Pacific Gas & Electric Topock Site Community Outreach Plan

California Department of Toxic Substances Control (DTSC)

May 2019

Updated by:

Phil McPhaul, Public Participation Specialist
California Department of Toxic Substances Control
5796 Corporate Avenue
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Acronyms & Abbreviations

ADEQ	Arizona Department of Environmental Quality
BLM	United States Department of the Interior, Bureau of Land Management
BOR	United States Department of the Interior, Bureau of Reclamation
CACA	Corrective Action Consent Agreement
CalEPA	California Environmental Protection Agency
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CMI	Corrective Measures Implementation
CMS	Corrective Measures Study
cr(III)	Trivalent chromium
cr(VI)	Hexavalent chromium
CRIT	Colorado River Indian Tribes
CWG	Consultative Workgroup
CTF	Clearinghouse Task Force
DOI	United States Department of the Interior
DTSC	California Department of Toxic Substances Control
FS	Feasibility Study
HNWR	Havasu National Wildlife Refuge
IM	Interim Measure
I-40	Interstate 40
MWD	Metropolitan Water District of Southern California
PG&E	Pacific Gas and Electric Company
Project	The investigations and cleanup of the PG&E Topock site

Plan	Community Outreach Plan
RCRA	Resource Conservation and Recovery Act
RD	Remedial Design
RFA	Resource Conservation and Recovery Act Facility Assessment
RFI	Resource Conservation and Recovery Act Facility Investigation
RI	Remedial Investigation
Site	PG&E Topock Project
Station	PG&E Topock Compressor Station
TLP	Topock Leadership Partnership
TRC	Technical Review Committee
TWG	Technical Work Group
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
Water Board	California Regional Water Quality Control Board, Colorado River Basin Region

Section 1: Introduction

1.1 Community Outreach Plan Overview

This Community Outreach Plan (Plan) was developed to present the general strategy and specific outreach activities the Department of Toxic Substances Control (DTSC) will conduct to facilitate community, stakeholder and Tribal government involvement in the environmental investigation and cleanup of the Pacific Gas and Electric Company (PG&E) Topock Compressor Station (Station) and its surrounding properties impacted by PG&E's operation, hereinafter referred to as the" Site".

In August 2003, DTSC was designated as the lead regulatory agency for the investigation and cleanup of the Site. Federal and state laws, policies and regulations require that DTSC provide opportunities for community members and other stakeholders to participate in the planning, decisions, and activities regarding the environmental cleanup of the Site. DTSC has prepared this Plan in accordance with the Health and Safety Code Sections 25187 and 25200.10; and DTSC's 2001 Public Participation Policy and Procedures Manual.

DTSC has worked closely with the community, regulatory agencies, tribal governments and key stakeholders during the cleanup process; feedback received from these groups is discussed within this Plan. Community concerns and future activities are identified to keep people informed and participating in the cleanup process. This Plan includes the following:

- Description of the Site and history of the Station
- Description of the nearby communities and nearby Tribal Nations
- Overview of the cleanup process
- Description of Community Engagement process
- Review of feedback from community members, key stakeholders and Tribal government representatives

1.2 Oversite Agencies

The California Environmental Protection Agency (CalEPA) has been given authority by the United States Environmental Protection Agency (USEPA) to implement the Resource Conservation and Recovery Act (RCRA) – which regulates the use, treatment, storage and disposal of hazardous waste – in California. DTSC was designated as the lead agency for the Site cleanup by CalEPA. As the lead California regulatory agency, DTSC directs all site investigation and cleanup activities in accordance with RCRA as well as implementation of the California Environmental Quality Act (CEQA). PG&E, as the responsible party, entered into an agreement with DTSC in 1996 to conduct environmental investigation and cleanup actions at the Site.

Federal agencies which own or manage the surrounding land also have jurisdiction over the remediation process. In July 2005, PG&E and the United States Department of the Interior (DOI), representing itself and its Bureaus (Bureau of Land Management (BLM), United States Fish and Wildlife Service (USFWS) and the Bureau of Reclamation (BOR)), entered into a Consent Agreement to facilitate federal oversight of remediation activities at the Site. In accordance with this agreement, environmental investigations and

cleanup activities at the Site must also be conducted to meet the requirements set forth by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA; also known as Superfund) in addition to the RCRA Corrective Action Process.

1.3 Community Engagement Process

DTSC uses a comprehensive community engagement process for environmental cleanup sites that it oversees. The purpose of this Plan is to present the general strategy and specific outreach activities DTSC will conduct to facilitate community, Tribal government and stakeholder involvement in the cleanup project. DTSC is committed to keeping the public informed of environmental investigation and cleanup activities at the Site. Additional details regarding the community engagement process and specific outreach activities can be found in Section 5 of this Plan.

Section 2: Background & Site History

2.1 Site Description

The Station is in eastern San Bernardino County, California in the Mojave Desert, approximately 12 miles southeast of the City of Needles, California, and one mile southeast of the Moabi Regional Park in California. The Station is 0.5 miles west of the community of Topock, Arizona, which is situated directly across the Colorado River from the Station, and is 4 miles south of Golden Shores, Arizona. The Station is approximately 1,500 feet west of the Colorado River (California shoreline) and less than 0.5 mile south of Interstate 40 (I-40) (see Figure 1, Site Location Map).

The Site, includes the Station and surrounding federal lands, is located within an environmentally sensitive area with public land that has been designated as an Area of Critical Environmental Concern by the BLM. This area encompasses a habitat area for endangered species, migratory birds, as well as lands designated as the Havasu National Wildlife Refuge managed by the USFWS (see Figure 2, Surrounding Properties).

This area also has cultural and spiritual significance to Native American Tribal Nations with ancestral ties to the region. Figure 3 (Colorado River Communities and Tribal Reservations) illustrates these neighboring lands. A more detailed description of nearby lands and communities is provided in Section 3.

2.2 Site Cleanup/History

PG&E began operations at the Station in December 1951. The Station was built to compress natural gas supplied from the southwestern United States for transport through pipelines to PG&E's service territory in central and northern California. Records show that PG&E held rights to operate a gas pipeline and compressor station dating back to the Federal Act of February 25, 1920 (41 Stat. 449, as amended). According to title records, PG&E gained full ownership of the land in 1965.

Operations at the Station have been consistent since the facility opened in 1951. The operations involve compression of natural gas, cooling of the compressed natural gas and compressor lubrication oil, water conditioning, wastewater management, facility and equipment maintenance and miscellaneous gas line operations. The greatest use of chemical products involves treatment of cooling water, and the greatest volume of waste produced consists of blowdown. Blowdown is the wastewater from cooling towers which is periodically removed from the cooling system because it contains too much salt. Salt is buildup in the water as a result of repeated evaporation of the water.

From 1951 to 1985, hexavalent chromium-based corrosion inhibitors and biocides were added to the cooling water system to protect the piping and equipment in the cooling towers. After 1964, the cooling tower blowdown was treated to remove hexavalent chromium prior to discharge. Until approximately 1970, cooling tower blowdown was discharged directly into Bat Cave Wash, an unlined arroyo immediately west of the Station. The discharged water either percolated into the ground or evaporated at the surface. During this period of uncontrolled wastewater discharge, an area of groundwater contamination, or "plume," was formed. Around 1970, PG&E discontinued discharge of untreated blowdown to the wash and began discharging treated blowdown into four single-lined evaporation ponds located west of Bat Cave Wash.

From 1970 to 1973, PG&E also injected treated blowdown into bedrock beneath the site using an injection well, but that process proved impractical and was discontinued.

In 1985, PG&E replaced the use of hexavalent chromium with non-hazardous phosphate-based products in the cooling water, at which time PG&E discontinued operation of the chromium blowdown treatment system. Use of the four single-lined evaporation ponds continued until 1989, when they were replaced with four new double-lined ponds that are still in use under permits by the California Colorado River Basin Regional Water Quality Control Board.

In addition to waste water management, the Station also generated and managed other solid and liquid waste throughout its operation. Under the direction of DTSC, PG&E has researched its records and has identified over 50 areas inside the Station and its surrounding lands for environmental investigation. Of the 50 areas identified, PG&E has concluded that 44 areas will need further investigation. After additional evaluation, DTSC determined that collection of soil samples to quantify contamination is required at 42 areas. The soil sampling efforts were completed in April 2017.

2.2.1 Environmental Investigation

Investigation activities at the Site by PG&E and DTSC date to the late 1980s with the identification of potential areas of environmental concern through an assessment of the Station under the RCRA process. In 1995, PG&E notified the Regional Water Quality Control Board of elevated hexavalent chromium (cr(VI)) discovered in groundwater. In 1996, PG&E and DTSC entered into a Corrective Action Consent Agreement in which PG&E agreed to perform environmental studies and cleanup subject to the oversight and approval of DTSC.

2.3 Timeline

Below is a brief chronology of important events at the Station, including investigation and cleanup activities:

1950s

1951 – PG&E began Topock Compressor Station operations.

1951 to 1985 – cr(VI) is used at the Station as an anti-corrosion agent in its cooling towers.

1951 to 1968 – Cooling tower wastewater discharged into percolation beds in a dry wash area next to the Station.

1960s

1964 – PG&E begins treating the wastewater to remove cr(VI).

1970s

1970 – PG&E installs an underground injection well to receive treated wastewater.

1971 – PG&E installs a series of lined evaporation ponds to receive treated wastewater.

1971 to 1974 – PG&E alternates disposal of the treated wastewater between the injection well and the lined ponds.

1974 – PG&E begins disposal of all wastewater exclusively in the lined ponds.

1980s

1980 – PG&E notifies USEPA of Hazardous Waste Activities.

1981 – PG&E identified as an owner/operator of a Treatment, Storage, and Disposal Facility from USEPA.

1985 – PG&E replaces the chromium-based anti-corrosion additive with a phosphate-based solution.

1985 – PG&E files intent to close all Treatment, Storage, and Disposal related units instead of pursuing an operation permit.

1987 – Corrective action at the Station begins with a RCRA Facility Assessment (RFA) conducted by USEPA.

1988 – Soil investigation is conducted at the former percolation bed and the surrounding area of Bat Cave Wash discharge area.

1990s

1990 to 1993 – PG&E submits closure certification reports for former hazardous waste management units.

