reasons, no changes to the text are made in response to the comment. DTSC confirms that the list on pages 4.7-6 and 4.7-7 is the complete list of sensitive receptors. As indicated on page 4.7-6, the list is provided in the setting and represents “new sensitive land uses.” For a discussion of which locations are related to noise versus vibration impacts, please see the analysis in Section 4.7.5.3 starting on page 4.7-28. Finally, regarding the request to share locations of Tribal sensitive resources, DTSC will coordinate with PG&E prior to construction start-up regarding avoiding noise- and vibration-sensitive areas prior to construction.

I6-093

The commenter requests modification to the text to clarify that the Construction Health and Safety Plan portion of the C/RAWP is being referenced.

DTSC concurs with these clarifications and, in response to the comment, the following Draft SEIR text on page 4.7-23 is revised in the Final SEIR as follows:

Appendix D (Construction Health and Safety Plan) of the C/RAWP provides health and safety procedures that would be applied during construction activities. Section 7.4.6.2 of this Construction Health and Safety Plan requires noise level

monitoring and the use of hearing protection when noise levels exceed the action level of 85 decibels over an 8-hour work day.

I6-094

The commenter asks for an explanation of the term “Compressor at the Station” on page 4.7-29, Table 4.7-11.

DTSC notes that a typographical error was made. In response to the comment, the text on page 4.7-20 within Table 4.7-11 is revised in the Final SEIR as follows:

Pumps 6x (~~Compressor at the~~ Station)

I6-095

The commenter suggests text modifications regarding a description of existing TCS Evaporation Pond infrastructure for accuracy.

DTSC concurs with the clarifications and, in response to the comment, the following Draft SEIR text on page 4.7-29 is revised in the Final SEIR as follows:

The TCS Evaporation Ponds contain agitators and drip systems ~~ponds~~ that would ~~filter~~ reduce the volume of contained wastewater through evaporation.

I6-096

The commenter notes that Table 4.7-14 does not have a Footnote 2.

DTSC notes this is a typographical error; the two instances where superscript “²” is used should be superscript “^b” and the correct information is present within the table. In response to the comment, the following two rows of the Draft SEIR text on page 4.7-39 are revised in the Final SEIR as follows:

TABLE 4.7-14
ESTIMATE OF NEW CONSTRUCTION NOISE LEVELS (L_{eq}) AT
EXISTING OFF-SITE SENSITIVE RECEIVER LOCATIONS

Noise-Sensitive Receptor	Nearest Construction Activity (not including boreholes)	Ambient Sound Level L_{eq} (dBA)	Distance between Nearest Receptor and Construction Activity (feet)	Estimated Construction Noise Levels at the Noise-Sensitive Receptor by Construction Phase, ^a Hourly L_{eq} (dBA) ^c	Combined Sound Level L_{eq} (dBA) ^c	Ambient Sound Level Increase	Exceed Threshold?
Daytime Noise Levels (7:00 a.m.-10:00 p.m.)							
Residences located on the south side of I-40 in Arizona	Pipeline Construction and Staging Area 26	43.5 ^{2b}	220	73.3	73.3	29.8	Yes
Topock 66 Spa & Resort and adjacent residences	Pipeline Construction and Staging Area 27	43.5 ^{2b}	180	75.1	75.1	31.6	Yes

NOTES:

^a Estimated construction noise levels represent the worst-case condition when noise generators are located closest to the receptors and are expected to last the entire duration of each construction phase.

^b These locations are a similar distance to I-40 and would have a similar ambient sound level.

^c Construction equipment assumptions for each construction activity is detailed in the model outputs in Appendix NOI.

SOURCE: LIN Consulting 2016 (see Appendix TRA).

I6-097

The commenter requests that the facility name cited in Section 4.8.2.1 is revised to match the correct name on the permit.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on pages 4.8-2 to 4.8-3 is revised in the Final SEIR as follows:

At the time the Groundwater FEIR was certified, ~~the Station~~ PG&E Topock Interim Measure No. 3 operated under Order No. 97-03-DWQ (General Permit No. CAS000001 [General Industrial Permit])...

At the time the Groundwater FEIR was certified, ~~the Station~~ PG&E Topock Interim Measure No. 3 was operating under Waste Discharge Identification Number 736IO19443.

I6-098

The commenter notes that although the Station does receive some electrical power from the City of Needles, city electricity does not act as backup power for the Station. Instead, the Station has a backup diesel generator for use if the main natural gas fired generators fail.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 4.8-3 is revised in the Final SEIR as follows:

In 2011, the Station primarily generated and still generates its own electricity on-site, ~~but can rely on backup on supply from the City of Needles, as needed.~~ The Station utilizes a backup diesel generator if the main natural gas fired generators fail.

I6-099

The commenter requests a clarification that the sludge generated from the IM-3 Facility is a non-RCRA hazardous waste.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 4.8-4 is revised in the Final SEIR as follows:

This sludge is considered a non-RCRA hazardous waste because of its toxicity, and was sent on a monthly basis for disposal at the Kettleman Hills Landfill in Kings County, California.

I6-100

The commenter requests clarification regarding the management of waste within the Hazardous Material Storage Building.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 4.8-8 is revised in the Final SEIR as follows:

This building is used for the management ~~processing~~ of solid waste, excluding soil, for recycling, disposal, or salvaging. The Project would share the existing use of this building for storage of hazardous wastes and hazardous materials, the recycling or salvage of materials from the IM-3 Facility structures (trailer and mobile warehouse units, equipment, and tank systems) and other uncontaminated materials with potential recycle, reuse, or resale value (e.g., steel, iron, nonferrous copper, stainless steel, plastic, and concrete).

I6-101

The commenter states that Section 4.8.5.2 of the Draft SEIR misstates the arsenic maximum contaminant levels (MCLs).

In response to the comment, the following Draft SEIR text on page 4.8-16 is revised in the Final SEIR to explain use of the Pre-injection Treatment System to treat freshwater. This change does not affect the impact analysis or significance conclusions presented in the Draft SEIR.

The Project would also include construction of a Contingent Freshwater Pre-Injection Treatment System, if necessary, to treat freshwater from water supply wells located in the HNWR in Arizona. The Pre-injection Treatment System would be constructed only after operational adjustments are made and if in the event that the arsenic in freshwater contains arsenic continues to impact the receiving water quality at concentrations above the water quality objective of 32 micrograms per liter, as described in Section 3.6.1.7 of this SEIR.

- I6-102 The commenter requests a clarification regarding the improvements to the TCS Evaporation Ponds in Section 4.8, “Utilities, Service Systems and Energy.”
- DTSC agrees with the comment regarding facilities to be constructed at the TCS Evaporation Ponds, but notes that these features were well documented in the Project Description (see Table 3-3 on page 3-45; pages 3-51 to 3-52) and included in the analysis in all sections of the SEIR. In response to the comment, the following Draft SEIR text on page 4.8-16 is revised in the Final SEIR as follows:
- The Project would include construction of improvements at the Topock Compressor Station (TCS) Evaporation Ponds, namely a small structure to house a natural gas generator, a containment pad for truck loading/unloading, a drip evaporation system (including agitators), valves, and remote monitoring instrumentation, as described in Section 3.6.1.9 of this SEIR.
- I6-103 The commenter notes that the use of solar cells would be at the Construction Headquarters west of Moabi Regional Park and therefore does not belong in the description of the Station and TCS Evaporation Ponds.
- In response to the comment, the following Draft SEIR text on page 4.8-17 is revised in the Final SEIR as follows:
- The existing generators at the Station would be supplemented by two new 480 volt natural gas generators with a new switchgear and auxiliary system (e.g., lighting controls, sensors, security cameras, and valve actuators) that would be housed in the existing Auxiliary Building. ~~The Project also includes the use of photovoltaic solar panels at the workshop building and parking shade structure to provide additional power supply.~~
- I6-104 The commenter notes that the two septic tanks at the Construction Headquarters would be located in previously disturbed areas. As Chapter 3, “Project Description” refers to these areas as disturbed, this text at this particular location is an error.
- DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text on pages 4.8-21 and 4.8-22 is revised in the Final SEIR as follows:
- However, the two septic tanks to be at the Construction Headquarters would be located at a previously ~~undisturbed~~ area.
- I6-105 The commenter clarifies that not all of the wastes generated from the decommissioning of the IM-3 Facility would be hazardous waste; some material may be non-hazardous waste.

DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text on page 4.8-25 is revised in the Final SEIR as follows:

The decommissioning of the IM-3 Facility would generate up to 5,000 cubic yards of solid waste and up to 2 million gallons of liquid waste. Depending on quality and quantity, The material would be recovered, disposed of on-site at the TCS Evaporation Ponds, or if needed, disposed of off-site at a licensed hazardous waste disposal facility permitted to accept the waste.

I6-106

The commenter notes that the water quality at Well HNWR-1A is already at unacceptable levels (Section 4.9.3.2, page 4.9-11).

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 4.9-11 is revised in the Final SEIR as follows:

- The water quality at well HNWR-1A further deteriorates ~~to unacceptable levels. In particular, if the concentration of arsenic increases to and remains above the water quality objective of 10 micrograms per liter (µg/L).~~

I6-107

The commenter notes that portable generators and lighting were previously analyzed in the Groundwater FEIR.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on pages 5-2 and 5-3 is revised in the Final SEIR as follows:

New direct impacts, not analyzed in the Groundwater FEIR, could occur as a result of: the importing of groundwater potentially containing increased levels of arsenic from Arizona to California; construction and operation of the Construction Headquarters, Long-Term Remedy Support Area and Soil Processing Area near Moabi Regional Park; ~~the use of portable generators and lighting to accommodate limited nighttime work activities;~~ and the use of certain staging areas.

I6-108

The commenter requests clarification regarding above versus underground piping, and the addition of the piping length.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 5-4 is revised in the Final SEIR as follows:

Direct and indirect impacts could occur as a result of: construction of the Construction Headquarters/Long-Term Remedy Support Area and Soil Processing/Clean-Soil Storage Area near Moabi Regional Park, not previously considered in the Groundwater FEIR; construction of an Operations Building and other improvements at the Transwestern Bench, not previously

considered in the Groundwater FEIR; construction of a Carbon Amendment Building and other improvements at the MW-20 Bench, not previously considered in the Groundwater FEIR; an approximately 12 percent increase in the number of boreholes from that previously considered in the Groundwater FEIR, as well as Future Activity Allowance; an approximately 50 percent increase in roadway improvements from that previously considered in the Groundwater FEIR, as well as a Future Activity Allowance; and an increased disturbance of soil from trenches for pipelines resulting from the fact that remedy pipelines are to be constructed underground (versus aboveground which was assumed in the Groundwater FEIR), which will result in approximately 127,500 linear feet of underground piping, installed in 43,200 feet of trenches, plus a Future Activity Allowance, all of which would result in a substantially more severe significant impact on unknown historical resources than was previously identified in the Groundwater FEIR. Therefore, the Final Groundwater Remedy Project has the potential to impact known and unknown historical resources other than the Topock TCP through ground disturbance, increased activity, and introduction of new visual intrusions to the landscape would alter the setting of these resources, and this impact is considered significant (Impact CUL-1b/c). This is consistent with the conclusions presented in the Groundwater FEIR.

I6-109

The commenter suggests edits to Subsection 5.1.3 of the SEIR, specifically eliminating reference to Mitigation Measure NOISE-1 on page 5-9, adding specific distances from which distance noise monitoring would be required, and adding specific language regarding the noise disturbance coordinator.

DTSC agrees that most of the text should be edited as suggested for clarity. However, DTSC does not agree with the revisions to delete reference to Mitigation Measure NOISE-1 from page 5-9, which is a summary of significant and unavoidable impacts of the proposed Project as required by the CEQA Guidelines Section 15126.2(b). As analyzed on page 4.7-44, Mitigation Measures NOISE-1 and NOISE-2 would both be required to reduce Impact NOISE-4; however, the impact would still remain significant and unavoidable with implementation of these mitigation measures. In response to the comment, the Draft SEIR text on page 5-9 is revised in the Final SEIR as follows:

In order to reduce this impact, **Mitigation Measures NOISE-1 and NOISE-2** shall be implemented (see Section 4.7). Mitigation Measures NOISE-1 and NOISE-2 would ~~limit~~ require noise monitoring if construction of Project features occurs within 1,850 feet and 5,830 feet from sensitive California receptors and 330 feet and 735 feet from Arizona receptors for daytime and nighttime noise, respectively, and 45 feet of sensitive receptors (Topock TCP), implementing acoustic shields to limit noise to sensitive receptors if noise levels are still determined to exceed

noise standards, and require a disturbance coordinator. The disturbance coordinator will be required to 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 Section 2.11 (CIMP; see Appendix H to the C/RAWP). In addition, CUL-1a-12 would ensure specifically that accommodations for Tribal ceremonies are provided for before, during, and after construction activities.