1995 – DTSC accepts PG&E's closure certification reports.

1996 – PG&E signs agreement with DTSC to identify and clean up past environmental contamination.

2000s

2000 – DTSC establishes Consultative Workgroup (CWG), comprised of stakeholder agencies, to provide input and recommendations to DTSC in its oversight of the project.

2004 – DTSC imposes Interim Measures due to cr(VI) detection near the Colorado River to prevent contamination from reaching the river.

2005 – Interim Treatment Plant construction completed, PG&E began removing cr(VI) from extracted groundwater and re-injecting clean water into the ground as part of the interim measures.

2005 – PG&E enters into a voluntary Consent Agreement with the DOI to perform corrective actions and response actions as a result of Site contamination.

2007 – PG&E submits and DTSC accepts the Volume 1, RFI report on site background and history

2007 – DTSC directs PG&E to begin phased approach to soil sampling and investigation of the Site.

2009 – PG&E submits and DTSC conditionally accepts the Volume 2, Groundwater and Surface Water Investigation Report and Addendum.

2009 – DOI directs PG&E to conduct a Time Critical Removal Action to remove contaminated debris from the southern portion of the site.

2009 – DTSC accepts groundwater Corrective Measures Study/Feasibility Study for evaluation of viable cleanup technologies.

2010s

2011 – DTSC certifies the final Environmental Impact Report for the proposed groundwater remedy in accordance with CEQA and adopts the groundwater remedy.

2011 – PG&E begins design of proposed remedy for groundwater

2012 – DTSC files a notice of preparation of an Environmental Impact Report to evaluate potential environmental impacts to collect and sample within the compressor station and its surrounding lands

2013 – DTSC completed an addendum to the 2011 certified Final Environmental Impact Report to test and site the location of the fresh water source in Arizona

2014 – DTSC completes and solicited comments on a draft Soil Investigation Environmental Impact Report

2015 – DTSC partially recirculates the biological section of the draft Environmental Impact Report due to identification of additional special species near the project area

2015 – After considering all comments received, DTSC prepared and certifies the final Environmental Impact Report for the soil investigation activities

2015 – PG&E submits the pre-final design for the groundwater remedy. DTSC files a notice of preparation in May 2015 for a Subsequent Environmental Impact Report to evaluate the potential environmental impacts that may result from the groundwater remedy design details which were not addressed in the certified 2011 Environmental Impact Report

2017 – DTSC held two public meetings and hearings to solicit comments on the draft Subsequent Environmental Impact Report for the groundwater remedy

2017 – From 2015 to April 2017, PG&E conducted soil investigation at the Site, collecting soil samples at 42 areas inside and outside of the Station

2018 – DTSC certifies the Subsequent Environmental Impact Report for the proposed groundwater remedy and approved the groundwater remedy design.

2018 – PG&E begins groundwater remedy construction on October 2, 2018. Additional details of the site investigation history can be found in the document library of the project website at: http://www.dtsc-topock.com/

Section 3: The Colorado River & Nearby Communities

This section includes a profile of the Colorado River and identifies the nearby local communities and tribal nations surrounding or downstream of the Site along the river.

3.1 Colorado River

The Colorado River spans 1,440 miles and provides water supply, electricity, recreation, and natural and cultural resources to the Pacific Southwest. The river has 244,000 square miles of drainage and flows through Colorado, New Mexico, Utah and Wyoming (collectively the Upper Basin); Arizona, California and Nevada (collectively the Lower Basin); and Mexico.

The Colorado River provides water to more than 25 million people in the Pacific Southwest. Its system of dams generates enough power to meet the partial electrical needs of 9 to 12 million people. The Colorado River is also a recreational and economic resource to nearby communities. Additionally, it holds spiritual significance to many Tribal Governments. It is an important part of the sacred ancestral territory for native peoples. Many Tribal, federal, state and local governments, along with private organizations are interested in protecting the valuable resources of the Colorado River. Figure 3 shows Colorado River Communities and Tribal Reservations.

3.2 Nearby Local Communities

The Site is located in eastern San Bernardino County, California, which shares a border with both Nevada and Arizona. The six major communities located near the Site are spread out along the Colorado River, often over large distances. DTSC is committed to communicate with all interested stakeholders regardless of their proximity to the Site, and who may be located beyond the typically required distance for community outreach.

The land within one mile of the Site boundary provides industrial, spiritual, recreational, and wildlife management uses. Several gas pipelines beyond those owned by PG&E pass through this corridor. Residential properties are located in Arizona, across the river from the Site, as well as limited term lodging within and around the Moabi Regional Park. Recreational facilities are located near the Topock/Golden Shores Marina and Moabi Regional Park. The Havasu National Wildlife Refuge is located near the Station along both the California and Arizona sides of the Colorado River. Other lands surrounding the Station are managed by the BLM. Figure 2 shows the approximate boundaries and ownership of the properties surrounding the Station.

There are no hospitals, schools or day care centers located near the Site. The closest hospital is located approximately 12 miles to the northwest in Needles, California, and the closest schools are located across the river and 5 miles to the northeast in Golden Shores, Arizona.

3.2.1 Moabi Regional Park, California

Located on a side channel of the Colorado River, Moabi Regional Park is a part of San Bernardino County's regional parks system. The park is approximately one mile west of the river's main channel, along the road used to access the Station from I-40. Moabi Regional Park is primarily used as a recreational area for swimming and boating, and includes houses, trailer homes, camping units, and a boat marina. The homes are used mainly as weekend or vacation residences. The park is located on Bureau of Reclamation (BOR) land that is managed by BLM, and leased to San Bernardino County. The Park also

is the location of the Pirate's Cove Resort, a concessionaire to the County and offering rental cabins and recreational activities.

3.2.2 City of Needles, California

The City of Needles is located near the borders of California, Arizona and Nevada, and has a population of approximately 5,300 people. The City of Needles is located approximately 12 miles northwest of the Station on I-40 on the west side of the Colorado River. Needles' economy relies primarily on the operations of the Burlington Northern Santa Fe Railroad and tourism. Several small businesses are in the area; these and related service industries provide jobs to residents of Needles and nearby communities. The city has several active civic associations and business organizations.

3.2.3 Topock, Arizona

In Arizona, across the Colorado River, nearby communities include Topock, Golden Shores, Lake Havasu City and Parker. Topock is a community of approximately four single-family homes (approximately 15 people) in a small mobile home park near the Topock Marina on the eastern bank of the Colorado River. The residents rely on Golden Shores and surrounding communities for their commercial and educational needs. Many of the residents are retired senior citizens who live in the area seasonally, from late fall through spring. Some of the residents travel to work in the neighboring communities.

3.2.4 Golden Shores, Arizona

Golden Shores is a small community of approximately 7,500 in Mohave County, Arizona, approximately five miles northeast of the Station on the east side of the Colorado River. The community includes small businesses, a fire station, a post office and one elementary school. Golden Shores also has an active Chamber of Commerce and Women's Club. A civic center is the hub of community activity, housing the Chamber of Commerce and serving as a regular meeting site for several local associations.

3.2.5 Lake Havasu City, Arizona

Lake Havasu City is located on the east shore of Lake Havasu on the Colorado River, approximately 18 miles south of the Station. With a population of 54,411 it is the largest population center of southern Mohave County, one of the fastest-growing counties in the United States. The city offers a broad range of community facilities, including several parks, two movie theater complexes, a county/city library, tennis courts, several beaches, a bowling alley and four golf courses. Recreational facilities located in the city include camping and fishing areas and a marina. Tourism and recreation are Lake Havasu City's principal economic activities.

3.2.6 Parker, Arizona

Parker is located in La Paz County, Arizona, on the eastern side of the Colorado River, approximately 20 miles south of Lake Havasu City and approximately 40 miles south of the Station. Parker sits on a mesa overlooking the Colorado River at an elevation of approximately 450 feet above sea level. Parker is almost surrounded by the Colorado River Indian Tribes Reservation. The community of 3,054 has an elementary school, junior high school and high school. It also maintains its own safety and fire services and operates a hospital. A community center and senior center serves as a regular meeting site for various activities and several local associations.

3.3 Nearby Tribal Nations

The tribal nations involved and interested in Site remediation efforts and whose government representatives are contacted regularly by DTSC about the project are the Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes (CRIT), Fort Mojave Indian Tribe, Fort Yuma-Quechan Indian Tribe, Havasupai Indian Tribe, Hualapai Indian Tribe, Torres-Martinez Desert Cahuilla Indian Tribe, Twenty-Nine Palms Indian Tribe and Yavapai-Prescott Indian Tribe.

Nine of the ten Tribes are federally recognized sovereign nations. The Tribes are economically and culturally reliant on the Colorado River, and they are historically and spiritually rooted to the region. The Tribes have a long-term and consistent cultural and historical affiliation with the land and river resources on and near the Site. Although each Tribe has its own history and belief system tied to the region and Colorado River, all share an overall interest in the health and welfare of their people, land and natural resources, sustaining important spiritual and religious beliefs and practices, honoring oral and cultural traditions, and maintaining the economic vitality and ecological well-being of the Colorado River and related cultural values and resources located at the Site.

Collectively, the Tribes include nearly 17,000 people located across hundreds of thousands of acres of land along the Colorado River corridor and within the region. The nearest Tribes are the Fort Mojave Indian Tribe with reservation lands eight miles north of the project area and the Chemehuevi Tribe approximately eight miles south. For these reasons, DTSC, the Federal bureaus, and PG&E are actively engaging the Tribes and Tribal government representatives to foster involvement and shared understanding as cleanup activities progress. For example, several Tribal representatives are actively engaged as members of the project's Technical Working Group, Clearinghouse Task Force, Topock Leadership Partnership and Consultative Workgroup (see Section 5), as well as in other project-specific deliberative bodies formed for purposes of meaningful coordination and communication through-out the project decision-making process.

Brief descriptions of the Tribal nations involved and interested in site cleanup activities and whose government representatives are contacted regularly by DTSC about the project are provided below. Additional information about each tribe is available by accessing the Internet links provided and by contacting the tribal nations directly.