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.

I6-110

The commenter requests using “unjustified” rather than “irreversible.” However, the word irreversible is correctly used, particularly in the context of CEQA Guidelines Section 15126.2, and the existing text is sufficient. The commenter also suggests adding text that qualifies the Project’s impacts to future generations because the Project will be decommissioned in the future.

DTSC agrees with this comment, and therefore, in response to the comment, the Draft SEIR text on page 5-11 is revised in the Final SEIR as follows:

The Project does not commit substantial amounts of resources compared to existing annual allotments, and the amount of energy and equipment to be used is limited to that needed for the remedy. The Project also includes decommissioning, and thus would not commit future generations to similar uses. ~~so~~ As a result, there is no irreversible commitment of nonrenewable resources or related significant impact.

I6-111

The commenter requests that since the Draft SEIR also evaluated the layup and decommissioning of the IM-3 Facility as part of construction activities, as well as future restoration of the IM-3 Facility, additional text be added to further describe the procedure.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 6-4 is revised in the Final SEIR as follows:

6.3.1 Pre-Construction, Construction, Start-Up & IM-3 Decommissioning

... Phase 2 may overlap the end of Phase 1 by a month or two, depending on the progress of construction.

In addition, upon receipt of DTSC’s approval for decommissioning of IM-3 Facility, with concurrence from DOI, PG&E will decommission the facility in accordance with the IM-3 Decommissioning Work Plan (Appendix F of C/RAWP). All

components of the IM-3 Facility, except for monitoring wells, a brine storage and loading facility at MW-20 Bench, and utilities in National Trails Highway, will be decommissioned and removed. Subsequent to decommissioning, PG&E will submit a site-specific restoration plan for review and comment. Restoration will be conducted in accordance with an approved restoration plan.

I6-112 The commenter requests clarification to the location of the Groundwater Monitoring (1C) cumulative project.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 6-7 is revised in the Final SEIR as follows:

Project 1C, Project Location: Immediate vicinity of the Station and in Arizona near the Topock Marina.

I6-113 The commenter requests an update to the year work would be conducted for the Management of Historic TCS Wells for the cumulative impacts discussion.

DTSC concurs with this clarification and, in response to the comment, the Draft SEIR text on page 6-16 is revised in the Final SEIR as follows:

This work is planned for ~~2016~~ 2017, or in subsequent years, as historic wells are identified.

I6-114 The commenter states that the pilot studies in Project 1F do not appear to be different from those included in the Soil Investigation Activities Project 1E, and suggests deleting the reference to potential pilot testing.

However, Project 1E is focused on investigation, whereas Project 1F is focused on future remediation where a pilot test may be necessary to evaluate the feasibility of a remediation method. The two projects need to remain separate; therefore, no text was revised. The commenter also requested updating the years that additional activities would be conducted. In response to that particular comment, the Draft SEIR text on page 6-17 is revised in the Final SEIR as follows:

The soil investigation project includes soil sampling and analysis as described in the Soil Work Plan (CH2M Hill 2013), and the potential need for additional activities such as bench scale tests, pilot studies, and geotechnical evaluations to support a future Soil Corrective Measures Study/Feasibility Study (Soil CMS/FS) and plant or other biota sampling activities to support an ecological risk assessment within, and in the vicinity of, the Station. For the purposes of this analysis, bench scale tests and pilot studies, which will be conducted to support a future Soil CMS/FS, are categorized and analyzed as part of the future soil remediation effort – Soil Remediation and Potential Pilot Test (1F) – based on the scope and timeframe of the activity.

The Soil Work Plan sampling began in November 2015 and continued through March ~~2016~~ 2017. Additional activities, similar to those described above associated with investigation have not yet been completed, and will depend on the results of soil sampling. If additional activities are to be completed, they would occur from ~~2016~~ 2017 to 2018.

- I6-115 The commenter states that pilot tests that are part of the Soil Investigation Activities (Project 1E) have already been conducted and do not need to be included in the cumulative analysis.
- As stated in Table 6-3, the timeframe for conducting pilot tests is anticipated to begin no earlier than 2018, which indicates they have not yet been conducted.
- I6-116 The commenter requests clarification to the text that federal and state standards would also require compliance for geology and soils.
- DTSC concurs with this clarification and, in response, the Draft SEIR text on page 6-36 is revised in the Final SEIR as follows:
- However, each of these individual projects would likely require implementation of similar measures and would be required to be in compliance with federal, state, and county standards, thereby reducing the potential for these potential impacts to be significant from a cumulative perspective.
- I6-117 The commenter suggests the cumulative impacts text be revised for clarity and consistency with Mitigation Measure HYDRO-1a/2a/3a.
- DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text on page 6-39 is revised in the Final SEIR as follows:
- The Project would implement SOPs and the BMP Plan for construction activities, ~~as well as adhere to the substantive provisions of the state Construction General Permit~~ to avoid and/or minimize the potential for impacts related to hydrology and water quality.
- I6-118 The commenter suggests that Mitigation Measure NOISE-3 would be effective at reducing the cumulative noise impact to a less than significant level (as opposed to that of significant and unavoidable).
- The commenter is directed to Section 4.7, “Noise,” under Impact NOISE-3 (pages 4.7-37 to 4.7-43), which explains why construction activities would expose sensitive receptors to noise levels in excess of the applicable noise standards and result in a substantial increase in ambient noise levels. Even with implementation of Mitigation Measure NOISE-2, which would require a disturbance coordinator to manage complaints and require an acoustical consultant for reoccurring

disturbances, impacts would not be able to be reduced to a less than significant level, resulting in a significant and unavoidable impact.

Given that the impact from the Project individually is significant even after mitigation, the cumulative impact of two or more concurrent activities cannot be found to be less impactful. Mitigation Measure NOISE-3 would reduce potential for cumulative noise impacts associated specifically with the PG&E efforts directly within the Project Area. However, because the specific locations and timing overlap of the other PG&E projects is unknown, Mitigation Measure NOISE-3 cannot definitively reduce impacts over the 50-year lifetime of the Project. As a result, the conclusion reached in the Draft SEIR of significant and unavoidable cumulative noise impacts is considered accurate and is not changed as a result of the comment.

I6-119 The commenter suggests editing the text to remove vibration.

As listed on page 6-41 of the Draft SEIR, vibration is also considered in the impact statement. Therefore, the suggested edits are not appropriate and no change is made in response to this comment.

I6-120 The commenter requests a text edit to clarify the processing of wastewater.

The text on page 6-47 is specifically referring to sewage-related waste stream. As such, the existing text is accurate, however, a separate sentence is added to clarify Project-generated wastewater. In response to the comment, the following Draft SEIR text on page 6-47 is revised in the Final SEIR as follows:

Sanitary Wwastewater at the Project Area is processed on-site via septic tanks and ,or trucked off-site when necessary. Remedy-related wastewater is processed on-site and reinjected into the Ground (IM-3 Facility), disposed of at the TCS Evaporation Ponds, or trucked off-site when necessary.

I6-121 The commenter requests deleting certain rationale for why the “Elimination of Project Components in the Moabi Regional Park Area” alternative meets some of the Project objectives but not others, such as safety and efficiency, which are two of several reasons this alternative was rejected.

DTSC respectfully disagrees with the deletion and maintains that public safety and efficiency would not be maintained with this alternative. The additional claims that the alternative would not meet Project objectives to minimize aesthetic and biological resources impacts if the infrastructure were to be moved to the Transwestern Bench is not substantiated and do not appear to be accurate. This alternative, if implemented, would involve placement of the Construction Headquarters and Long-Term Remedy Support Area off-site, which would meet Project objectives by reducing aesthetic and biological impacts on-site, but would increase

health and safety risks by adding traffic off-site and increase potential for hazardous material release from spills and accidents during transport as stated above. No change is made in response to this comment.

I6-122

The commenter requests clarification that the Aboveground Pipeline Alternative would meet most but not all of the Project objectives.

DTSC agrees and acknowledges that the analysis does not change with the recommended edits. In response to the comment, the following Draft SEIR text on page 7-42 is revised in the Final SEIR as follows:

It is important to note that the Aboveground Pipeline Alternative would ~~not~~ achieve most of the basic fundamental Project objectives, but not every single objective. The Project objectives are to ensure the Final Groundwater Remedy achieves cleanup levels and/or performance goals and compliance with RAO's within a reasonable time frame; minimize ground disturbance to protect biological, historical, cultural resources and aesthetic impacts to the extent feasible; to ensure efficiency and compliance with health and safety standards in consideration of public safety. The construction and long-term operation and maintenance of the Aboveground Pipeline Alternative would result in greater worker and public safety issues associated with an increased risk of injury or even death associated with worker/visitor falls due to the Project Area's topography and steep slopes. Further, the Aboveground Pipeline Alternative would require increased maintenance requirements, such as sand blasting and painting every 10 years. Since the construction and long-term maintenance and operation of the Aboveground Pipeline Alternative would result in greater risks to worker and public safety issues as well as greater aesthetic impacts, this alternative would not meet two of the environmental objectives of the Project.

I6-123

The commenter notes that Mitigation Measure GEO-1a was included in the 2011 Groundwater EIR but has not been brought forward in all appropriate sections of the Draft SEIR. In addition, the commenter notes there is no Mitigation Measure GEO-2 in the 2011 Groundwater FEIR.

DTSC's approach to the geology mitigation measures from the 2011 Groundwater FEIR was that they did not change and therefore did not need to be brought forward into the SEIR analysis. However, it was always DTSC's intention that these measures would be included in the MMRP as part of the approval documents that will be considered for the Final SEIR. In response to the comment, the following Draft SEIR text in Appendix GWMM - Groundwater FEIR and SEIR Mitigation Measures Comparison Table is revised in the Final SEIR as follows:

Mitigation Measure GEO-1a

b) . . . PG&E ~~shall~~ developed a SWPPP as discussed in Mitigation Measure HYDRO-1 ~~of the “Hydrology and Water Quality” section of this SEIR.~~ The SWPPP ~~shall identify~~ identifies best management practices (BMPs) that would be used to protect stormwater runoff and minimize erosion during construction.

d) Regarding the potential for contaminated soils to be eroded and contribute contamination into receiving waters, Mitigation Measures ~~GEO-1a~~ GEO-2 and HAZ-2 of the “Hazards and Hazardous Materials” section of this SEIR provides the provisions for safe work practices and handling of contaminated soils as investigation derived wastes.

Geology & Soils			
Would the proposed Project: b) Result in substantial soil erosion or the loss of topsoil?	Potentially Significant	Mitigation Measure GEO-1a: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Erosion of Soils. 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. 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 shall developed a SWPPP as discussed in mitigation measure HYDRO-1 of the “Hydrology and Water Quality” section of this EIR. The SWPPP shall identify 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	Less than Significant

		<p>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.</p> <p>d) Regarding the potential for contaminated soils to be eroded and contribute contamination into receiving waters, Mitigation Measures <u>GEO-1a</u> GEO-2 and HAZ-2 shall be implemented. Mitigation Measure <u>GEO-1a</u> GEO-2 provides the provisions for mitigating erosion through BMPs which shall be implemented. Mitigation Measure HAZ-2 provides the provisions for safe work practices and handling of contaminated soils as investigation derived wastes.</p> <p>Mitigation Measure GEO-1b: Construction, Operation and Maintenance, and Decommissioning Impacts Related to Differential Compaction of Soils.</p> <p>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.</p> <p>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</p>	
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		<p>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.</p> <p>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 outlined <u>prepared in compliance with</u> in mitigation measure BIO-1 shall <u>includes</u> 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.</p>	
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This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.

I6-124

The commenter states that the habitat restoration plan required by Mitigation Measure BIO-1 has been completed, and requested this text be updated, as edited below. The commenter also noted some text had been cut off in the Draft SEIR and requested its restoration.

In response to the comment, the following Draft SEIR text in Appendix GWMM - Groundwater FEIR and SEIR Mitigation Measures Comparison Table, is revised in the Final SEIR as follows:

c) . . . The habitat restoration plan ~~outlined~~ prepared in compliance with in Mitigation Measure BIO-1 ~~shall~~ 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.

This change presented in the mitigation measure does not result in a decrease in the effectiveness of the proposed measure, does not result in a substantial increase in the severity of the identified impact after mitigation, and does not preclude meaningful review and comment.

I6-125

The commenter requests clarification that light and glare sources were analyzed in the Groundwater FEIR.

DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text in Appendix IS – Modified Initial Study on page IS-5 is revised in the Final SEIR as follows:

... the Final Remedy Design provides new detail regarding light and glare sources, ~~such as the use of solar panels, which were not previously analyzed in the FEIR~~ and provides additional detail about the need for activities during nighttime hours that may have additional lighting.

I6-126

The commenter requests the addition of the text below for completeness.

DTSC concurs with this clarification and, in response to the comment, the following Draft SEIR text in Appendix IS – Modifies Initial Study on page IS-42 is revised in the Final SEIR as follows:

In addition, details of various components of the Final Remedy Design were not known at that time and were therefore not available for analysis. The Groundwater FEIR addressed the potential for elevated levels of arsenic and other byproducts that could result from reductive processes. The Groundwater FEIR also proposed implementation of Mitigation Measure HYDRO-1 ...

Letter I7: Ruth Musser-Lopez

Comment Letter I7

Ruth Musser-Lopez
River Archaeological Heritage Association (RiverAHA)
No. 1 Grandview and, or 420 E Street
Needles, CA 92363

February 27, 2017

Ms. Karen Baker, Deputy Director
c/o Mr. Aaron Yue, Project Manager,
Department of Toxic Substances Control
5796 Corporate Avenue, Cypress, CA 90630
VIA EMAIL aaron.yue@dtsc.ca.gov

Dear Ms. Baker,

This letter is in addition to my public comments recorded at a public hearing held at the Needles Senior Center by the California Department of Toxic Substances Control (DTSC) to provide information about a "Final Groundwater Remediation Project," hereafter "PROJECT", to summarize the "Draft Subsequent Environmental Impact Report for the Draft PG&E Topock Compressor Station Final Groundwater Remediation Project" (hereafter, "SEIR") and to hear the comments of the public with regard to the planned clean up project of the "Bat Cave Wash" and compressor station area Chromium 6 plume (hereafter, "PLUME"). Bat Cave Wash is the intermittent desert flash flood wash drainage issuing out of the mountain slopes along side of PG&E's Compressor station adjacent to the Interstate 40 bridge crossing over the Colorado River south of Needles into Arizona.

I7-001

My comments address the following areas with regard to the matter of California's Department of Toxic Substances Control remediation plan and environmental impact report related to PG&E's hexavalent chromium (Chrome VI) "flushing" and dilution project represented to be a solution to toxic pollution caused by PG&E's illegal hazardous waste dumping in the Park Moabi area:

1) the matter of the City of Needles closed landfill as a consequence of PG&E's chromium dumping there, with no replacement land fill, even for our organic brush; damage to individuals resulting from PG&E's chromium in the landfill.

I7-002

2) the matter of the adverse impact of the environmental impact report itself and the remediation plan, as it now exists, upon our community's Route 66 tourism industry due to road closures, maze closures and unsupportable conclusions regarding cultural resources that are not based upon empirical evidence and could potentially have a long-term cumulative impact upon our tourism industry and future recreational and education opportunities.

I7-003

3) the flushing system and the potential of overflow to and from the Colorado River, the construction of wells, the use of arsenic contaminated water imported from Arizona wells, the impact of the arsenic water treatment plant.

I7-004

However, first I am requesting that the comment period be extended and that the public be allowed at least 60 days to review the voluminous documentation and to prepare comments with regard to this massive experimental PROJECT with known adverse unmitigated economic and environmental consequences. It was announced that a 47-day public comment period allegedly opened on January 12, 2017, and will close on February 27, 2017 during which time written comment may be filed. First, I would like to object to the assertion that the comment period opened on January 12, 2017. Since its first meeting in Needles, I have repeatedly

I7-005

requested to be notified at my address concerning the project, but DTSC has consistently failed to provide me with notification. I was not notified of the availability of the DTSC until a Needles neighbor informed me by forwarding to me on January 30 2017 the written notification of the comment period he had just received. These comments are a rush job and do not represent all of my concerns, objections, questions, or concurrences and support.

17-005

1) NEEDLES SEWER PLANT, LANDFILL AND DAMAGE TO CITIZENS.

The negligence in failing to notify me of the availability of the SEIR and the comment period, is especially insulting and disrespectful considering that excepting Tribal representatives, I am one of the few local citizens in Needles and the Topock area, if any, who has bothered to attend the very early meetings including one in LaQuinta years ago and commented on the record in the past.

While a member of the Needles City Council in the 1990s I was instrumental in getting our City of Needles manholes locked off from liquid waste haulers like PG&E and my questioning with regard to the cause of the sewer plant bacterial kills and resulting stench led to an investigation into the possible dumping of liquid waste into the Needles manholes by liquid waste haulers including potentially PG&E contractors without authority or manifests and for that I got a big thank you in the form of a SLAPP (Strategic Litigation Against a Political Participant) suit from City management at the time, which though I was exonerated by the Judge who released me from the harassment of the malicious prosecution brought by the city at the expense of their taxpayers on the grounds of "contempt" of their kangaroo court and the city's so called "law enforcement" when I revealed the names of all the BLM employees who spoke to me, who feared retaliation, there was still significant financial costs that I bore. Also the BLM employee informants were damaged, one whom I believe was retaliated against as he was soon after transferred. One city employee who I didn't even know or speak with prior to the kangaroo court proceedings held by the council, Al Hammontree, got fired when the city managers suspected that he was the one I was talking to about possible dumping in our manholes. So sad.

17-006

And so, yes...there has already been a lot of uncompensated damage to the people in Needles whose landfill was shut down when it was learned that the acidic sludge from the sewer plant may cause a change in valency of the chromium that was dumped there by PG&E upon the illegal authorization of the county. In the current iteration of the lower Colorado River chromium dumping review the DTSC continues to ignore the Needles landfill problem and that is not fair or right. Both Hammontree and I, and the former BLM employee who lived in Needles at the time, suffered personal damage as well as being damaged as part of the class of citizens who are now without a local landfill, must pay extra for hauling waste across the river to an Arizona landfill and have no place of our own community's for the disposal of debris, even limbs and branches.

2) ERRORS, OMISSIONS, MISREPRESENTATIONS CONCERNING CULTURAL RESOURCES DAMAGES LOCAL INDUSTRY AND INDIVIDUALS

The repeated failure to notify me appears to be an apparent attempt to avoid addressing my concerns and publicly recognizing, mitigating and compensating me and others similarly positioned for the damage that this PROJECT, including its mitigation measures, will have on me personally and those in a similar class of individuals owning and or operating in the tourism, recreation, heritage, education, research and related industries— whose rights, privileges and opportunities have been and will be "short changed" and or eliminated as a result of implementing the prescriptions and intentions both stated and unstated in the SEIR document.

17-007

<p>I am a professional research archaeologist and businesswoman living and working in the local Needles/Park Moabi area who has been adversely impacted by the unlawful dumping of hazardous and toxic substances in the Needles/Park Moabi area and the ongoing PROJECT including the ongoing DTSC assessment activities. The project impact includes a direct adverse effect upon my rights and privileges, business, research, income, heritage, religion, beliefs and recreation which was not and has not been considered or addressed in the report.</p>	<p>17-008</p>
<p>For example, specifically, as a professional archaeologist, one, and only one, and an old out-dated one at that, of the publications of my extensive research with regard to the "Mystic Maze" was cited in the environmental document and wrongfully misrepresented and underrepresented leading to inaccurate conclusions in the report as misguided by your cultural resource consulting firm, who I assume was Applied Earthworks, Inc., the same firm that failed to report the numerous historic Route 66 heritage signage, motor lodges, and road works and National Old Trails Highway resources including +100 year old homes, walls and other distinctive road features in harms way when they surveyed the I-40 Interconnect project through Needles after they agreed with CalTrans and the City of Needles to ignore those resources and just look down at the pavement.</p>	<p>17-009</p>
<p>Applied Earthworks, Inc had been paid with or had access to Federal funds to fully record and document potential National Register properties but the firm ignored historic structures and their settings in the project area including a 3-story building over 100 years old that was constructed using an ancient Mojave Indian technology involving the use of arrowweed. The tribes had been contacted about the I-40 Interconnect project, and no comments were received from them, but the property owners with historic structures and settings that would be impacted were not provided with an opportunity to comment on that project before it was approved.</p>	<p>17-010</p>
<p>By ignoring the archaeological sites, the firm avoided identifying a "historic district" which gave CalTrans and the City of Needles an excuse to categorically exclude and exempt the federal project from environmental review under CEQA and NEPA. In doing so, the property owners along the route to be impacted, of whom I am one, were denied their right to comment during a public scoping period and to review the potential environmental impact of the project on the Route 66/National Old Trails Highway properties.</p>	
<p>Because of this dissatisfactory work and wrongful representation of the historic record by the firm, as I stated on the record at the public hearing, there is reason to believe that the archaeological record is not reliable and I agree with the Fort Mojave Indian Tribe as represented on page 4.4-44 that an independent cultural resources survey is needed to review the administrative draft of the archaeological record as prepared by Applied Earthworks, Inc. if it is going to be relied upon in the SEIR for making the decision with regard to the project.</p>	<p>17-011</p>
<p>Another thing concerns me with regard to the representations by Applied Earthworks, Inc. It appears that the firm has confused current cultural and religious beliefs as normally reported in socio-economic concerns with archaeology, history and empirical evidence and thus the integrity of the SEIR document is compromised.</p>	
<p>The maze (CA-SBr-219) is located near the gorge and the traditional historic place of the departed in the gorge dunes and thus the maze has apparently been incorporated into current religious and cultural world view with regard to the death passage. While this position held by local tribal members today has benefited the entire Needles and surrounding community, as well, from the perspective that the tribes have now taken a strong stewardship role that is helping to preserve the site, it does not justify the failure of the archaeological firm completing the analysis to ignore science or archaeological method in reporting on the significance and age of archaeological resources. Omissions are now and will in the future, be a cost to the tourism, educational, research and recreational community and industries.</p>	<p>17-012</p>

Omissions, errors and misrepresentations are directly related to the representations made about the Mystic Maze CA-SBR-219. Failure to address the evidence includes but is not limited to the following:

- a) Omission of the historic recorded testimony and oral history of now deceased Mojave on file with the CalTrans (State Road Department);
- b) Failure to acknowledge the existing empirical evidence and, or complete empirical archaeological testing of your own to draw conclusions with regard to age, significance and relevance of the historic railroad aggregate procurement surface mine which they refer to as a prehistoric maze;
- c) reliance upon outdated and unsupported assertions in a haphazardly typed and outdated National Register nomination form;

17-013

Moreover, the problem of the omissions are compounded by misrepresentations or fake representations that twist the historic facts or leave out historic facts drawing unreliable conclusions. For example, on page 4.4-61 it is stated:

"The interpretive plaque at the southern boundary of Locus A refers to the Topock Maze as a place where warriors "cleansed themselves" after battle before returning to their home villages (McDougall and Inoway 2005)."

17-014

This statement leaves out the important detail of the ethnographic references that the cleansing ceremony could have been completed at any location. The analysis also says "According to the Mojave people the Topock Maze has always been there." Again, this reference is not supported in the ethnographic or historic record and the statement does not make clear who constitutes the "Mojave People." Here is another quote from the same paragraph that is problematic:

17-015

"Those who consider its origin related to the construction of the railroad typically cite a memo from a railroad engineer in 1891 that describes the collection of gravel into windrows by Mojave workers prior to the gravel being hauled and used to support a bridge caisson (Haenszel 1978; Musser-Lopez 2011)."

That's it? That's all I had to support my conclusion that the gravel alignments are a historic aggregate mine? This misrepresentation includes errors and omissions including the omission of all the other evidence that I provided, including the evidence of the same gravel alignment footprint known to have been made by the use of Fresno scrapers at two other sites next to railroad tracks; the omissions and errors are damaging to me and to the integrity of the SEIR document. The statement then goes on to say:

17-016

"Photographic evidence of the bridge construction, interviews with railroad workers from that time, and statements from Needles residents present at the time of the bridge construction all suggest, however, that the Topock Maze was present prior to bridge construction, even if portions of it were later collected for ballast or support material (DTSC 2011)."

Here, the SEIR leaves out the important fact that the railroad grade also had to be constructed prior to the bridge construction and that a large amount of aggregate material was needed for the grade leading to the bridge. The railroad grade was built prior to the bridge so

that it could bring supplies to the bridge area, therefore, of course, the gravel operation was already ongoing prior to bridge construction. I included in my research, photos of the grade showing that a large amount of aggregate was needed to fill in the washes between the relic Pleistocene terraces between Topock and Needles. The photos of the bridge construction and the interviews with "railroad workers" and "Needles residents" present at the time of bridge construction need to be fully vetted in the SEIR back up data, because from the photos and interviews that have been made available to me, it would have to be concluded that the gravel alignments were made at the time of the construction of the railroad grade which happened before the bridge. The bridge contractors copied the grade construction contractors. It is pretty obvious what happened. All of that gravel was not used at the bridge. There is significant evidence in the historic record of engineering surveys of the bridge crossing location prior to the construction of the railroad in which the giant feature was never mentioned though a giant maze would have been something that the surveyors would have definitely noted in their diary. This and more evidence is included in my treatises on the subject and there is still more evidence that is yet to be published.