3.3.1 Chemehuevi Indian Tribe

The Chemehuevi Indian Tribe has a population between 150 and 345 people living on the reservation. The reservation has a total area of 30,653 acres and includes 36 miles of Lake Havasu and the Colorado River shoreline. The Chemehuevi Indian Tribe was granted water rights to the Colorado River in 1963.
Resources: http://www.chemehuevi.net/home.php

3.3.2 Cocopah Indian Tribe

The Cocopah Indian Tribe has an approximate population of 1,200 members living and working on or near the reservation. Divided into three separate segments (North, West and East), the reservation has a total approximate area of 6,500 acres along the Colorado River. The West Cocopah Reservation contains seven miles of Colorado River within the United States and Mexico Limitrophe region. The Limitrophe is a unique designation given to a water border between two countries. This unique ecoregion included a wide variety of habitats for many rare and sensitive plant and animal species

that are both biologically and culturally significant. The Cocopah people (Kwapa) have lived along the banks of the Colorado River for many centuries utilizing the various resources the river sustains. The Kwapa people consider themselves caretakers of the river and the river delta. Today they strive to maintain the natural character of the river. The Cocopah Indian Tribe was granted water rights to the Colorado River in 1963.
Resources: http://www.cocopah.com/

3.3.3 Colorado River Indian Tribe

Colorado River Indian Tribes (CRIT) has a population of approximately 3,950 active tribal members. The latest Census data reported a population of 9,201 people living on Tribal lands, or within the Colorado River Indian Reservation. The reservation is unique in that it includes just over one square mile (973.3 acres) of non-tribal owned lands comprising the Township of Parker, Arizona, incorporated in 1948, and encompassed entirely within the boundaries of the reservation.

CRIT is composed of four distinct Tribal groups – Mohave, Chemehuevi (Nuwu), Navajo and Hopi. Historically the lower Colorado River corridor was the ancestral home to the Mohave and Chemehuevi peoples, among others. The Mohave people living at the Colorado River Indian Reservation and the Mojave living at Fort Mojave Indian Reservation are of the same origin, and have the same aboriginal ties to the area. Because of modern developments – and the establishment of separate reservations – they live at two locations and spell their name slightly differently.

The reservation has a total land area of approximately 300,000 acres, stretching along the Colorado River in both California and Arizona. The main economic activity is agriculture, with over 85,000 acres of crop land in production in a typical year. CRIT government administers departments of Education, Healthcare, Tribal Police, a Tribal Court, an Office of the Attorney General (providing civil, criminal, public defender, victim's advocacy and legal aid services to the Tribal Government and the membership), a Fire Department, Realty services, Utilities services, Housing services, numerous social welfare services, a Fish and Game department, an Environmental Protection Office, as well as a number of commercial enterprises including the Blue Water Resort and Casino. CRIT is the largest employer in La Paz County, Arizona.
Resources: http://www.crit-nsn.gov/

3.3.4 Fort Mojave Indian Tribe

The Fort Mojave Indian Tribe has a population of 1,202 people living on the reservation. The reservation lands are divided into three segments over three states. The reservation has a total area of 41,884 acres and includes parts of the Colorado River. Of the nearly 42,000 acres, a 23,669-acre segment is in Mojave County, Arizona; a 12,633-acre segment is in California, San Bernardino County; and the remaining 5,582-acre segment is in Clark County, Nevada. The Mojave people have traditionally and continuously inhabited this region of the Mojave Valley. The Fort Mojave Indian Tribe has aboriginal ties to this region and project area.
Resources: http://mojaveindiantribe.com/

3.3.5 Fort Yuma-Quechan Indian Tribe

The Fort Yuma-Quechan Indian Tribe has an approximate population of 2,475 members on the reservation. The reservation has a total approximate area of 45,000 acres and

borders Arizona, California, Baja California and Mexico. The reservation is located along both sides of the Colorado River. The Fort Yuma-Quechan Indian Tribe was granted water rights to the Colorado River in 1963.
Resources: http://itcaonline.com/?page_id=1173

3.3.6 Havasupai Indian Tribe

The Havasupai Indian Tribe has a population of approximately 639 members. The reservation has an approximate area of 251,000 acres along the western edge of Grand Canyon's south rim. The Havasupai Indian Tribe was granted water rights to the Colorado River in 1963.
Resources: http://www.havasupai-nsn.gov/

3.3.7 Hualapai Indian Tribe

The Hualapai Indian Tribe has an approximate population of 1,621 residents, of which 1,353 are tribal members. The 947 Tribal members not living on the reservation increases the total to 2,300. Divided into four segments, the reservation has an approximate area of 994,146 acres along 108 miles of the Grand Canyon and the Colorado River. Water rights to the Colorado River are still being negotiated according to the tribal office.
Resources: http://hualapai-nsn.gov/

3.3.8 Torres-Martinez Desert Cahuilla Indian Tribe

The Torres-Martinez Desert Cahuilla Indian Tribe has an approximate population of 858 tribal members. The reservation has an approximate area of 24,024 acres. Although the Torres Martinez Desert Cahuilla Indian Tribe is not located on the Colorado River, the tribe has significant ties by way of water coming from the Colorado River via the Coachella Valley Canal. It is then being recharged by the Coachella Valley Water District into the aquifer. The aquifer is the primary drinking water source.
Resources: http://www.torresmartinez.org/

3.3.9 Twenty-Nine Palms Indian Tribe

Twenty-Nine Palms Indian Tribe has an unknown population of tribal members. The reservation has an approximate area of 402 acres in San Bernardino County.
Resources: http://www.29palmstribe.com/index-1.html

3.3.10 Yavapai-Prescott Indian Tribe

Yavapai-Prescott Indian Tribe has an approximate population of 159 tribal members. The reservation has an approximate area of 1,395 acres. The Yavapai-Prescott Indian Tribe is not located on the Colorado River.
Resources: http://www.ypit.com/

Section 4: Cleanup Process Overview

4.1 What is Corrective Action?

Corrective action refers to the investigation and cleanup process at a hazardous waste site. The mandate to conduct corrective action at the Site is contained in laws that govern facilities that are either regulated as a hazardous waste Treatment, Storage, and/or Disposal facility or at any time have been regulated under such laws. The PG&E Topock Compressor Station was regulated under RCRA when PG&E notified the USEPA of their hazardous waste management activities in 1980. DTSC is authorized, by Federal delegation, to be the lead agency overseeing the corrective action program under RCRA for California.

The Corrective Action process can be broken down to six steps, from investigation to implementation of a remedy (see Figure 4). Furthermore, each of the six steps have specific communication activities that are suggested or required. For a more detailed description of the communication activities that will take place at each step, see Appendix G: Schedule of Activities for RCRA.

4.2 Corrective Action History at the Topock Site

RCRA Corrective Action activities at the Site were initiated in 1987 with the completion of a RCRA Facility Assessment (RFA) conducted by the USEPA. The RFA identified 13 areas of possible contamination through records review, data evaluation, interviews and a visual site inspection. Although several of these areas, including the sludge or mud drying beds, old evaporation ponds, and wastewater treatment tank areas, have been investigated by PG&E and their closure report accepted by DTSC in 1995, PG&E has identified additional areas of concern throughout the Corrective Action investigation and cleanup process. In February 1996, PG&E and DTSC entered into a voluntary agreement that requires PG&E to follow the RCRA Corrective Action investigation and cleanup process with DTSC oversight.

As the oversight agency, DTSC must do the following to protect public health and the environment:

1. Determine the extent of the contamination
2. Determine what should be done to clean it up
3. Take steps to clean it up.

PG&E has determined in the 2012 RFI soil work plan that 44 distinct areas will require further investigation out of over 50 areas of potential concerns identified. After additional evaluation, DTSC determined that collection of soil samples to quantify contamination is required at 42 locations. The soil sampling efforts was completed in April 2017. Based on the soil sampling data, PG&E will complete a risk assessment to determine potential human health and ecological risks posed by contaminated soil. The risk assessment will guide DTSC in making risk management decisions regarding the need for soil cleanup. The risk assessment is anticipated to be completed in 2019. In addition, DTSC has adopted PG&E's preferred final groundwater remedy in 2011. PG&E completed the design of the groundwater remedy in 2015 and DTSC approved the design on April 24, 2018. Construction of the final groundwater remedy began on October 2, 2018 and will continue for approximately 5 years.

4.2.1 Groundwater & Surface Water Sampling

Groundwater and river water sampling, also known as "monitoring," began in 1998 as part of initial site investigation activities, and has been incorporated into a regular monitoring program. Monitoring activities at the Site include sampling a network of over 130 monitoring wells, four river shoreline locations, two other surface monitoring locations and 10 in-channel river sampling locations. Groundwater sampling occurs in selected wells monthly, quarterly, semiannually and biennially. River water is sampled monthly during low river periods (during the winter) and quarterly during the rest of the year. The monitoring program has helped to define the level and extent of hexavalent chromium or cr(VI) in groundwater. Furthermore, by monitoring the wells at regular intervals, DTSC is able to determine if changes to the cr(VI) plume occur and to take appropriate steps to control its movement and migration if necessary. DTSC has also learned from the surface water sampling that the quality of the Colorado River has not been adversely impacted by site contamination.

4.2.2 Interim Measures at the Site

Interim Measures (IMs) are cleanup actions that are taken to protect public health and the environment while long-term solutions are being developed and evaluated. A series of three IMs were imposed at the Topock site in 2004 for protection of the Colorado River after PG&E detected elevated levels of cr(VI) in newly installed groundwater monitoring wells located next to the Colorado River. Although surface water and pore water beneath the river did not detect elevated levels of cr(VI), DTSC required PG&E to begin groundwater removal and treatment of the extracted groundwater to control the movement of the groundwater towards the river. Under IM No. 3, groundwater that contains cr(VI) is extracted and piped to a treatment facility, which removes the cr(VI) and re-injects the treated groundwater back into the subsurface. The treated groundwater meets standards set by DTSC and the California Regional Water Quality Control Board. This IM will remain operational until the final groundwater remediation system is operational. The IM work plans and associated documents are available in the Information Repositories (listed in Appendix D). The IM No. 3 groundwater extraction and treatment system has extracted and treated approximately 875 million gallons of water and removed approximately 7,500 pounds of chromium from the contaminated groundwater from August 1, 2005 through September 30, 2018.