17-016

Discovered in my independent research, and previously reported is that over 100 years ago, the Mystic Maze controversy originated when in 1907 Edward Curtis, a railroad contractor assisting with developing tourism, saw the gravel alignments, photographed them, tweaked the photos using shading and invented the origin of the "stone maze." The controversy Curtis created resulted in a tourism industry that has benefited Needles. Curtis, infamously known for his misrepresentations and staged photographs, also invented the myth of the "stone maze" by romanticizing its significance to the Mojave. That legend was enhanced by a Harold Betts idealized painting and sold on post cards at Harvey Houses after 1908. Prior to that the railroad had been embroiled in a public protest for tearing up the desert with their railroad construction destroying real Mojave art, a large anthropomorphic ground figure—so much so that county officials had to come out to calm the crowd of protestors.

The consequences of the ongoing reports, the DTSC 2011 and SEIR 2017 conclusions is that both the DTSC and the property manager, the United States Department of Fish and Wildlife (hereafter, F&W) and the agency from whom the F&W has withdrawn the lands Bureau of Land Management authorized by the United States Department of Interior already, even before PROJECT approval, discourages and denies historic tourism, visitation and research at the "Mystic Maze" having determined it to be a "prehistoric sacred site" based upon the assertions and current religious beliefs of some while ignoring the rights, privileges, historic use and empirical evidence of others. I and the association of concerned citizens who I represent object to the closure of the Mystic Maze area to researchers and others..

17-017

For example, I have previously provided and published a list of tests that could be conducted to determine age and significance of the CA-SBr-219. My request to conduct a non invasive empirical test for age which would rely upon observable evidence at the gravel alignments/maze was flatly ignored based upon the foregone conclusion by the BLM and, or, the F&W manager that the alignments are "sacred."

The American Rock Art Research Association was dissuaded by the Bureau of Land Management from visiting the gravel alignments as a consequence of the historic visitor attraction, now being a place of ongoing religious worship. This includes the location at CA-SBR-219 where decades ago, because no one else cared about protecting the integrity of the historic site, the Needles Museum group, which I am a charter member of, is responsible for seeing to it that a barrier (with pedestrian gate) be erected to keep off road vehicles from destroying it. Now museum groups and rock art researchers are not welcome.

17-018

The American Rock Art Research Association (ARARA) organization includes rock art experts who have researched rock art all over the world, not just Native American rock art.

They come from all over the country to the annual event held in different locations every year. Some who came to the event here, with their meeting place in nearby Laughlin, Nevada, were interested in the field trip loop around the Colorado river valley in the vicinity of Needles, Bullhead and Laughlin where they could observe the "maze" site footprint with their own eyes. On-site or *in-situ* inspection is very important in archaeology and rock art studies because second hand photos can be altered or be limited to just one location in the site rendering a skewed perspective. Despite all the planning and hoops that they were forced to go through, small ARARA field trip groups accompanied by guides were not allowed the opportunity to see the site "facts" with their own eyes.

17-018

Sadly, blinding people with 'alternative facts' seem to be the Orwellian world in which we live in today. In the case of the gravel alignments "maze," the hushing of scientific evidence in an environmental disclosure statement is so preposterous and out of whack with reality that the report is on the level of absurdly scandalous.

My extensive research and multiple publications were written off and ignored and instead my detailed analysis were disrespected, wrongfully minimized and distorted into fake facts and misrepresentations. The analysis in the SEIR lacks integrity and appears to be a result of laziness, greed and neglect—a simple and cheap solution simply to say the "maze" is sacred and then ignore the need for real science, research, empirical testing to support your conclusions with regard to significance and age. My strong admonition is that your researchers and writers update their data base with my more recent publication that documents evidence and conclusions with regard to the age and significance of the gravel alignments based upon empirical evidence. There are two free publications at the Society for California Archaeology Proceedings webpage under Musser-Lopez and a more recent publication in the **Nevada Archaeologist**, Vol. 26, 2013. "**Rock and Gravel Row Mounds/Aggregate Harvesting Near Historic Railroads in the Desert and Basin Regions of California and Nevada**" by Ruth Musser-Lopez.

17-019

I mean no disrespect to the religious beliefs of current religious practitioners and I have always emphasized in my presentations and writings that based upon my understanding of prehistory, the entire Mohave Valley and its surrounding geologic features, including the mountains and the gorge are sacred to the Mojave, and I am in total concurrence that the "maze" should be on the National Register and protected, but my concern is the integrity of the record including past documented religious beliefs, historic and archaeological records and ability of all not just some to be able to view the giant feature from the ground and enjoy the story behind the controversial site. To simply relegate to "Native American sacred" and "off-limits" to the detriment of any other interpretation is damaging to the whole of the Route 66 tourism industry including my own business, professional and personal enjoyment.

17-020

Further, it has now been learned that to compensate the Fort Mojave Indian Tribe for loss of sacred lands, a large chunk of land that includes an alignment of National Old Trails Highway and, or, Route 66 will be turned over to the tribe for their own sovereignty when the project is completed. Though I am all for the tribe being compensated for their loss of traditional and sacred territory, I am saddened by the potential loss of the use of the old historic road alignments for tourism, interpretation and recreation. I must object to those historic routes being closed to access by the general public.

17-021

The stated purpose of the SEIR is that the current environmental conditions surrounding the Project have changed and, or, new information is available since the final Environmental Impact Report (EIR) and "groundwater remedy" plan in 2011 with regard to impacts upon air quality, hazards and hazardous materials, hydrology and water quality biological resources, utilities, service systems and energy, water supply, aesthetics, noise and cultural resources. The report asserts that there will be less than a significant impact after mitigation in all of these

17-022

areas except in the area of the last three, aesthetics, noise and cultural resources where there will be a significant and unavoidable impact as a result of project implementation. 17-022

Non-destructive empirical testing is an obligation of those describing the environmental setting, to lend support to more accurately understanding its age and significance for the purpose of evaluating the magnitude of impact of the project. **The agency is obligated to conduct empirical testing in support of their conclusions, particularly with regard to CA-SBr-219 which is of significant economic interest to the RT66 tourism community, particularly the businesses relying on tourism and visitation in Needles, California.** 17-023

3) FAILED WARRANTY OF METHOD

My understanding based on the SEIR is that the plan to remediate ground water has the objective of reducing the mass, toxicity, mobility volume and concentration of the hexavalent chromium, Cr(VI), plume. Proposed is "treatment technologies" namely the use of a method to treat groundwater in place with a degradable food-grade organic compound ("ethanol") as opposed to pumping and circulating water through a separate above ground treatment plant. The treatment involves an in situ recirculation flushing system using injection and extraction wells, pipes, and dams, and is billed as a method of reducing and converting Cr(VI) to a "relatively insoluble trivalent chromium, CR(III) form. Using an ethanol additive purposed to be injected into newly constructed wells, then flushing the groundwater towards the river where extraction wells would siphon and recycle the water back to the injection wells, representatives of the DTSC appeared confident in their presentation that their plan will work. The stated remedy asserts that the reduced chromium would precipitate or become adsorbed onto soils below the water table and thereby be removed from groundwater. What is the guarantee that this is what will happen. What chance is there for failure? 17-024

In questioning after the meeting the DTSC Project Manager, Aaron Yue, admitted that the flushing system has the downside of using clean water. Clean water would be mixed with and would dilute the foul water. The clean water would come from the extraction wells adjacent to the Colorado River that have a purpose of drawing up the converted groundwater but would also draw surrounding river water as well. This drawing up of river water from new wells is a concern. What right to use Colorado River water is available to operate the program. What certainty is there that the contaminated water won't flow by and pass the draw area on route to the river. "Fresh" water would also be hauled in from an arsenic laced source on the Arizona side of the adjacent river. The plan design calls for filtering the arsenic from the Arizona water before injecting into California wells. Where will the arsenic be disposed of. What is the environmental consequence of truck delivery of that water. 17-025

CLOSING

With all that said, I want you to know that I support your effort to get the dangerous plume cleaned up, the effort to take the public and tribal concerns into consideration and the fact that PG&E is begin required to fund this cleanup operation and related studies. I am thankful for the developing technology that appears to be able to provide us with a potential solution. Now, what is the contingency plan if this one doesn't work? 17-026

Respectfully submitted,

Ruth Musser-Lopez

Needles, California

Dale Jones

From: Ruth Musser-Lopez
Sent: Monday, February 06, 2017 11:03 AM
To: Rick Daniels; Dale Jones; Janispaget
Subject: Request for agenda item

Rick, Dale and Jan - could one of you please pass this on or forward to Mayor Paget because I do not have his email address.

I am requesting time on the agenda, an agenda item, to address the matter of California's Department of Toxic Substances Control remediation plan and environmental impact report related to PG&E's hexavalent chromium (Chrome VI) "flushing" and dilution project represented to be a solution to toxic pollution caused by PG&E's illegal hazardous waste dumping in the Park Moabi area. I would like to have 7-10 minutes to address some matters that could potentially cause adverse impact to the community of Needles that have been over looked.

- 1) the use of arsenic contaminated water imported from Arizona wells.
- 2) the matter of our closed landfill as a consequence of PG&E's chromium dumping there, with no replacement land fill, even for our organic brush.
- 3) the matter of the adverse impact of the environmental impact report itself and the remediation plan, as it now exists, upon our community's Rt66 tourism due to road closures, maze closures and unsupportable conclusions regarding cultural resources that are not based upon empirical evidence and could potentially have a long-term cumulative impact upon our tourism industry and future recreational and education opportunities.

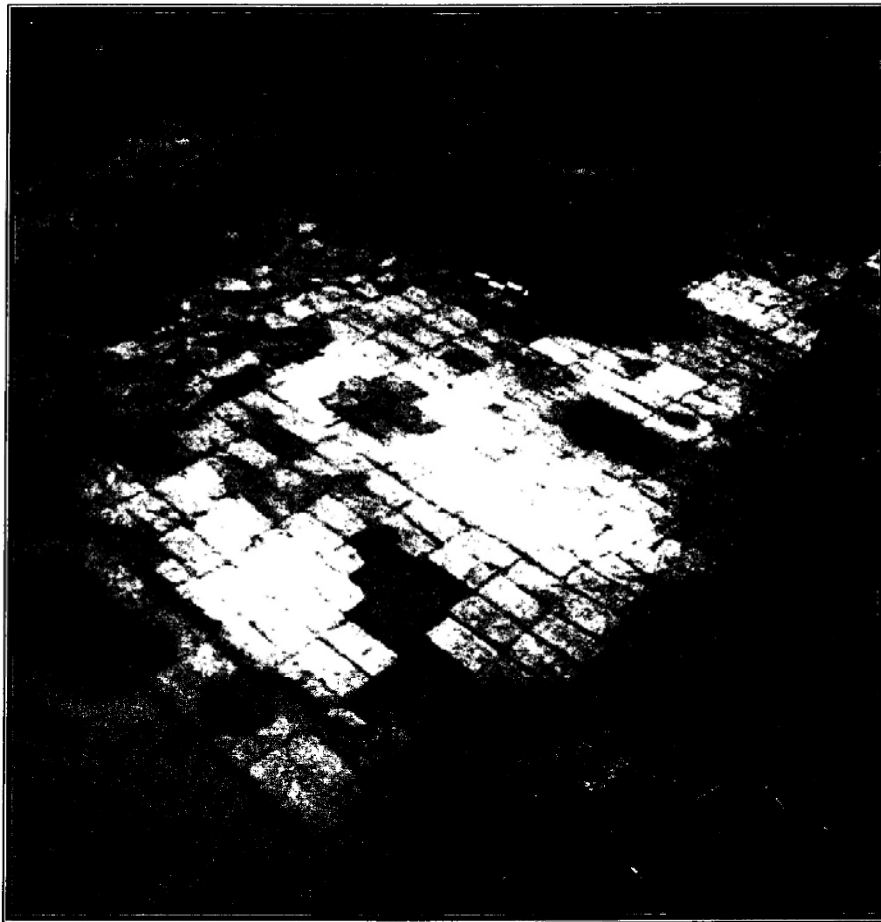
Thank you for considering my request. I look forward to hearing from you.
 Have a good day.
 Ruth Musser-Lopez

2-14-2017 #3

NEVADA ARCHAEOLOGIST

VOLUME 26, 2013

ADDITIONAL INSIGHT INTO NEVADA'S PAST



NEVADA ARCHAEOLOGICAL ASSOCIATION

Rock and Gravel Row Mounds/Aggregate Harvesting Near Historic Railroads in the Desert and Basin Regions of California and Nevada

Ruth Musser-Lopez

San Bernardino County Archaeological Heritage Association

In Volume 22 of the Nevada Archaeologist, Stearns and McLane (2007) make the case of historic railroad "ballast harvesting" finding a ca. 100-year-old shovel blade at 26CH2335, described as pebble mounds adjacent to linear rows of harvested pebbles along the Hazen Branch of the Southern Pacific Railroad. Lending further credence, virtually the same footprint of linear rows of mounded pebbles and gravel separated by and alternating with wider rows cleared of surface aggregate are also found along railroads in the Mojave Desert at the "Mystic Maze" (CA-SBr-219) and in Afton Canyon (CA-SBr-1910H). However, the purported prehistoric origin of the so-called "Maze" has been the subject of controversy for over 100 years, though the historic record, patterns of patination, contouring for erosion control, and the stylistic characteristics distinguishing nearby fragile prehistoric earthen art intaglios from the robust row mound alignments supports a historic origin associated with aggregate harvesting for railroad ballast and bridge caissons.