In addition to the groundwater IMs, hazardous substances were found at elevated concentrations within a steep slope and its associated ravine located at the southern portion of the Compressor Station. This area has been identified as the Debris Ravine or Area of Concern (AOC) 4 where historical waste disposal took place. The DOI determined that the contamination posed a substantial threat of release onto the Havasu National Wildlife Refuge, managed by USFWS. On June 24, 2009, DOI requested PG&E to conduct a Time-Critical Removal Action to remove the hazardous debris and soil at AOC 4. PG&E initiated removal activities at AOC 4 in January 2010. Due to the Time-Critical Removal Action, PG&E transported off-site and properly disposed of over 11,000 cubic yards of contaminated fill material and debris.

4.2.3 Status of Groundwater Remedy

A Corrective Measure Study (CMS)/Feasibility Study (FS) was completed by PG&E and approved by DTSC and DOI in December 2009. The purpose of the CMS/FS was to evaluate different cleanup alternatives for the cr(VI) in groundwater that was a result from past releases in and around Bat Cave Wash. The CMS/FS established cleanup goals for the groundwater remedy, and evaluated each of the alternatives against RCRA Corrective Action and CERCLA-mandated criteria. In the CMS/FS, PG&E recommended to DTSC and DOI that *In Situ* (defined as in place or in position) Treatment with Fresh Water Flushing as the final groundwater remedy. Based on information presented in the CMS/FS document, DTSC and DOI agreed with PG&E's recommendation. DTSC formally adopted the recommended remedy on January 31, 2011.

A Preliminary (or 30%) Design plan was submitted by PG&E to the oversight agencies in late 2011 and approved in February 2012 after review and input from DTSC. DOI and project stakeholder feedback were considered and incorporated into the next iteration of the design, known as the Intermediate (or 60%) Design which was submitted for review and comment in
April 2011. PG&E completed the pre-Final Design (or 90%) in September 2014 and subsequently the final (or 100%) design for DTSC approval in November 2015. Based on the information provided in the design, DTSC completed a Subsequent Environmental Impact Report (SEIR) to evaluate the potential environmental impacts of the cleanup project in accordance with the California Environmental Quality Act (CEQA). DTSC released the draft SEIR report for public review and comment in January 2017. After considering and responding to all comments received, DTSC certified the final SEIR on April 24, 2018 and approved the final design for construction of the remedy. Construction began on October 2, 2018. It is anticipated that PG&E will take up to five years to complete construction of the groundwater remedy system in two separate construction phases.

4.2.4 Soils Investigation

PG&E has prepared and submitted a 2012 Supplemental Soil Investigation Work Plan (WP) to further define the nature and extent of contaminants in the ground and subsurface soil inside and outside of the compressor station property. Forty-four areas have been identified as requiring further investigation. In subsequent evaluations, DTSC amended the areas needing additional evaluation to 42. DTSC approved the WP, addendum, and errata in August 2015 after the certification of a soil investigation Environmental Impact Report pursuant to the CEQA requirements. PG&E begin the necessary fieldwork to collect and analyze the proposed samples in December 2015 and completed all soil investigation field work in April 2017. The results gathered from the investigation is being used to evaluate human health and environmental risks. PG&E will be directed to evaluate cleanup alternatives and recommend a cleanup action at the site if necessary.

4.2.5 Additional Information

For more information on these Site activities, refer to the project documents in the Information Repositories listed in Appendix E or contact Mr. Aaron Yue, DTSC Project Manager, by phone at (714) 484-5439 and by email at aaron.yue@dtsc.ca.gov.

Although limited activities will be conducted across the Colorado River in Arizona such as the installation of wells and fresh water conveyance pipeline, all environmental

investigation activities and the results will be reported to the Arizona Department of Environmental Quality (ADEQ). Additional information regarding ADEQ's involvement in the project can be directed to Ms. Wendy Flood, Community Involvement Manager, by phone at (602) 771-4410, by email at: wv1@azdeq.gov
or reviewed at http://www.azdeq.gov/node/3573.

General information on environmental investigation activities conducted by the State of Arizona is placed on ADEQ's Website at: www.azdeq.gov.

Section 5: Community Engagement Process

5.1 Objectives of Community Engagement

Community Engagement is an integral part of the RCRA Corrective Action process conducted by DTSC. The Site remediation project includes a proactive public participation component that provides project information to communities and stakeholders as well as identifies concerns if any. DTSC encourages participation by community members and stakeholders by conducting community surveys, interviews and meeting regularly with work groups, stakeholders and community members associated with the project. Community engagement is guided by DTSC's Public Participation Manual, that identifies goals and procedures for community outreach. Community engagement objectives associated with the PG&E Topock Site are as follows:

- **Objective 1:** Provide timely and accurate information about environmental investigations and cleanup activities to local residents, community organizations, elected officials and governmental bodies.
- **Objective 2:** Provide easy-to-understand information about potential health effects and technical issues so that residents and stakeholders are empowered to provide input.
- **Objective 3:** Provide opportunities for Tribal Government representatives, community members, and other stakeholders to ask questions, provide comments, become involved and give feedback on project plans.

5.2 Communications with Community Stakeholders & Tribal Governments

DTSC recognizes the importance of the environmental investigation and cleanup activities at the Site and the concern of the many diverse stakeholders who value the surrounding desert habitat and the Colorado River. As the lead agency, DTSC oversees communication and community outreach activities connected with the site investigation and cleanup.

A history of past community outreach activities includes distribution of fact community updates / fact sheets and project updates to the following:

- Tribal government representatives
- Residents and businesses in the Golden Shores and Topock communities in Arizona
- Elected officials
- Community organizations
- Other key stakeholders in Needles, California and Lake Havasu City, Arizona
- DTSC also issues public notices through news media and local club publications to announce upcoming events or other activities with input opportunities.

5.2.1 Communication with the Federal Government

DTSC recognizes the importance of communicating and coordinating all cleanup and outreach activities with federal agencies to ensure the protection of the Colorado River and the surrounding communities. In March 2000, DTSC established a Consultative Workgroup (CWG) that included various federal agencies that exercise regulatory authority in the affected area to facilitate consultation and coordination. The CWG has since expanded to include other state and local responsible agencies, stakeholders and

sovereign Tribal Nations. The federal government agencies currently represented in the CWG include; the DOI, BLM, BOR, USFWS, and the HNWR. The CWG meets regularly to discuss project activities and provide opportunities for input, discussion and recommendations to DTSC.

5.2.2 Communication with State & Local Governments

The environmental investigation and cleanup of the Site affects the State of California and all other surrounding local governments. Interested state agencies and local governments are invited to participate in the cleanup process, and many have chosen to do so by participating in the CWG.

DTSC realizes that the State of Arizona adjoins the affected groundwater system and relies on water from the Colorado River. Moreover, most of, much of populated communities along the Colorado River are residences and businesses within the State of Arizona. DTSC has and will continue to engage with its counterpart ADEQ regarding this Site. ADEQ participates in the CWG and provides input on technical matters, including, but not limited to, the interim measures, well installation and monitoring plans, and the groundwater remediation design. Efforts will be made to ensure that representatives from ADEQ are actively involved when outreach activities are planned and conducted in the State of Arizona.

5.2.3 Communication with Tribal Governments

Several Native American Tribes have lands that border the Colorado River. Nine of these Tribes are federally recognized. All are sovereign nations that are historically and spiritually rooted to the land and are economically reliant on the Colorado River. There are several Tribes located along the river (from north to south) that are engaged on this Project: Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribes (CRIT), Fort Mojave Indian Tribe, Fort Yuma-Quechan Indian Tribe, and the Hualapai Indian Tribe. Representatives of these tribal governments are involved in project workgroups and are kept informed of the Site project and key decisions for the cleanup. DTSC also communicates with other interested Tribes in Southern California and Arizona (see Section 3.3). These include, the Fort Yuma- Quechan Indian Tribe, Torres-Martinez Desert Cahuilla Indian Tribe, Havasupai Indian Tribe, Twenty-Nine Palms Indian Tribe and Yavapai-Prescott Indian Tribe. Project related documentations are regularly sent to these Tribes for their information and input.

5.3 Project Workgroups

DTSC recognizes the importance of the environmental investigation and cleanup activities at the PG&E Topock site to those who value the surrounding land and Colorado River. DTSC has established the following workgroups focused on engaging these groups for input into the cleanup process.

5.3.1 Consultative Work Group (CWG)

The CWG was first established in 2000 to facilitate participation of key stakeholders in the site investigation and remediation process. DTSC expanded the CWG after being designated as the Administering Agency in 2004. The CWG is comprised of stakeholders and government groups with approximately 50 participants. The objective of the CWG is to facilitate participation of these state, regional and federal agencies and the Native American Tribal governments in the cleanup process, and through such participation, integrate applicable federal and state regulatory authorities and requirements. In

addition, the CWG provides opinions, comments and recommendations to DTSC, helping DTSC make decisions on the effective and expeditious remediation of past releases from the Site; the objective is to manage the lands and waters of the Colorado River basin in a manner that is respectful and minimizes impacts to sensitive cultural and environmental resources. DTSC currently convenes the CWG at least three times a year and at multiple locations convenient to stakeholders to encourage involvement and participation.

5.3.2 Technical Work Group (TWG)

DTSC established the TWG as a subgroup of the CWG. The TWG meets to discuss specific project-related issues in greater technical detail among the experts of the focused scientific field. The result of their deliberation is then reported back to the CWG. Past areas of discussion include groundwater investigation, hydrogeology, soil investigation, modeling, engineering design, human/ecological risk evaluations and assessments, and remediation alternatives for the Topock project. The TWG is composed of stakeholders and tribal government representatives and their technical experts. The TWG meets on an "as needed" basis and meeting frequencies vary from monthly to quarterly.

5.3.3 Clearinghouse Task Force (CTF)

The CTF was formed to develop and streamline processes and tools to improve communications and understanding of technical and regulatory project information. The goal of the CTF is to foster timely and effective project management and promote early collaboration with clear information and feedback to the state and federal agencies for decision making on the Site. CTF members are also CWG members. The CTF is a smaller group with approximately 15 people. The CTF meets regularly, depending on need, ranging from monthly to quarterly. The CTF communicates progress to the Topock Leadership Partnership (TLP) and the Consultative Work Group, and integrates feedback and direction from these groups into future process improvement efforts.

5.3.4 Topock Leadership Partnership (TLP)

The TLP was created to enable senior officials of stakeholders, Tribal Governments and responsible government agencies to provide input to DTSC and DOI on the direction of actions necessary to complete the Topock project. The TLP exchanges information, views and opinions on various actions proposed by the DTSC and DOI with respect to the development, selection and implementation of the groundwater remedy for the project. The intent is to provide a senior level perspective of each participant's interests and gain understanding of differing points of views that could be considered before critical decisions are made by the agencies. The TLP has met five times since 2008, principally prior to critical project decisions. Generally, the TLP discusses larger, conceptual and broader policies or decisions, while the TWG and the CWG continue to deal with more detailed and technical issues. Senior leaders of CWG stakeholder groups and the 10 nearby Native American Tribal Governments are invited to the TLP to provide broad representation and perspectives.

5.3.5 Technical Review Committee (TRC)

The TRC was established to convene and retain a multidisciplinary panel of five independent scientific and engineering experts who advice interested tribal members on technical matters associated with the Topock investigation and remediation project. The TRC reviews project-related documents and participate in project-related meetings to assist in Tribal engagement on the project.

5.4 Community Engagement Tools & Activities

DTSC has a responsibility to ensure effective community engagement and communication. DTSC uses the following outreach tools for that purpose:

- Surveys and interviews
- Briefings, presentations and meetings
- Community Updates/Fact Sheets
- Public notices
- Public meetings
- Public comment periods
- Site tours
- Mailing Lists
- Information Repositories

5.4.1 Survey & Interviews

DTSC has conducted community surveys and interviews regarding the Topock project in 1997, 2002, 2009, 2012, and 2018. Surveys allow DTSC to assess and monitor the level of community interest. DTSC will update and modify the communication efforts as necessary based on input received. A survey can also provide useful feedback about the needs and concerns within the surrounding communities. Information collected in surveys helps identify the best way for DTSC to communicate with members of the community. DTSC conducted community interviews with community members, stakeholders and tribal governments between August and November 2018. Community interviews provide additional information and help identify concerns in the community about the Project. Additional information about the survey questionnaire can be found in Appendix B: Community Survey Results Summary.

5.4.2 Briefings, Presentations & Meetings

DTSC representatives welcome the opportunity to participate in meetings sponsored by community or neighborhood organizations who are interested in learning more about the project. Comments or questions from the public will be answered during the meetings when possible, or noted and answered by DTSC at a later date if research is required. To request that the project staff provide a briefing to your community or organization, please contact DTSC's Community Outreach contact, identified under the project contacts listed in Section 5.8.

5.4.3 Fact Sheets/Community Updates

DTSC produces and distributes community updates, also known as fact sheets, to share information with the public and other stakeholders on project developments, findings and field activities. Community updates / fact sheets are also used to announce public meetings and the release of technical documents that require public review and comment. Community updates / fact sheets are written in easy-to-understand language. Technical terms, when used, will be explained in simple terms. Graphs, figures and photos will be used to help improve understanding. All community updates / fact sheets list the Information Repositories (such as local libraries) where interested parties and the public can find copies of pertinent documents and the locations, names, addresses and phone numbers of people to contact. Copies of previously produced community updates / fact sheets are available in Appendix F. Community updates / fact sheets, 1998 Public Participation Plan and 2007 Public Participation Plan Addendum, the 2013 Community

Outreach Plan and this 2019 updated Community Outreach Plan are available in the Document Library of the Site website at http://www.dtsc-topock.com

5.4.4 Public Notices

Public Notices also provide timely information about the Site investigation and cleanup efforts. The notices are prepared to inform the community of upcoming DTSC actions, as well as identify comment periods for specific documents, such as a draft Environmental Impact Report (EIR). Public Notices will be posted or kept in the Information Repositories and selected community gathering areas at the beginning of any public comment period. Examples of information that might be included in a Public Notice are as follows:

- Start and end dates of public comment periods and the process for submitting comments
- Announcement of the release of milestone technical documents
- Announcement of the time, date and location for a public meeting
- Contact information for whom to call with questions

The Public Notice may also be published in local newspapers around Topock in both Arizona and California. The list of papers includes, but is not limited to, the Desert Star in the Needles, California area; Today's News-Herald in the Lake Havasu City, Arizona area; Topock Topics in the Golden Shores, and the Parker Pioneer in the Parker, Arizona area. Public Notices are also posted in community centers and tribal council offices.

5.4.5 Public Meetings & Hearings

DTSC may hold formal public meetings or hearings to share information and receive comments on important project documents. Public meetings will provide an opportunity for DTSC to explain technical information, answer questions and receive public comments. Meetings may be held in more than one location in different parts of California, Nevada or Arizona. DTSC will also hold public hearings prior to adoption of remedies and for draft Environmental Impact Reports (EIRs). Formal hearings are usually recorded and all comments received are kept as administrative record for the project.

For public meetings and hearings, local officials and Tribal representatives will be briefed about the purpose and agenda in advance by phone, memorandum or personal meeting. Meeting location and time will be announced via Public Notice in the local newspaper, in a community update / fact sheet or notice posted in the Information Repositories, or in both. Meeting announcements and other meeting information will also be posted on the Topock and DTSC website.

5.4.6 Public Comment Periods

As part of a continuing effort to involve affected communities and interested parties in the cleanup process, DTSC will invite public comments and input at key junctures of the project prior to a significant decision regarding the Site. Formal public comment periods will be at least 30 days. DTSC will issue notices to the public that specific governing documents for the proposed decision are available for review and comment. DTSC will post public comment documents on the project website and in the local Information Repositories listed in Appendix D. DTSC will take comments in writing by regular mail, email, and submission from the project website. If a formal public hearing is proposed, comments can also be submitted in person at the hearing. DTSC will evaluate and consider all comments received before finalizing those key documents and decisions.

Based on the evaluation of comments and input received, DTSC may adopt the proposed decision with or without modifications, or deny the proposed action. DTSC will issue a formal written response to all comments in a document called Response to Comments along with the final decision. The Response to Comments and the final decision will be made available in local Information Repositories and on the project website.

5.4.7 Site Tours

DTSC can arrange with PG&E to provide site tours to key individuals and elected officials. These tours provide an overview of the cleanup activities and have been a helpful communication tool used to brief elected officials, CWG members and Tribal government representatives on the Corrective Action process, including current and upcoming field activities. Project overview and orientation can be provided for key stakeholders, leaders and project managers and newcomers that plan to be involved in the project. Contact DTSC for further information.

5.4.8 Mailing Lists

DTSC has established a mailing list of individuals and parties interested in the site. It is used to provide upcoming information, opportunities for input or involvement, or notice of key decisions. The complete mailing list for this site includes the following:

- Representatives from California and Arizona Tribes
- Members of the CWG
- Local, state and federal elected officials
- Local, state and federal government agency officials
- Key individuals and organizations in Needles and the Mojave Valley area
- Other interested community individuals
- Business associations
- Local news media
- Statewide DTSC mandatory mailing list of key individuals and groups

The mailing list is updated at least quarterly. In addition, it is updated when individuals request to be added or removed from the list; after meetings, site tours or public meetings (based on sign-in sheets); when new members join the CWG and when elected officials change office. Anyone can request to be included on the mailing list by contacting DTSC.

5.4.9 Information Repositories

Documents in electronic and written form related to the environmental investigation and cleanup can be viewed in the local Information Repositories. The Information Repositories are set up to provide easy local access to this Plan, project work plans, technical reports, fact sheets/community updates and other important project documents. The repositories are located in Havasu Lake, CA at the Chemehuevi Indian Reservation; in the Golden Shores, Lake Havasu City, and Needles public libraries; in the CRIT library; and in DTSC's Cypress regional office file room. DTSC maintained a public repository at the Parker Public Library until 2017 which was closed due to lack of use and availability of the same information at nearby locations. Appendix D provides a list of the information repositories as well as their locations and hours of operation.

5.4.10 Topock Websites

DTSC maintains a website for the Site investigation and cleanup activities. This website provides an overview of current Site activities and other Site-related information. The following Information is on the website:

- Site description and history
- Site activity overview
- Groundwater and surface water monitoring activities
- Interim measures activities
- Site investigation and cleanup activities and reports
- Identification of communities near the Topock Compressor Station
- Outreach activities related to the environmental investigation at the Site
- Information Repository locations
- Frequently asked questions about the Site
- Web based option for adding or removing yourself from the Site mailing list
- Project contact information and links to various interested parties
- Document Library containing project documents

The Topock website is located at http://www.dtsc-topock.com. ***Information about the Site is also provided on DTSC's EnviroStor website at:***

https://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=36490090

5.4.11 Additional Activities

DTSC will conduct additional outreach activities as appropriate or as requested by members of the community. Additional activities could include:

- Information in local newsletters or publications (such as Topock Topics)
- Announcements on local radio or television stations

Community flyers distributed to community members and placed in areas of interest to the community (such as community recreation centers)

- Emailing important project information to community members who sign up to be on the electronic mailing list

Section 6: Community/Stakeholder/Tribal Feedback

6.1 Community Assessment Process

To help prepare this Plan, DTSC has a community assessment process that consists of in person and phone interviews. The purpose of this process is to: 1) document interest, views and concerns related to the environmental investigation; and 2) identify specific public participation activities that will facilitate community engagement in DTSC's decision-making process for this site. DTSC has conducted four formal community assessments as part of its community outreach process. The first assessment, conducted in 1997, included both survey questionnaires and interviews. The second community assessment, conducted in June 2002, included a survey and interviews that were completed in January 2003. The third community assessment survey was conducted in 2009. A community survey and community interviews were conducted in 2012. Additional interviews were conducted in 2018 and used to prepare this Community Outreach Plan update.

6.2 Community Surveys

The community survey conducted in January 2012 was designed to evaluate interest in, and knowledge of, the environmental investigation and cleanup at the Topock Site. The 19-question survey included multiple choice, fill in the blank and yes/no questions. The feedback received from the surveys and interviews can be organized into the following six topic categories:

- Groundwater Impacts/Water Quality
- Health Concerns
- Adequate Communication
- Cleanup Process
- Property Values
- Miscellaneous

Copies of the survey questionnaires and a detailed description of the feedback received are provided in Appendix B: Community Survey Results Summary.