In 2010, the Archaeological Heritage Association preliminarily evaluated several types of evidence with regard to aggregate row mound structures: their associations, their morphology, the characteristics of the pavement immediately surrounding them, and the historic record including photographic and ethnographic evidence. The evidence was used to evaluate three hypotheses: (1) that the gravel rows were made in conjunction with prehistoric agricultural activity; (2) that they were made as geoglyphs or earthen art for prehistoric use in ceremony; and (3) that they were byproducts of a modern gravel procurement operation and erosion control in conjunction with the construction of the railroad and the need for ballast and caisson aggregate. The abstract for the report was submitted to the Society for California Archaeology in December of 2010, and the preliminary findings that the rows were likely made using mechanical scra-

pers (Figure 1) in vogue from 1883 to 1910 when the railroad and bridges were under construction were presented at the annual meeting in March of 2011 (Musser-Lopez 2011).

To date, parallel gravel row mounds have been recorded in three separate places in the Mojave Desert and Great Basin, each adjacent to historic railroads (Figure 2). The 100-year-old controversy over the age and origin of the 100-acre "Mystic Maze" or "Topock Maze" (CA-SBr-219) near Park Moabi, California, next to the historic railroad bridge crossing of the Colorado River at Topock, Arizona, has resulted in it being the best known of the sites. Site CA-SBr-219 is also an archaeological type-site icon of considerable importance, listed on the National Register of Historic Places as a significant prehistoric site.

Though the site area had been explored first during the 1853-1854 Whipple Expedition, dur-

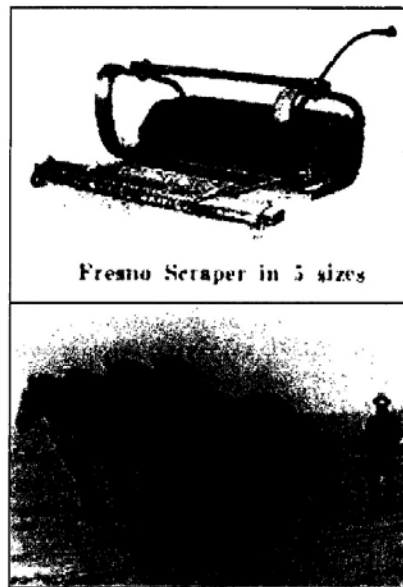


Figure 1. Horse drawn mechanical scrapers in vogue during the period of 1883 to 1910 were likely used to harvest railroad ballast. Top image courtesy of *Road and Street Catalog and Data Book* (Gillette 1930).

ing which detailed diaries were kept in an effort to find a 35th parallel route for the railroad, then by engineers, contractors, and railroad personnel building the railroad in the 1880s, no mention was ever made of gravel row alignments or a gigantic prehistoric labyrinth until it was first photographed and described in the literature as a “stone maze” by Edward S. Curtis in 1908. Curtis was contracted by the railroad to produce imagery and promotional material to attract tourism to the West for the purpose of visiting remains of a “vanishing race” of Native Americans.

Described as an “ethnographic adventurer,” Curtis was known to manipulate imagery and/or

enhance the facts. Curtis (1908:55) asserted that the site was used by “Mohave Indians...as a maze into which to lure and escape spirits...bewilder the spirits... and thus elude them”, allegedly basing his information upon one person’s memory received by Curtis second-hand.



Figure 2. Aggregate row mound footprint at three archaeological sites, top to bottom: (1) 26CH2335, Hazen; (2) CA-SBr-1910H, Afton; and (3) CA-SBr-219, Topock.

The giant maze imagery took root in the corporate mind of the local culture that sold everything from a fantastically sketched maze with the words "Mystic Maze" on postcards at Harvey Houses to jars of honey based upon the ever morphing legend. By 1929, the local Needles High School yearbook had been named *The Mystic Maze* and the volume included an editorial about the many life paths students can choose from, much like the paths in the Mystic Maze (*The Mystic Maze* 1929).

It should be noted that Schroeder (1952) reported an interview with a Mrs. B. B. Brown of Parker, Arizona, who claimed to have spoken with an elder Mojave Indian by the name of Chuck Wood, who testified to Mojaves using the maze to find the way out without crossing the gravel, thus to "leave the devil behind them." It is unknown if she used an interpreter; however, the date of the purported conversation was said to be in 1910, postdating the Curtis publication. Interviews with Mojaves who actually lived in the Mohave Valley/Topock area contradict this statement (see below).

Perpetuating the idea of its prehistoric origin, the gravel row was then recorded as a prehistoric archaeological feature of "Site M-78" by Malcolm J. Rogers in 1939, and thereafter the site record was updated repeatedly, rerecorded as a California prehistoric site (CA-SBr-219), an Arizona prehistoric site (AZ L:7:14) (Urban 1976), and as a National Register of Historic Places prehistoric site by well-meaning archaeologists who based their assessment of a prehistoric origin on Rogers (1939), Schroeder (1952), and their own visual observations of patina without any further empirical testing, ignorant of or ignoring the historic record and strong evidence of historic surface gravel mining operations in the area. Rogers (1939:9), to his credit, did predicate his description of the site as prehistoric with this precaution:

"In the vicinity of roads, rail-

roads and modern settlements, the mesa surfaces have often been dragged with scrapers to procure gravel for road ballast or concrete work. That work has produced wholly fortuitous figures of a geometric nature which are difficult to distinguish from the prehistoric figures; they have to be carefully studied before a decision regarding their origin can be made."

It was not until 2005 that another 100-acre site with row mounds was recorded – 26CH2335 in Churchill County, Nevada (Stearns and McLane 2007). Similarly, it was also located adjacent to a historic railroad, and like the so-called maze at Topock, it too was initially identified as a "geoglyph" or earthen art. Shortly after Musser-Lopez's (2011) assertion that the Topock "maze" was the remains of gravel harvesting with mechanical scrapers, rock and gravel row mounds with a virtually identical footprint were reported in Afton Canyon near Barstow, California. In 2011, Fred Lange updated the site record for CA-SBr-1910H, the historic Afton settlement, reporting the presence of the rows mounds constituting the most recent known recording of this site type. In his report, Lange (2011:2) states:

...The scrapes are consistent with the footprint of a Fresno scraper. The scrapes lead to the rail line and the (sic) show that the adjacent material was used to build the rail grade. The age of the railroad is consistent with when the Fresno Scraper was in operation.

Typically, "rock and gravel row mounds" can be described as patterned relief, low-lying,

linear rows of mounded gravel, pebbles, or aggregate separated by wider rows of cleared swaths. Aggregates are comprised of rounded pebbles to subangular gravel averaging 2 to 7 cm in size along with infrequent larger rocks. Though typically about 100 to 150 cm wide, inter-site and intra-site cleared rows are not consistent widths; this variation is explained by the fact that Fresnoes were being produced in multiple sizes as demonstrated in the 1930 *Road and Street Catalog and Data Book* (Gillette 1930, see Figure 1). The contrast of color between the cleared swaths and gravel row mounds is dependent upon local variations in patination and geomorphology of the original undisturbed surface gravels and the underlying soils prior to human modification. Site size ranges from near 10 to 100 acres with hundreds of rows present. Generally, gravel row mound sites have the following characteristics:

- Location is on easily accessible relic river terraces or in basins or washes with abundant gravel and cobbles averaging 2 to 7 cm in size along with infrequent larger rocks;
- An historic railroad is found within a few miles or less;
- Site contains artificially formed, regularly spaced, parallel gravel row mounds, each roughly 10-30 cm high and 20-60 cm wide, and typically spaced about 120 cm apart, separated by swaths of cleared surface gravels exposing underlying soil;
- Rows are open ended, do not make abrupt turns and do not feature obstructions or turnarounds characteristic of a puzzle, labyrinth, or maze;
- Rows can be physically associated with raked pebble mounds;
- Rows can be physically associated with totally harvested, cleared areas;
- Sites are typically devoid of historic artifacts and features except access roads;
- If prehistoric trails are present in the site, they are truncated by the alignments;
- If prehistoric artifacts are present in the site, typically they are isolates; for example, a single potsherd or lithic flake isolated in a row mound, or found gathered in a pile;
- Undisturbed lithic reduction stations or pot drops are not found in or on row mounds;
- Rows are often gently curved to conform to contour of slopes; and
- Tests for prehistoric aboriginal crop pollen are negative.

Estimated ages of gravel row mounds vary from historic times to over 8,000+ years ago. Without verifiable evidence, the earlier date is likely assigned by those wishing to link the mounds to the age of Paleoindian occupation of presently dry Pleistocene/early Holocene lake shorelines, perhaps attempting to make it fit into Bedwell's (1973) Western Pluvial Lake Tradition or another similar concept. The historic date is based upon the historic record associated with the Topock site CA-SBr-219 (see below) but it has also been speculated by their presence near or leading up to historic railroads at the three known sites and the reported 2005 discovery of a 100-year-old shovel blade at 26CH2335 (Stearns and McLane 2007). Otherwise, there have been relatively few historic or prehistoric artifacts associated with aggregate row mounds.

AGGREGATE ROW MOUND FUNCTION

Stearns and McLane (2007) provide an excellent summary of the contributions to the current theory regarding the function of circular mounds of aggregate or pebbles and extend that theory to row mounds based upon the association of peb-

ble mounds adjacent to linear rows of pebbles and gravel along the Hazen Branch of the Southern Pacific Railroad. They suggest that rakes, shovels, and wagons were used to harvest gravel at 26CH2335. Gravel was raked into neat rows and wagons moved conveniently between the row mounds along the wide, cleared swath between them while gravel was pitched onto the wagon from the mounds.

In 2011, Musser-Lopez demonstrated the likelihood that CA-SBR-219 is also an aggregate borrowing area, citing S. M. Rowe (1891). In 1891, Rowe published an article entitled the "Red Rock Cantilever Bridge" in the *Transactions of the American Society of Civil Engineers* documenting profit-driven gravel harvesting by railroad construction contractors who hired "Indian laborers" to procure aggregate material used in the caisson work at Topock by raking up gravel from mesa terraces near the bridge to be transported by wagon, loaded up on railcar and moved to locations where needed:

"...The broken stone was at first supplied from the debris of the Chino Quarry and from the volcanic rock found in the vicinity of the bridge, but it was found that broken volcanic rock with which the "mesas" were strewn, could be collected at less cost, and being of the same character, was substituted in the caisson work at a saving of nearly \$1 per cubic yard. The process of gathering was to rake these fragments of stone into windrows and haul them by wagon to a pile where convenient to load into a car when needed. An inclined screen was erected to separate the dust from the stone while conveying it to the car. Indian labor was used very suc-

cessfully for this as well as for labor about the caisson" (Rowe 1891:692-693).

In a personal communication, Everett Bassett, Transcom Environmental, suggested that instead of or in addition to the Fresno Scraper, the employment of the Buck Scraper, with a characteristic of pushing soil or gravel to the side, should be considered as a possible way in which the gravel rows were roughed out. The Buck Scraper's historic successor, the Fresno Scraper, with its controllable scraper bucket, was used extensively by the railroad as the first "bulldozer" for construction, along with teams of draft horses. The distance between the rows seems to be designed for the 3.5-foot-wide blade, a perfect fit for collection of gravel. The use of horse-drawn scrapers in the area between 1883 and 1910, when thousands of them were produced, is supported by both local testimony and archival documentation. In 1941, Charles Puck (1941:2), in a letter to the *Desert Magazine* editor, cited an article on page 32 of the January 1933 *Touring Topics Magazine* (predecessor of *Westways*) stating:

"... the ridges of rock is [sic] the work of the contractor who built the Santa Fe bridge at that point. He used a scraper to line up the rocks so they could be shoveled into wagons. He claims to have saved \$1 per cubic yard by getting his material in this manner."