6.3 Community Interviews

From August 2018 to November 2018, DTSC conducted community interviews with community members, key stakeholders and Native American Tribal Government representatives. Five out of the ten tribes listed in Section 3.3 participated in the interviews. The interviews were conducted in-person or over the phone. All individuals interviewed were asked a series of questions developed to determine the level of interest and concern about the Project and to identify local communication needs and preferences.

Feedback from the interviews is grouped into three categories:

- Community Interviews
- Stakeholder Interviews
- Native American Tribal Government Interviews

6.3.1 Stakeholder Interviews

Three individuals were interviewed as part of the stakeholder interviews for the Topock Compressor Station Community Outreach Plan.

Project Awareness

Each interviewee was aware of the Topock Compressor Station Site activities and identified themselves as the main point of contact for receiving information associated with this project. The interviewees all stated that along with being directly involved with the project, they received their information through the Community Update created for the project in April 2018. Each interviewee felt the information provided in the Community Update was sufficient and easy to understand.

Project Concerns

Each interviewee expressed a low level of overall concern for the activities associated with the project and were satisfied with progress made over the past couple of years. Each stated they were excited that Site cleanup had begun. None of the interviewees had received any concerns from the local community regarding the Site. One interviewee stated that she and her team are not located in close proximity to the Site which may be the reason that they have not received any community feedback.

Future Communication

Each interviewee felt the in-person work group meetings were helpful and were excited to see them continue. They all felt the Community Update was adequate communication and felt this was appropriate for future communication. Due to the low interest at this point, none of the interview participants felt a public meeting was necessary to share project information for this Site as Community Updates are sufficient.

6.3.2 Native American Tribal Government Interviews

Community Interviews were conducted during the months of August and September 2018 with members of Tribal Governments (Chemehuevi Indian Tribe, Cocopah Indian Tribe, Colorado River Indian Tribe, Fort Mojave Indian Tribe, and the Quechan Indian Tribe) associated with the Site remediation project. The purpose of these community interviews is to understand how Tribal Governments feel about the outreach materials provided by DTSC. Additionally, DTSC wanted to know what changes or additional outreach can be done to improve communication of Site related activities. The following is a summary of those community interviews.

- **Project Awareness:**

  All interviewees were aware of the Site remediation project. They were all members of various workgroups associated with the project and most stated that they were the main point of contact for information communicated to their tribes. One individual named their supervisor as a point of contact for project information. The individuals that were interviewed stated that they received most of their information regarding the Site via workgroup meetings and some mailings. All felt that the information that was provided was helpful and sufficient communication regarding the activities taking place at the Site.

- **Project Concerns:**

  The interviewees were satisfied with the progress being made at the Site. Several stated they were excited the construction and cleanup of the Site are beginning. The concerns mentioned include the effects of the contamination and cleanup on the

communities and a concern for negative impacts to sacred Tribal cultural historic property. There are additional concerns for a precedence being set for similar future cleanup projects. All interviewees were happy about the current level of communication taking place between the tribes and PG&E, DTSC and other agencies involved in the cleanup.

- **Future Communications:**

The overwhelming consensus for preferred method of communication indicated a preference for in-person meetings. According to the those interviewed, printed information coupled with conversation are extremely helpful during these meetings. Community Updates are considered a useful tool for communicating project information. All interviewees have seen the latest version of the Community Update (April 2018) and feel it has the appropriate amount of information included. Two interviewees state the information provided to their tribal communities is not generating much interest. Those interviewed informed us that project communications are first received by tribal liaisons and/or elders and then passed on to tribal community members.

6.4 Meetings & Briefings

DTSC received feedback from various community members and stakeholders during many briefings and meetings held throughout the process, especially during the planning and implementation stages of the Interim Measures and the groundwater remedy approval and design process.

Incorporating input from the agencies and organizations on the CWG membership has helped shape project direction and has been reflected in work plans and technical decisions at every step in the process. Elected officials, staff of downstream cities, and Tribal representatives have all expressed their concern that the Colorado River be protected, because many rely on the river as a source of drinking water and a source of revenue from recreation, tourism and other pursuits.

6.5 Contact Persons

DTSC's Community Outreach Staff are responsible for responding to public inquiries and coordinating the distribution of community updates/fact sheets and Public Notices and organizing other community outreach activities.

DTSC encourages all interested parties to contact the Community Outreach Staff person or the Project Manager with questions or concerns regarding the project. For media inquiries, contact the Public Information Officer. These contacts will be updated as needed.

Department of Toxic Substances Control

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

Phil McPhaul, Public Participation Specialist
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Russ Edmondson, Public Information Officer
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Pacific Gas and Electric Company

Curt Russell, Topock Project Manager
Pacific Gas & Electric Company
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GCR4@pge.com

Andrea Gooden, Director, Remediation Stakeholder Engagement
Pacific Gas and Electric Company
77 Beale Street
San Francisco CA 94105
(415) 973-1136
ARGH@pge.com

For questions or comments related to federal involvement, contact the lead federal agency:

U.S. Department of the Interior, Bureau of Land Management

Pamela Innis, DOI Topock Remedial Project Manager
U.S. Department of the Interior, Bureau of Land Management – Arizona State Office
One North Central Avenue, Suite 800
Phoenix, Arizona 85004-4427
(602) 417-9578
Pamela_Innis@ios.doi.gov

For questions or comments from Arizona residents or related to Arizona involvement, contact:

Arizona Department of Environmental Quality

Nichole Osuch, Project Manager, Voluntary Remediation Program
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-4847
NSO@azdeq.gov

Joey Pace, Secondary Project Manager, Voluntary Remediation Program
Arizona Department of Environmental Quality
1110 West Washington Street
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(602) 771-4818
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Wendy Flood, Community Involvement Manager
Arizona Department of Environmental Quality
1110 West Washington Street
Phoenix, AZ 85007
(602) 771-4410
WV1@azdeq.gov

Morgan O'Connor, Community Liaison
Arizona Department of Environmental Quality
2500 North Fort Valley Road, Building #1
Flagstaff, AZ 86001
(928) 679-7307
to2@azdeq.gov

Section 7: References

Websites

Arizona Dept. of Environmental Quality
www.azdeq.gov

Colorado River Board of California Homepage
www.crb.ca.gov

Colorado River Water Users Association
www.crwua.org

Department of Toxic Substances Control
www.dtsc-topock.com

Golden Shores, Arizona
www.goldenshores.net

Inter-Tribal Council of Arizona
www.itcaonline.com

Lake Havasu City Chamber of Commerce
www.havasuchamber.com

Metropolitan Water District of Southern California
www.mwdh2o.com

Town of Parker, Arizona
www.ci.parker.az.us

United States Census 2010
www.census.gov ; factfinder2.census.gov

U.S. Dept. of Interior, Bureau of Land Management
www.blm.gov

Section 8: Appendices

Appendix A: Project / Site Maps & Graphic Information

Figure 1

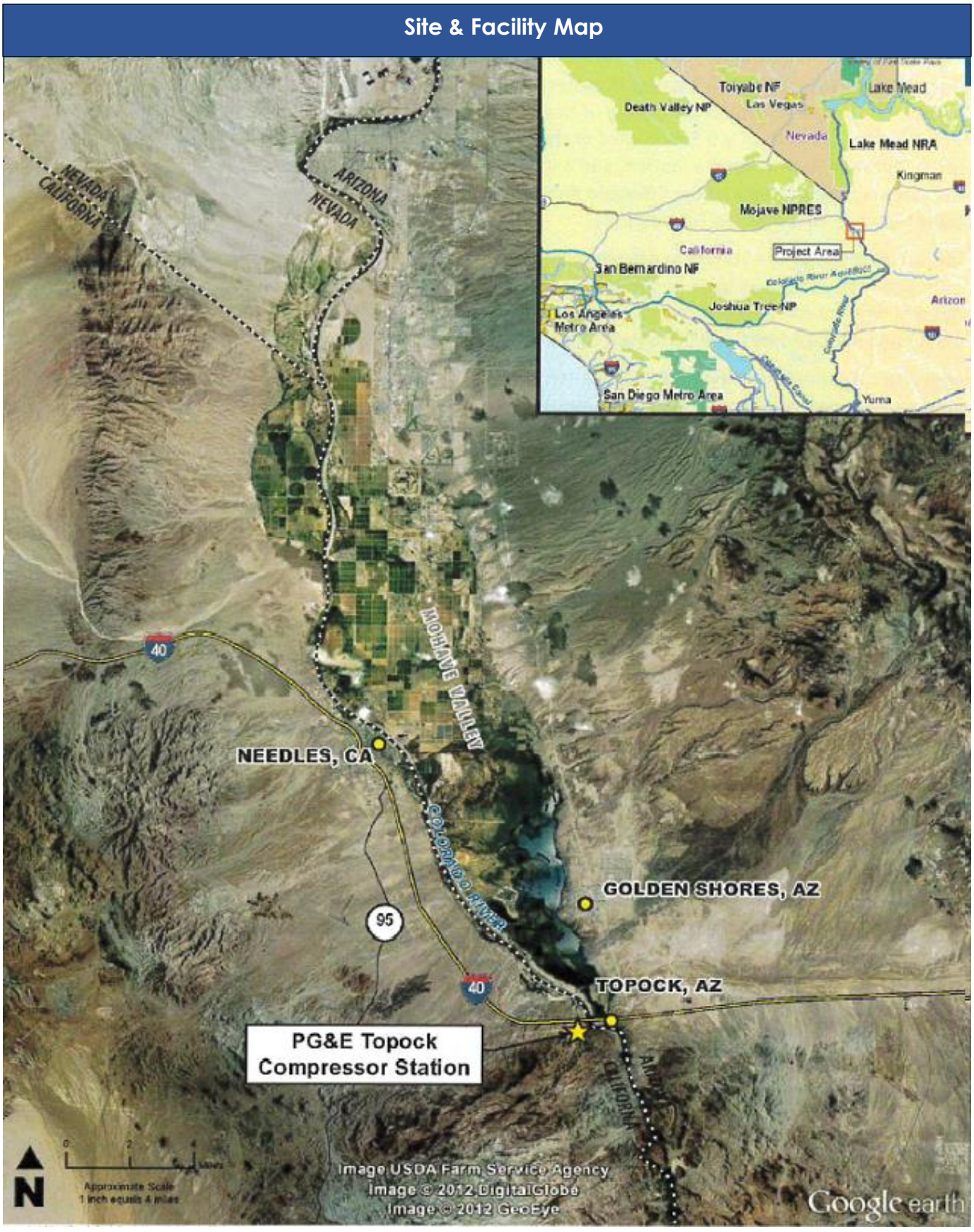

Site & Facility Map
Toiyabe NF
Death Valley NP
Las Vegas
Lake Mead
Nevada
Lake Mead NRA
Kingman
Mojave NPRES
California
Project Area
San Bernardino NF
Joshua Tree NP
Los Angeles Metro Area
San Diego Metro Area
Yuma
NEVADA
CALIFORNIA
ARIZONA
NEVADA
MOHAVE VALLEY
40
NEEDLES, CA
COLORADO RIVER
95
GOLDEN SHORES, AZ
TOPOCK, AZ
PG&E Topock Compressor Station
Approximate Scale
1 inch equals 4 miles
Image USDA Farm Service Agency
Image © 2012 DigitalGlobe
Image © 2012 GeoEye
Google earth

Figure 2

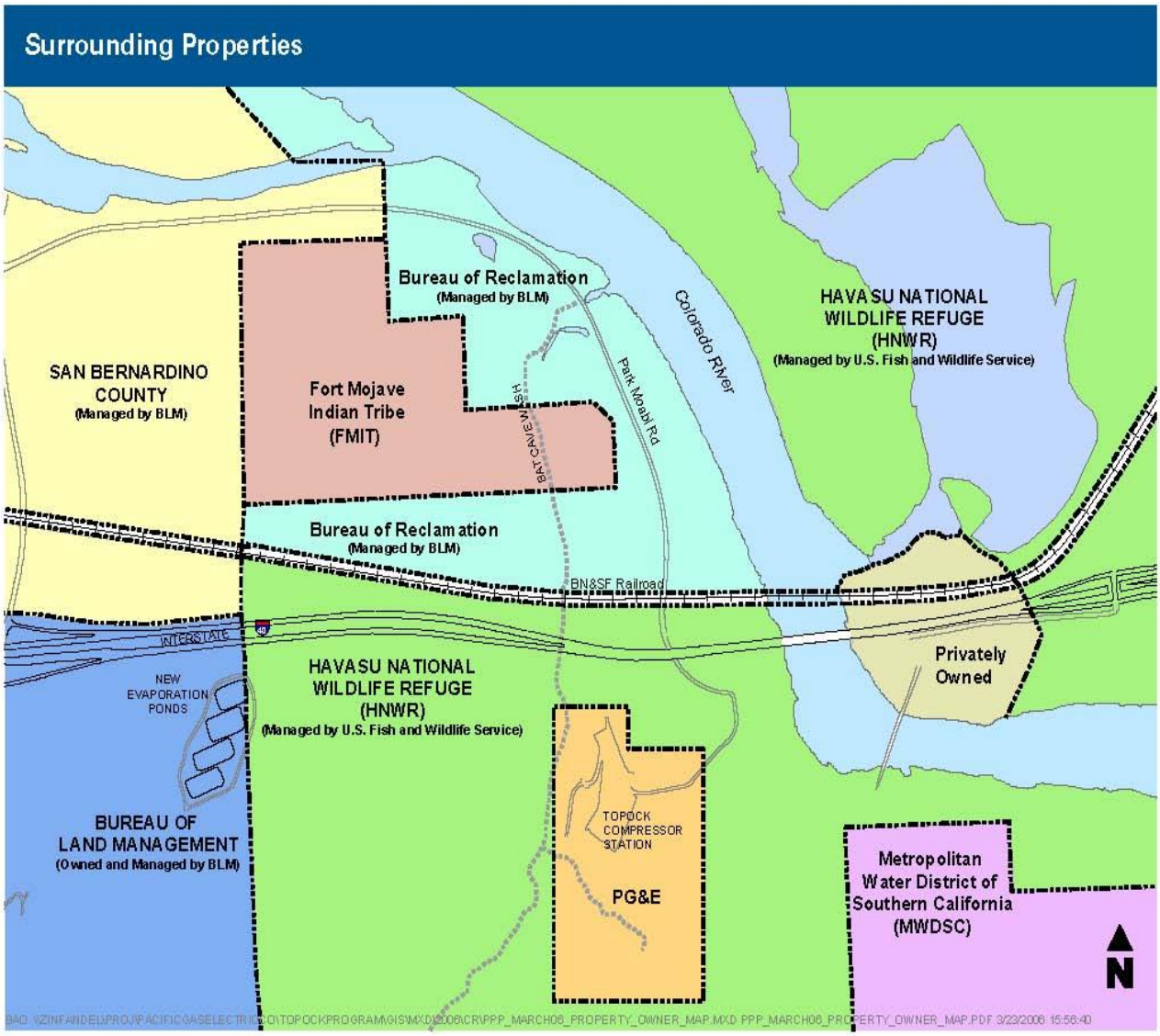

Surrounding Properties
Bureau of Reclamation
(Managed by BLM)
Colorado River
HAVASU NATIONAL
WILDLIFE REFUGE
(HNWR)
(Managed by U.S. Fish and Wildlife Service)
SAN BERNARDINO
COUNTY
(Managed by BLM)
Fort Mojave
Indian Tribe
(FMIT)
BAT CAVE WASH
Park Moabi Rd
Bureau of Reclamation
(Managed by BLM)
BN&SF Railroad
INTERSTATE
Privately
Owned
NEW
EVAPORATION
PONDS
HAVASU NATIONAL
WILDLIFE REFUGE
(HNWR)
(Managed by U.S. Fish and Wildlife Service)
TOPOCK
COMPRESSOR
STATION
PG&E
BUREAU OF
LAND MANAGEMENT
(Owned and Managed by BLM)
Metropolitan
Water District of
Southern California
(MWDSC)
N

Figure 3

Communities Surrounding Site & Tribal Reservations

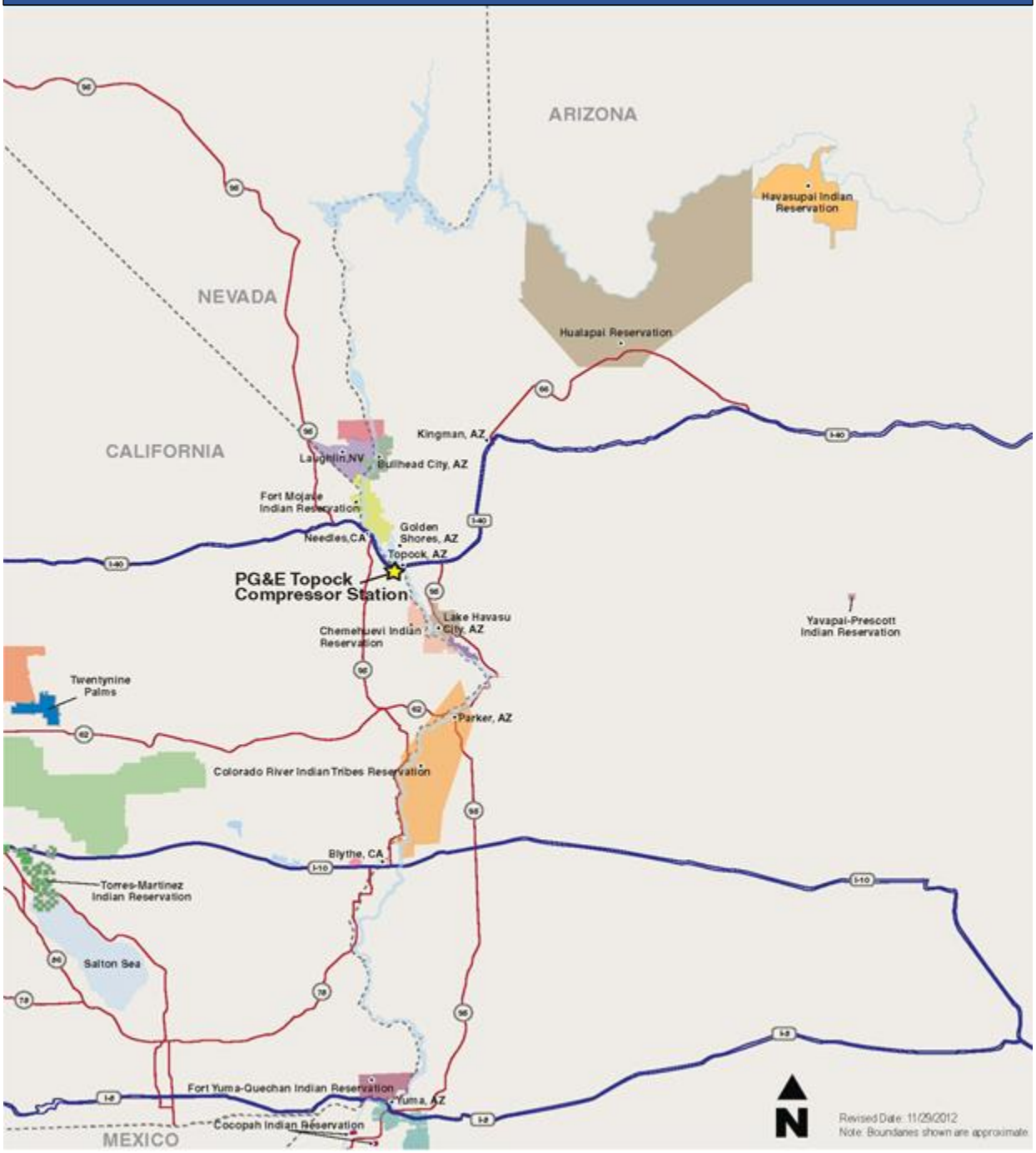
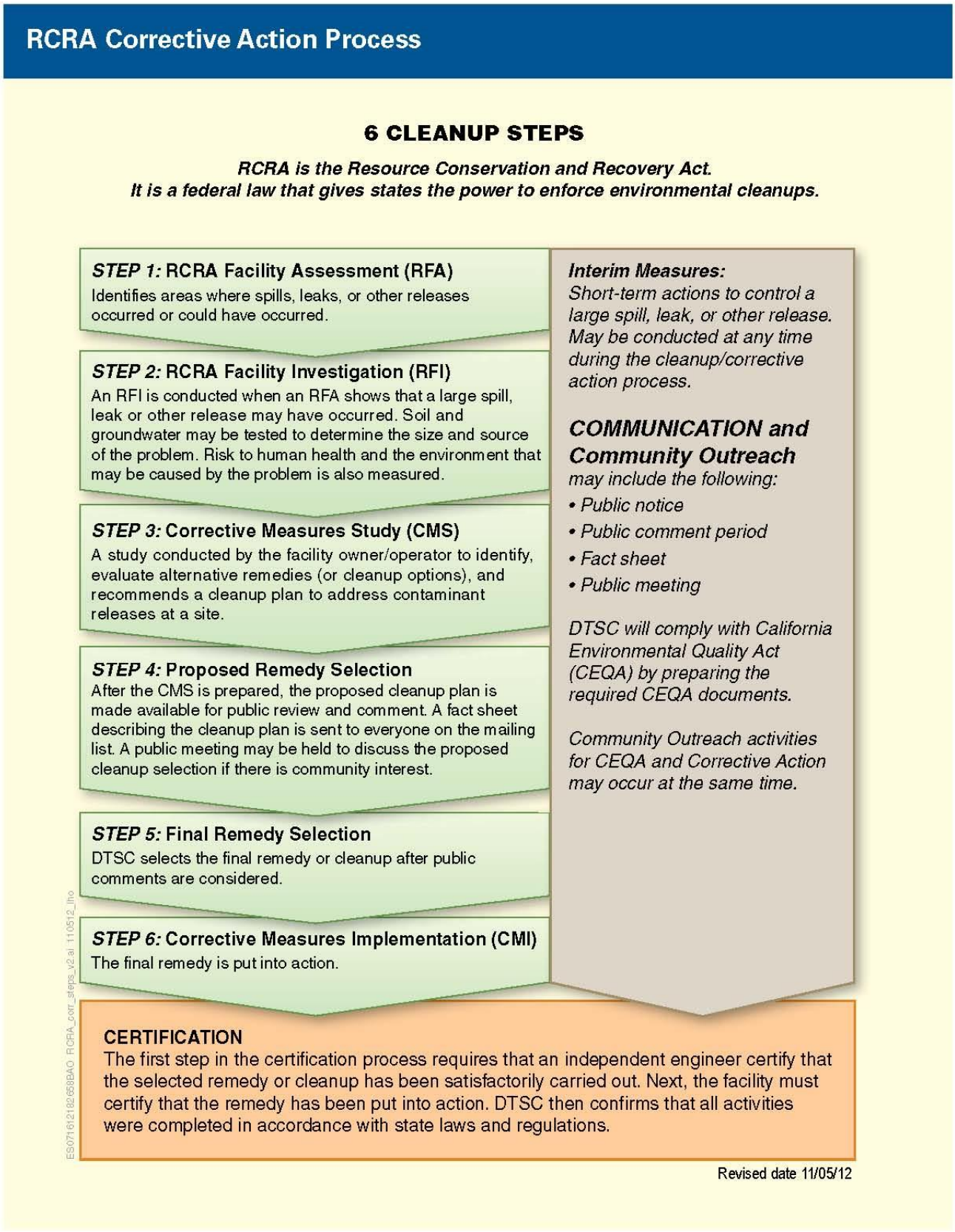