Desert Magazine editor Randall Henderson further expounded upon the article, saying that H. W. Dennis, a Los Angeles engineer who answered the question of origin, wrote it. Henderson (1956:46) recounted the Dennis article:

"Actually, the mysterious maze

was a by-product in the construction of the Topock Bridge across the Colorado by the Santa Fe railroad in the early 1880s. The construction men needed great quantities of broken rock for the concrete caissons. They found it was cheaper to scrape up and screen the coarse gravel on the nearby mesa than to operate a rock-crusher. They used a Fresno scraper for the operation, and this explains the tiny parallel windrows of gravel which extend across many acres of the mesa's surface."

Oral testimony also supports that aggregates were raked and shoveled into wagons by Mojave laborers. Perhaps as technology evolved, scrapers were introduced and combined with hand raking and shoveling. In her 2011 paper, Mussler-Lopez also cited the 1957 statement made by J. M. Asbill who conducted an investigation with regard to the maze for the Division of Highways, California Department of Public Works. Asbill (1978:52) reported on an interview with Mr. Hiram McCord who was eight at the time of the bridge construction:

"Mr. McCord's uncle, Jorando Gates relates the story that the so-called "maze" was made by Indians employed by the railroad company to rake rocks which were to be used in the construction of the Red Rock River Bridge by the Atlantic and Pacific Railroad.... Mr. McCord was informed that many reports on the origin of the "maze" was [sic] to the effect that the maze was constructed by the Indians for the purpose of walking

through it and in some unknown manner being able to elude pursuing evil spirits. Mr. McCord states that to his knowledge there is nothing in the folklore of his tribe that would place any credence at all upon such reports."

Asbill (1978:52) reported that Mr. McCord acted as interpreter during an interview conducted with Mr. Charlie Hamilton, then an elder of the tribe and wrote:

"Mr. Charlie Hamilton, age 75, states that he personally saw the rocks which forms this 'maze' being raked by eight Indians, and that he actually rode on the wagons which hauled the rocks to the bridge site during the construction of the railroad bridge."

It should be noted that members of the McCord family have traditionally served in leadership roles in the Fort Mojave Indian Tribe including in the tribal judicial and legislative bodies. Although Haenszel (1974) sought to debunk the testimony by Hamilton, whom she referred to as "illiterate," the State Department believed the evidence supplied by Hamilton, Gates, and McCord is an important contribution to the understanding of the origin of the "maze" and we are fortunate to have Asbill's record noted by Haenszel (1978). When the facts became known as a result of Asbill's investigation, a highway sign posted along Route 66 stating "Prehistoric Indian Maze," was revised to "The Rock Maze" (Henderson 1956), reflecting a more neutral position; today, there is no highway sign at all.

OTHER EVIDENCE OF AGE AND FUNCTION

Site CA-SBr-219 (Park Moabi/Topock): The Type Site for Aggregate Row Mounds

Site CA-SBr-219 is a type site icon that meets all of the criteria described above for a typical "Gravel Row Mound" site, but what should be recognized first and foremost is that it is not a maze. The roughly 100-acre large earthen construct is located about 20 km south of Needles, California, at the Park Moabi turn off of I-40 in San Bernardino County. It includes an extensive series of 200+ surviving, open-ended, artificially-formed, parallel, alternating row mounds of darkly colored gravel, many over 1,000 feet long, alternating with wider rows of what appears to have been scraped or raked swaths revealing the lightly colored soils underlying the gravel (Figure 3). The striped rows, easily viewed from satellite and at ground level, are located on a connected series of low, naturally

formed relic Pleistocene river terraces naturally dissected by intermittent washes. Adjacent relatively undisturbed terraces to the west and north are consistently covered with darkly patinated desert pavement.

A Lack of Patina on Cleared Surfaces and Disturbed Patinated Surfaces without Repatination

What distinguishes and is confusing about CA-SBr-219 are the characteristic contrasting dark and light rows (Figure 4). The original darkly patinated surface gravels are scooped up into rows, leaving exposed the underlying light colored subsurface. That contrast is visually striking and can be viewed while passing by via train, automobile, horseback, or on foot even today, leaving the visual effect that has resulted in the site being a roadside attraction for well over 100 years while the other two aggregate row mound sites have gone virtually unnoticed by the media.



Figure 3. Aggregate harvest area above row mounds following the natural contour of the slope above original steam engine track (white dashed arrow) present prior to realignment for new bridge indicates ballast harvesting with erosion control in mind in the area adjacent to old bridge over the lower Colorado River at CA-SBr-219 (Topock, AZ/CA).



Figure 4. Gentle curvilinear sweeps of the aggregate row mounds following the natural contour of the slope is evidence of ballast harvesting taking into consideration erosion control in area adjacent to the railroad grade at CA-SBr-219 (Topock).

Unfortunately, many people, including some professional archaeologists, have misinterpreted the patina on the mound row aggregate as indicating an ancient prehistoric age rather than focusing on the obvious lack of patina accumulation on the cleared surfaces between. Within the row mounds themselves, the surface patina is not consistent and one can visually detect that some of the originally patinated surfaces are turned down while the reddish soil stained side is turned up. This evidence of a recent age is discussed by Musser-Lopez (2011) along with several other points summarized below.

Isolating relict Loci A, B, and C of the site is a historic transportation corridor through the central portion of the acreage and includes Interstate 40 and the historic grade of the Atlantic and Pacific (A&P) Railroad, later to become the Atchison, Topeka, and Santa Fe (AT&SF) Railroad, and now the Burlington Northern and Santa Fe (BNSF) Railroad. Located adjacent to the historic railroad bridge on the west side of the Lower Colorado River entering Arizona at the southern end of Mohave Valley and bounded by the Chemehuevi Mountains and the Topock Gorge to the south, the site is in a transition zone

of the Mojave, Colorado, and Sonoran deserts.

The Style of Delivery Distinguishes Aggregate Row Alignments from Prehistoric Art

Based upon ethnographic evidence and oral history, Musser-Lopez (2011) reported that prior to the railroad, there existed prehistoric rancherias and villages in the Topock/Park Moabi area with trails connecting them one to another. This being a sacred area to the Mojaves, significant prehistoric earthen art still exists where it was not destroyed by modern constructs. Still present today are four giant anthropomorphic ground figures in three distinctly separate locations within this area. These figures, which Park Moabi residents endearingly refer to as the "Moabi Stick Men," are similar to the famous anthropomorphs found in Blythe, California: the "Blythe Intaglios."

These intaglios are very different in construction style than the nearby gravel mound alignments at the maze. The Moabi Stick Men are earthen representational art work constructed utilizing a type of art form referred to as "intaglio" while the gravel aligned rows are a form of "relief" (for images, see Musser-Lopez 2011). Steve Miller, archaeologist with the Lake Havasu Bureau of Land Management, suggests that the anthropomorphs were produced by removing dark tiny gravel fragments by hand, actually lifting individual pieces of gravel out of a central configuration. While the anthropomorphs are fragile and can be easily damaged, the aggregate row mounds at Topock are a robust "relief" produced by scraping and piling up gravel.

A representational figure photographed in 1926 by Rogers (1939) was found in the midst of the row alignments; Rogers described the image as being that of a "phallus." Haenszel (1978) described the figure more delicately as having the appearance of a hook in the "hook and eye" for fastening clothing. A lot of to do was made about this figure, its placement, and landscape orientation which was considered to be evidence

of a prehistoric origin for the so-called “maze”, though logic would suggest that it could have been constructed during the historic period simply by making a small, almost effortless alteration in the gravel rows.

The figure in the photograph can simply be described as two rock rings (roughly 2 feet in diameter) added to and slightly altering two gravel row scrapings so that the opposite end of the rows are connected. The alteration gives the appearance of two eyes and a large nose, resonant of the popular World War II “KILROY WAS HERE” imagery. Since the figure was photographed in 1926, it predates World War II; coincidentally, however, very similar imagery existed and was popularized in World War I as “FOO WAS HERE,” FOO (Forward Observation Officer) being a precursor to Kilroy. An innocent prank? To illustrate that the explanation is within the realm of possibilities, until about the 1980s, a renowned railroad employee living in Needles, California, left his name in prominent places around the desert – many remember seeing the words “T. More was here” or just “T. More” at the end of a trail or on a mountain top boulder.

Superimposition of Aggregate Row Mounds over Prehistoric Sites

A historic, well-documented local public outcry summarized by Haenzel (1978) transpired in the Topock area when an important prehistoric anthropomorphic earthen art figure, similar in description to the Moabi Stick Men, was destroyed during the realignment of the railroad on the west side of the bridge at the turn of the twentieth century. This figure was said to be adjacent to the row mound alignments but separated from them by a ditch constructed around it.

Musser-Lopez (2011) asserted that the smoking gun of the historic origin of the gravel rows is the fact of a public outcry bringing government officials out from the Coast, which only

arose as a consequence of the prehistoric anthropomorphic intaglio being destroyed. This alarm begs the question: why was there not an outcry when the railroad was aligned through the middle of the adjacent prehistoric “sacred maze?” The lack of concern strongly implies that the parallel gravel row mounds at the time of the railroad’s realignment were not considered to be an antiquity of cultural importance. It should be noted that the railroad was constructed in the 1880s, the bridge realignment took place in the 1890s, and the first written record or suggestion using the words “prehistoric”, “Indian”, and “stone maze” was not until the 1908 Curtis report.

The confusion with regard to the origin of the row mounds at CA-SBr-219 is due in part to the original prehistoric use of the area, evidence of which is laced through the historic site. That ballast harvesting of surface gravels took place in areas of previous prehistoric use in the Topock/Moabi area is also evidence by isolated artifacts in and trails truncated by the aggregate row mounds. A reported pile of flakes and sherds is reminiscent of those left by unpermitted collectors at many prehistoric sites throughout the desert.

Curvilinear vs. Straight Rows: Contouring for Erosion Control

In 1979, Robert F. Heizer and C. William Clewlow took soil samples from the site for analysis to the University of California, Berkeley, which came back negative for aboriginal pollen (Musser-Lopez 2011). Other observations by Musser-Lopez (2011) do not support an agrarian site function. Lange et al. (2013) wrote “Rows of pebbles on cleared desert surfaces (mazes) were created by Native American peoples” and “rejected” “recent assertions that Afton Canyon mechanical scraper scars might be utilized to challenge the Native American origin of the Topock Maze...”, maintaining that the curvilinear

nature of the rows at CA-SBr-219 is evidence of its prehistoric origin. On the contrary, however, we observe that with the exception of "FOO" (the "eyes/nose" figure, or Roger's "phallic symbol") all of the row mounds could have been easily negotiated using historic scrapers and draft animals or could have been made using historic hand rakes. The presence of gentle row mound sweeps around hillsides following the curvature of the natural slope contours argues for erosion control near the railroad grade (see Figures 3 and 4), not prehistoric origin (see Musser-Lopez 2011).

Aggregate Row Mound Construction

Musser-Lopez (2011) also advanced the idea that while surface gravel harvesting may have started out as hand rake and shovel operations, the footprint of the row mound alignments alternating with cleared swaths at CA-SBr-219 indicate that mechanical scrapers such as the Fresno or Buck type scrapers pulled by teams of horses or mules may have been used. She pointed out that mechanical scrapers were in vogue during the 1880s to the turn of the twentieth century when the railroad and bridge were being constructed and realigned near and/or adjacent to the site and that once harvesting of gravels began, raking and shoveling by hand likely evolved with the technology – she postulated that mechanical scrapers typically used for leveling roads and railroad grades were adapted for use in gravel harvesting supplemented by hand raking and shoveling (Musser-Lopez 2011).

CA-SBr-1910H fits well within the framework of the typical gravel row mound site with a virtually identical footprint as 26CH2335 and CA-SBr-219. The recorder for LSA Associates describes the historic origin of the rows at Afton as "...made during the construction of the railroad. The engineer used locally available material to construct the rail grade" and states that the rows were made by a mechanical scraper, a

Fresno (Lange 2011). CA-SBr-1910H further challenges the prehistoric origin of the so-called maze and lends further credence to a historic origin of all three sites.

CONCLUSIONS AND RECOMMENDATIONS

As a type site listed on the National Register of Historic Places and available for public inspection, CA-SBr-219 provides an important outdoor laboratory setting for learning about and comparing other aggregate row mound sites. Further, given its unique stature as a historic roadside attraction, it is important that all of the currently available tools for exhaustive, rigorous, empirical archaeological analysis be utilized to form an objective foundation for management and interpretive recommendations. Currently, a worn and barely legible interpretive sign, installed at the site by the United States Fish and Wildlife Service, includes imagery of the maze superimposed with Mojave pottery suggesting that the gravel alignments are prehistoric in origin. Though the findings presented here are considered to be preliminary pending the Department of Interior's (DOI) approval of the Archaeological Heritage Association's proposal to complete empirical testing and analysis at CA-SBr-219, sufficient evidence has been provided to challenge the DOI's assumptions regarding the age and origin of the Topock Maze.

Further, the site is located adjacent to and west of the Pacific Gas and Electric's (PG&E's) gas compressor station and Bat Cave Wash, the recent dumping ground of PG&E's hexavalent chromium ("Chrome 6") hydroxide sludge. The potential threat of lethal Chrome 6 contaminated groundwater migrating into the Colorado River could pale in comparison to the groundwater contamination made famous in Hinkley, California, by the 2000 film *Erin Brockovich*. The new ponds associated with the California De-

partment of Toxic Control's Groundwater Remediation Project at the PG&E Topock Compressor Station (see Pacific Gas & Electric 2011 for more information) were built on the opposite side of CA-SBr-219 so that now the publicly accessible area of the Topock Maze is bound by PG&E, its pipeline, toxic dumping ground, and present Superfund-level cleanup activity. Though CA-SBr-219 was rerecorded in conjunction with the ongoing interim measures (McDougall 2005), many empirical methods are available to determine age and origin but such studies have yet to be accomplished.

If archaeologists are to continue to assert that CA-SBr-219 is truly a prehistoric maze or earthen art, then there is an important obligation to protect what could be the largest canvas on Earth. The credibility of the archaeological community is at stake. We must not rely on assumptions and we cannot afford to dismiss the tools of research available to us in order to make a determination on a site of this magnitude of importance. Suggested studies may include but not be limited to detailed morphological examination and controlled study of the surrounding pavement as methods for distinguishing such features from the traces of modern commercial gravel collection (as recommended by Bendímez and others [1986] at Macahui), as well as replication, luminescence dating, further pollen analysis, testing for presence or absence of reformed patina, clast comparisons and other innovative minimally destructive tests, and counts of disturbed patinated rocks in the alignments recommended by Musser-Lopez (2011).

ACKNOWLEDGEMENTS

Robin Laska, San Bernardino County Museum, directed me to CA-SBr-1910H (Afton) following my March 2011 presentation asserting Fresno scrapers were used at CA-SBr-219 (Topock). Jeff Wedding, Harry Reid Center for Environ-

mental Studies, Las Vegas informed me of 26CH2335 after hearing my 2013 presentation concerning the same at the Nevada Archaeological Association's Annual Meeting. Frank Grober, historian, assisted with archival research. Steve Miller, Bureau of Land Management, assisted in the examination of anthropomorph construction. Mark Gutglueck, *San Bernardino County Sentinel*, provided editorial assistance, as did Geoffrey Smith and an anonymous reviewer for the *Nevada Archaeologist*, the latter whom I thank for providing the bottom photograph in Figure 1. My husband, Robert J. Lopez, shared his father Jesus "Zeus" Lopez's 1929 copy of the Needles High School annual *The Mystic Maze* and his knowledge concerning his father's influence upon the naming of the annual. I am also appreciative of Robert's support in this study and knowledge with regard to the local community's fond sentiment yet continued skepticism toward a prehistoric origin of the Mystic Maze.

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**Letter
I7
Response**

**Ruth Musser-Lopez
February 27, 2017**

I7-001 The commenter states that this comment letter is in addition to comments made at the Draft SEIR public hearing in Needles. The commenter summarizes the Project Area and makes claims about the remediation efforts.

DTSC appreciates the commenter's thoughtful questions and that the commenter took the time to share their concerns with DTSC. DTSC wishes to thank the commenter for participating in this process and provides the responses below to address the commenter's questions and concerns.

I7-002 The commenter states that the Needles landfill is closed because of PG&E's illegal dumping activities, and that no replacement area has been identified.

The closing of the referenced landfill is a decision outside of DTSC's jurisdiction or this Project. DTSC recommends the commenter contact the County of San Bernardino Waste System Division and the City of Needles, which controls the landfill. Alternatively, the commenter can also inquire with the California RWQCB, Colorado River Basin Region, which oversees the Waste Discharge Requirements, Closure and Post Closure maintenance of the Needles Landfill. The Needles Landfill will not be used for the proposed Project. The commenter is referred to response to comment I4-002 for a discussion of waste stream and landfill analysis related to the Project.

I7-003 The commenter states that the Final Groundwater Remedy Project as analyzed through the Draft SEIR has an adverse impact on Route 66's tourism industry due to road closures, Topock Maze closures, and other adverse impacts to tourism and recreation.

The Topock Maze is located on lands owned and managed by the Federal Government, and as such it is the entity that can either allow or restrict access. Access to the Topock Maze and associated roadways has not been modified as a result of the proposed Project and DTSC does not have authority to grant or deny access to federal property.

I7-004 The commenter states that there could be undefined adverse impacts from the flushing system that could potentially result in overflow to and from the Colorado River; construction of wells; and use of arsenic-contaminated water.

The commenter is referred to Section 4.6, "Hydrology and Water Quality," and Section 4.9, "Water Supply," for a detailed discussion of hydrology, groundwater, and arsenic issues. These detailed analyses

conclude that after implementation of various mitigation measures, impacts related to water quality and other hydrologic matters would be less than significant. Furthermore, the remedy design, which is included in SEIR Appendix BOD, also considered various operational contingencies to ensure swift and appropriate response to operational failures to protect human health and the environment. Although DTSC appreciates the concerns raised, the comment does not specify any deficiencies in the analysis included in the Draft SEIR for the Final Groundwater Remedy Project. As a result, this comment has been noted for the record and no further response is necessary.

I7-005

The commenter requests that the comment period be extended to a total of 60 days, and objects to the fact that the comment period did not open on January 12, 2017, and that the commenter was not notified of the Draft SEIR until January 30, 2017.

DTSC is committed to engaging and informing the public with respect to all aspects of the proposed Final Groundwater Remedy Project as a result of historic contamination in and around the PG&E Topock Compressor Station. According to CEQA Guidelines Section 21091, a lead agency is required to circulate an EIR for no less than 45 days if the document is submitted to the California State Clearinghouse, which it was. In addition to direct mailing, DTSC also issued public notices for the comment period and the scoping meeting for the SEIR at the Needles Public Library as well as published in the Needles Desert Star newspaper, which is circulated within the City of Needles. DTSC believes it has met the notice obligations required under CEQA Guidelines Section 15087 and no further action is necessary. Nevertheless, in an email from DTSC dated February 28, 2017, DTSC agreed to accept additional comments from the commenter no later than March 8, 2017, giving the commenter the same 47-day review period as was given for the Draft SEIR. DTSC regrets that the commenter did not receive DTSC's direct mailing of the NOA at the beginning of the 47-day Draft SEIR comment period on January 12. However, immediately upon request from the commenter on January 26, 2017, DTSC did send a hard copy of the Draft SEIR via overnight mail, which the commenter received on January 27, 2017, according to FedEx records. This comment letter (I7) was sent by Ms. Musser-Lopez dated February 27, 2017, within the comment period. DTSC has updated the master contact list for this Project to ensure the commenter receives all general public CEQA-related notices in the future.

I7-006

Regarding the initial comment about notification of the commenter, please see response to comment I4-001, I4-009, and I7-005. The commenter states their involvement in several past Needles projects/issues, including dumping of waste into Needles manholes (including litigation), and the Needles landfill closure.

Although DTSC is made aware of the commenter's past involvement in other investigations and legal actions, DTSC cannot comment on past actions in which DTSC was not involved. DTSC appreciates the

commenter's vigilance and concerns with waste disposal practices, and welcomes the commenter's inquiries with respect to the proposed action. However, the comment provided is unrelated to the environmental analysis presented in the Draft SEIR for the Final Groundwater Remedy Project. As a result, this comment has been noted for the record and no further response is necessary.

I7-007

The commenter states that DTSC's failure to notify the commenter about the Draft SEIR is an attempt to avoid addressing detrimental impacts to the tourism, recreation, heritage, education, research, and related industries, of which the commenter will be impacted.

As previously stated in response to comment I4-001, I4-009, and I7-005, DTSC regrets that the commenter was not included in the initial notification, but stresses that DTSC did provide the necessary notification in addition to direct mailing. Furthermore, the commenter has been placed on mailing lists for future Topock-related project communications.

DTSC's role as the state agency responsible for protecting the public and the environment from harmful effects of toxic substances mandates restoration of contaminated resources and enforcement of hazardous waste laws. As such, the groundwater remedy is required by state law and is a high priority to DTSC. DTSC acknowledges the commenters' concern regarding tourism, recreation, heritage, education, and research. The vast majority of land in the Project Area and vicinity is federally-owned, and as a result DTSC does not have authority over land uses or activities related to tourism, recreation, heritage, education, or research. DTSC's main objective is to require cleanup of groundwater contamination at the Topock site. The CEQA Guidelines requires analysis of impacts to recreation and historic/heritage resources. As indicated in Appendix IS to the Draft SEIR, DTSC has found that the Project would have no environmental impact to recreation uses based on the significance criteria established in the CEQA Guidelines. Section 4.4, "Cultural Resources," in the Draft SEIR includes an analysis of historical and archaeological resources, including those that are of significance to Native American Tribes in the Topock area.

I7-008

The commenter states they are a professional archaeologist and business person and have been adversely impacted by the unlawful dumping of hazardous/toxic substances in the Needles/Moabi Regional Park area and the ongoing Project, including DTSC's ongoing assessment activities. The commenter also states that the project has directly impacted their rights and privileges, business, research, income, heritage, religion, beliefs, and recreation, which were not addressed in the Draft SEIR.

DTSC appreciates these comments and understands the commenter's concerns. Please see response to comment I7-007 for a discussion of impacts to recreation, heritage, and research. While the SEIR is focused on the environmental impacts of the Project as required to be analyzed per the CEQA Guidelines, DTSC will be weighing all relevant factors

when determining whether or not to approve the Project, including economic and social factors if reasonably foreseeable and potentially significant indirect effects could occur to the physical environment as a result of those factors. (CEQA Guidelines, Section 15131, subd. (a) [CEQA is only concerned with a project's socioeconomic effects when such effects may lead to reasonably foreseeable adverse physical changes to the environment].) Substantial evidence in the record must therefore link the socioeconomic impacts of a project to impacts on the physical environment to warrant analysis, or additional analysis, in an EIR. DTSC will consider all of the evidence in the record before making a decision on the Project. If DTSC decides to approve the Project, DTSC will adopt Findings and Statement of Overriding Considerations for impacts which remain significant and unavoidable. The CEQA Findings and Statement of Overriding Considerations will describe in detail the overarching reasons for Project approval despite the identified significant environmental impacts.

I7-009

DTSC appreciates the commenter's input as a technical expert with regard to archaeological resources, including the Topock Maze. The commenter states that one of their publications, "Mystic Maze," was misrepresented in the Draft SEIR.

It is noted that the commenter does not provide any specific basis for the misrepresentation, therefore no further response can be provided. The discussion in the Draft SEIR is intended to be a brief summary of the understanding of the Topock Maze, not an in-depth discussion citing all the sources who have written about the importance of the Maze. DTSC understands that there are differing opinions on the origin and age of the Topock Maze, and appreciates the commenter's additional information on an alternative theory of the creation of the Topock Maze. The description of the Topock Maze on pages 4.4-60 and 4.4-61 of the SEIR is meant to be a brief synopsis and provides a brief overview of the differing opinions of the Topock Maze's origins. It is not DTSC's intent to misrepresent the information cited in the SEIR. DTSC understands that the commenter has conducted independent research, including reviewing photographic and ethnographic documentation, conducting oral history and interviews, and compiling information from other researchers. DTSC acknowledges that additional information is available to those who may be interested in the differing interpretation of the Topock Maze and, in response to this comment, the text on page 4.4-61 of the SEIR has been modified to the following:

Some support a Native American origin, while others have suggested that it is a byproduct of railroad construction, which occurred between 1888 and 1893 (see Musser-Lopez 2011 and 2013 for additional details on the latter interpretation).... Those who consider its origin related to the construction of the railroad ~~typically~~ cite a memo from a railroad engineer in 1891 that describes the collection of gravel into windrows by Mojave workers prior to the gravel being hauled and used to support a bridge caisson, and also have suggested that the rows may have

been created by the use of Fresno Scrapers (Haenszel 1978; Musser-Lopez 2011, 2013).

In response to this comment, this reference has been added on page 8-17 of the SEIR:

Musser-Lopez, Ruth. 2013. Rock and Gravel Row Mounds/Aggregate Harvesting Near Historic Railroads in the Desert and Basin Regions of California and Nevada. Nevada Archaeologist, Volume 26, pp.73-84.

I7-010

The commenter states that Applied Earthworks is DTSC's cultural resources consulting firm and alleges numerous flaws in their past evaluations.

Applied Earthworks is not DTSC's cultural resources consulting firm (see response to comment I4-008). Much of the description included in the comment is unrelated to this Project and the environmental analysis presented in the Draft SEIR for the Final Groundwater Remedy Project. The Draft SEIR was prepared in concert with DTSC's CEQA consulting team Environmental Science Associates (ESA) and the decisions regarding the Project will be based on DTSC's independent judgement. The work conducted for the I-40 project is unrelated to this Project and DTSC did not have any oversight for the I-40 project. Project-related impacts to resources within the Project Area, including Route 66/National Old Trails Highway, have been adequately addressed and appropriate mitigation is identified in the SEIR. While the California Department of Transportation (Caltrans) and the City of Needles may have determined that the I-40 project was exempt from CEQA, the Project analyzed in this SEIR is not exempt from CEQA and DTSC appreciates any comments specific to the cultural resources analysis presented within the subject SEIR at hand.

I7-011

The commenter states that an independent cultural resources survey is needed to review the archaeological record prepared by Applied Earthworks.

DTSC appreciates the concerns raised by the commenter. DTSC did use its own judgement when assessing the information presented by PG&E and its consultants. Moreover, DTSC's CEQA consulting team has reviewed the cultural resources information and has looked at the resources at the site and determined that the cultural resources information provided by the Tribes, PG&E, and PG&E's consultant is appropriate and sufficient for use in the SEIR. Tribal representatives are also invited to participate in all scientific surveys and provide input regarding Tribal resources.

I7-012

The commenter states that the Applied Earthworks studies have not sufficiently considered science and archaeological methods in reporting the significance and age of archaeological resources, including the Topock Maze.

All significant or unevaluated resources in the Project Area are considered historical resources under CEQA and are afforded the same consideration and protections under CEQA, irrespective of NRHP/CRHR criteria or scientific/cultural value. In analyzing impacts to resources, DTSC did consider relevant scientific and cultural values attached to resources in order to develop meaningful mitigation measures that would adequately avoid, minimize, rectify, reduce, and/or compensate for impacts to significant resources.

I7-013

The commenter states that the Draft SEIR contained errors and misrepresentations about the Topock Maze (CA-SBR-219) and its significance.

As noted under response to comment I7-009, DTSC acknowledges that there are differing opinions on the origin of the Topock Maze. The BLM, a federal agency responsible for assessment and protection of resources, has determined that a TCP related to the Topock Maze encompasses the APE (which covers the Project Area to a large extent) and it is eligible for inclusion in the NRHP under Criterion A. The BLM further determined that all prehistoric archaeological sites in the APE, including the Topock Maze (CA-SBR-219, Loci A, B, and C), are contributors to the significance of the Topock TCP. Therefore, the Topock TCP and Topock Maze (CA-SBR-219, Loci A, B, and C) are historical resources under CEQA. Under CEQA, DTSC is obligated to analyze direct and indirect impacts to historical resources that could be affected by the proposed Project since “a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment” (CEQA Guidelines Section 15064.5(b)). Although DTSC understands that there are differing opinions on the origin and age of the Topock Maze, it is considered a significant resource, as agreed to by the commenter (see response to comment I7-020), and deserves all applicable consideration and protections under CEQA. It should be noted that the Topock Maze (CA-SBR-219 – Loci A, B, and C) is not within the Project Area.

I7-014

The commenter states that misrepresentations in the Draft SEIR twist the historic facts and lead to unreliable conclusions about the Topock Maze.

Please see response to comment I7-009 for a discussion of different interpretations of the Topock Maze and response to comment I7-013 for a discussion of the significance of the Topock Maze and DTSC’s obligations under CEQA.

I7-015

The commenter takes issue with the following sentence on page 4.4-61: “According to the Mojave people the Topock Maze has always been there.” The commenter states this sentence is not supported by ethnographic or historic records, and does not make clear who constitutes the Mojave people.

The sentence in question is representing a perspective from the “Mojave people.” The ethnographic evidence for the Fort Mojave Indian Tribe

(FMIT) is documented in eight pages of the Draft SEIR on pages 4.4-49 to 4.4-57, which refers to the Topock Maze in a large context of Tribal history and values. In those pages, direct quotes are taken from Tribal members who cite the “Mojave people.” Please see response to comment I7-009 for a discussion of different interpretations of the Topock Maze and response to comment I7-013 for a discussion of the significance of the Topock Maze and DTSC’s obligations under CEQA.

- I7-016 The commenter states that one of their publications was misrepresented in the Draft SEIR, and goes into detail about their assertion that the railroad grade had to be constructed prior to the bridge construction.
- It was not DTSC’s intent to misrepresent information in the SEIR. Please see response to comment I7-009 for a discussion of different interpretations of the Topock Maze.
- I7-017 The commenter explains their independent research surrounding the Topock Maze and gives a history of so-called “Mystic Maze controversy.” The commenter states that federal and state agencies have changed the status of land such that tourism, visitation, and research are prohibited at the Topock Maze.
- Please see response to comment I4-003 for a discussion about access restrictions to the Topock Maze and response to comment I7-009 for a discussion of different interpretations of the Topock Maze.
- I7-018 The commenter states that the American Rock Art Association was dissuaded by the BLM from visiting the Topock Maze, and makes claims that the Draft SEIR cultural resources analysis is “hushing out scientific evidence” with “alternative facts” and is “absurdly scandalous.”
- For a discussion of federal-related access to the Topock Maze, please see response to comment I4-003 and response to comment I7-009 for a discussion of different interpretations of the Topock Maze. Please also reference response to comment I7-013 regarding DTSC’s obligations under CEQA for this Project.
- I7-019 The commenter expresses concern that their extensive research and multiple publications were ignored in the Draft SEIR, while detailed analysis was wrongfully minimized and distorted into fake facts. The commenter also contends that the Draft SEIR analysis needs to be revised with more recent publications that document the “maze” as gravel alignments based on empirical evidence.
- Please see response to comment I7-009 for a discussion of different interpretations of the Topock Maze and response to comment I7-013 for a discussion of the significance of the Topock Maze and DTSC’s obligations under CEQA.
- I7-020 While the commenter states support for Mojave people’s beliefs based on the connection to the entire Mohave Valley and cites concurrence that

the Topock Maze should be on the National Register of Historic Places, the commenter also expresses concern for the integrity of the record, and lack of access to the Topock Maze because it is sacred to Native Americans.

The commenter is referred to response to comment I4-003, I7-009, and I7-013.

I7-021

The commenter states that the FMIT will be compensated with land that includes a portion of the National Old Trails Highways and/or Route 66 when the Project is completed, and objects due to the loss of access for the public.

Under a settlement agreement for the 2011 Groundwater FEIR, the FMIT received a plot of land as shown on Figure 3-2 of the Draft SEIR. This land was previously owned by the Metropolitan Water District and then PG&E, and was under private ownership prior to transfer to the FMIT. As such, it was not part of the public lands system and permission from previous landowners would have been required to access this land in the past, as will be the case in the future. Further, the portion of National Old Trails Highways and/or Route 66 located on FMIT land is largely not passable to vehicles and not intended for public use. While these portions of National Old Trails Highways and/or Route 66 that will remain under private ownership, there are portions of alignment that currently overlay access roads associated with the Project, namely the access road just east of the IM-3 Facility extending west to Park Moabi Road. These portions of National Old Trails Highways and/or Route 66 will maintain open to the public.

I7-022

The commenter restates conclusions reached in the Draft SEIR.

DTSC appreciates the commenter's review of the voluminous document, and continued involvement. The comment is noted for the record.

I7-023

The commenter states that the Draft SEIR is obligated to use non-destructive empirical testing in describing the environmental setting, particularly for cultural resource CA-SBR-219.

Please see Response to Comment I7-013 for a discussion of the significance of the Topock Maze and DTSC's obligations under CEQA.

I7-024

The commenter restates treatment technologies and processes associated with the proposed Project and asks what the likelihood is that the remedy will work and not fail.

Based on a Final Corrective Measures Study/Feasibility Study, DTSC selected Alternative E – In Situ with Freshwater Flushing pursuant to applicable laws, guidelines, and regulations. There is no technical evidence that the selected remedy would fail. However, DTSC has included the Future Activity Allowance (see pages 3-11 to 3-12 for a description) to account for any unanticipated variations in the conditions

encountered and the plume response which may require additional infrastructure that would achieve remediation. In addition, PG&E conducted a Failure Mode Effect Analysis, provided in the Appendix BOD to the SEIR (see Sub Appendix L, Volume 3, Contingency Plan). The analysis is a process to identify possible failure scenarios that could cause the groundwater remedy to not perform as expected. The result of the failure analysis identified contingency measures that are included in the Final Remedy Design to return the groundwater remedy to acceptable operation.

I7-025

In questioning after the public meeting held in Needles, the DTSC project manager indicated that the flushing system has the downside of using clean water, which would be mixed with and would dilute the foul water. The water extracted from wells could also draw up surrounding river water, which the commenter states is a concern. The commenter questions what right DTSC has to use Colorado River water available to operate the program.

As discussed in Chapter 4.9, “Water Supply,” PG&E has water entitlements under a subcontract with the City of Needles, which entitles PG&E to 422 acre-feet per annum (afa) of consumptive use. The points of diversion under the subcontract may be anywhere in the general vicinity of the Station property, including the Colorado River, and are not restricted to a location on the PG&E-owned property itself. PG&E’s actual annual consumptive use through 2011 was less than the full entitlement and varies each year, ranging from roughly 70 to 100 afa with a maximum usage of 110 afa. However, as described in Section 3.6.1.3, “Freshwater Injection Wells,” in the Project Description, it should be noted that the water extracted from the wells along the Colorado River would be injected into the aquifer in the Freshwater Injection Wells just west of the western upgradient edge of the contaminant plume. The water would drive the contaminated groundwater through the treatment zone and back toward the extraction wells along the Colorado River. Thus, river water that gets extracted along with the groundwater would be returned to the environment and upon completion of treatment operations, would be left in the aquifer to eventually flow back to the river.

The commenter also questions what certainty there is that the contaminated water will not flow by and pass the draw area on route to the river. The extraction and injection rates at the injection and extraction wells along the National Trails Highway can be adjusted in response to the concentrations detected at downgradient (dose response) wells. Further east, the River Bank Extraction Wells are located closer to the Colorado River and can be used to capture Cr(VI) and/or treatment byproducts for further control. The decision logic and operational framework for the Inner Recirculation Loop is found in Figure 2.2-4 of Appendix L, “Operation and Maintenance Manual,” in the SEIR Appendix BOD. Should contaminants be detected beyond anticipated locations, then the groundwater remedy would be modified using a number of options that could include changing extraction and injection

well rates, modifying the type or quantity of reductant injected into the aquifer, and adding additional extraction wells to the remedy.

The commenter restates concepts from the Project, that fresh water would be hauled in from an arsenic-laced source on the Arizona side of the adjacent river, and questions where the arsenic will be disposed of. The naturally occurring arsenic in the Arizona freshwater sources will be routinely sampled. Furthermore, there are specific conditions recommended by the California State Water Resources Board to analyze whether arsenic concentrations at the injection sites are high enough to require treatment, as discussed in Chapter 4.6, “Hydrology and Water Quality,” Impact HYDRO-5a. If needed, the treatment system that would be used to treat arsenic in freshwater is the Contingent Freshwater Pre-Injection Treatment System described in Section 3.6.1.7 of the Project Description and Appendix M of the Final Remedy Design [included as Appendix BOD to this SEIR]. The freshwater would be pumped to a holding tank within the Station, injected with hypochlorite for arsenic oxidation and acid to reduce pH to 6.5 to improve arsenic removal, then pumped through a solids-filtration process, then through a treatment media vessel, and ultimately the treated water would be pumped to a treated-water storage tank. The arsenic would be absorbed into the treatment media. Periodically, the spent media will be removed from each treatment media vessel and sent to a landfill. However, based on the groundwater fate and transport modeling conducted by PG&E and reviewed by the Agencies and consultants for the Tribes, it is anticipated that the naturally occurring arsenic in the freshwater would be adsorbed into the natural soil matrix at the injection area and that the arsenic concentration at the point of injection would return to its current background level and will not exceed the water quality objective as stated in Section 3.6.1.7 of the SEIR.

The commenter questions what the environmental consequence is of truck delivery of the water from Arizona that includes elevated levels of arsenic. As described in Section 3.6.1.7 of the Project Description, the water will be delivered by pipelines constructed from the well head to the treatment system. Trucks will not be used to deliver the freshwater from Arizona.

I7-026

The commenter expresses support for DTSC’s efforts to clean up the groundwater contamination plume, and asks what the contingency is if the current remediation efforts do not work.

The commenter is referred to response to comment I7-024 for a response to the remedy failure concern.