Figure 4


RCRA Corrective Action Process
6 CLEANUP STEPS
RCRA is the Resource Conservation and Recovery Act.
It is a federal law that gives states the power to enforce environmental cleanups.
STEP 1: RCRA Facility Assessment (RFA)
Identifies areas where spills, leaks, or other releases occurred or could have occurred.
STEP 2: RCRA Facility Investigation (RFI)
An RFI is conducted when an RFA shows that a large spill, leak or other release may have occurred. Soil and groundwater may be tested to determine the size and source of the problem. Risk to human health and the environment that may be caused by the problem is also measured.
STEP 3: Corrective Measures Study (CMS)
A study conducted by the facility owner/operator to identify, evaluate alternative remedies (or cleanup options), and recommends a cleanup plan to address contaminant releases at a site.
STEP 4: Proposed Remedy Selection
After the CMS is prepared, the proposed cleanup plan is made available for public review and comment. A fact sheet describing the cleanup plan is sent to everyone on the mailing list. A public meeting may be held to discuss the proposed cleanup selection if there is community interest.
STEP 5: Final Remedy Selection
DTSC selects the final remedy or cleanup after public comments are considered.
STEP 6: Corrective Measures Implementation (CMI)
The final remedy is put into action.
Interim Measures:
Short-term actions to control a large spill, leak, or other release. May be conducted at any time during the cleanup/corrective action process.
COMMUNICATION and Community Outreach
may include the following:
• Public notice
• Public comment period
• Fact sheet
• Public meeting
DTSC will comply with California Environmental Quality Act (CEQA) by preparing the required CEQA documents.
Community Outreach activities for CEQA and Corrective Action may occur at the same time.
CERTIFICATION
The first step in the certification process requires that an independent engineer certify that the selected remedy or cleanup has been satisfactorily carried out. Next, the facility must certify that the remedy has been put into action. DTSC then confirms that all activities were completed in accordance with state laws and regulations.
Revised date 11/05/12

Appendix B: Comparison of State (RCRA) & Federal (CERCLA) Outreach Activities

Appendix B

Comparison of State (RCRA) & Federal (CERCLA) Outreach Activities

The table below provides a comparison between the Resources Conservation and Recovery Act (RCRA) public outreach activities and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) community involvement activities. Additionally, the table provides a quick reference to compare the differences in the document titles between the two regulatory programs. The differences are shown in bolded text.

General Activity	CERCLA Action	CERCLA Community Involvement Activities (per CERCLA and NCP)	RCRA Action	RCRA Public Outreach Activities (per DTSC guidelines)
Evidence of Contamination Discovered or Reported	Establish a lead agency		Establish a lead agency	
Evaluate Community Interest	Community Involvement Plan (CIP)	1. Publish **CIP** 2. Conduct interviews of key community members and organizations 3. Establish Repository for Public Documents 4. Publish Fact Sheet* 5. Public Meeting*	Public Participation Plan (PPP)	1. Publish **PPP** 2. Conduct interviews of key community members and organizations 3. Establish Repository for Public Documents 4. Publish Fact Sheet* 5. Public Meeting*
Investigate the Nature and Extent of Contamination	Remedial Investigation (RI)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*	RCRA Facility Investigation (RFI)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*
Identify and Analyze Alternative Actions to Address Site Contamination	Feasibility Study (FS)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*	Corrective Measure Study (CMS)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*
Propose a Final Remedy	Proposed Plan (Pre-ROD Significant Changes)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*	Proposed Remedy Selection	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*
Select Final Remedy	Record of Decision (ROD)	1. **Publish Public Notice of ROD**	Statement of Basis	1. **Publish Notification of Final Decision**
Revisions to Final Remedy (if necessary)	Post-ROD Significant Changes Explanation of Significant Differences (ESD)	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*	Revise Statement of Basis	1. Publish Public Notice* 2. Publish Fact Sheet* 3. Public Comment Period* 4. Public Meeting*
Conduct Cleanup Operations	Remedial Design and Remedial Action (RD/RA)	1. Publish Fact Sheet on **Final Engineering Design**	Corrective Measures Implementation (CMI)	1. Publish Fact Sheet* 2. **Add Remedial Design Plans to Repository**
Evaluate Effectiveness of Final Remedy	5-Year Review	1. **Publish Public Notice**		
When Cleanup Goals are Achieved	Site Closeout Report		Certification of Remedy Completion	

*If necessary, as determined by community involvement specialist

Appendix C: 2012 Community Survey Results Summary

APPENDIX C

Community Survey Results Summary

1.0 Introduction

The following memorandum contains the results of 2,524 California Department of Toxic Substances Control (DTSC) community surveys that were provided to community members, stakeholders, tribal government representatives and residents in the Topock/Golden Shores on January 31, 2012.

The purpose of the survey was to evaluate interest in, and knowledge of, the environmental investigation and cleanup at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station Site. In addition to the mailing, the survey was sent to the designated information repository libraries for the project and was posted online at www.dtsc-topock.com/survey for respondents to fill out electronically.

The survey offered three ways of returning the survey to DTSC: electronically on the website, via a postage-paid return mail envelope, and by email to the DTSC Community Outreach Supervisor, Mona Bontty. The survey was initially due by March 1, 2012, with the deadline extended to March 16, 2012. There were 59 hard copies and 15 electronic surveys that were filled out and returned to DTSC, for a total of 74.

The survey asked 19 questions, with some including several parts. The questions were presented in various formats: some were in a yes/no or multiple choice format, while others asked the respondents to answer in their own words. For this memo, the majority of the responses are recorded verbatim from the survey responses; other answers were categorized into groups to help quantify responses. Additional information is provided before each question, for authentication of the results.

2.0 Results of Community Survey Responses

Question 1

Question 1 looked at community awareness of the cleanup project. Approximately eighty-eight percent of respondents answered affirmatively that they were aware of the project and cleanup efforts. Question 1b asked respondents how and when they became aware of the project, in a "fill in the blank" answer format. The table below presents their responses, separated into categories.

Question 1	Responses	Number of Responses	Percentage
Are you aware that an environmental investigation and cleanup effort is taking place at the PG&E Topock Compressor Station?	Yes	65	87.8%
	No	6	8.1%
	No Answer	3	4.1%
Question 1b	**Responses**	**Number of Responses (Total number represents 'yes' in Question 1)**	**Percentage**
If yes, how and when did you first become aware of the site?	No Answer	26	39.4%
	Others	8	12.1%
	Media	9	13.6%
	Within the last few years	13	19.7%
	Beginning of cleanup investigation	7	10.6%
	Community meeting	2	3.0%
	Information repositories	1	1.5%

Question 2

Question 2 was a multiple choice question asking how long respondents have lived or worked in the area. Approximately thirty-two percent of the respondents indicated they have lived in the area for 21 or more years.

Question 2	Responses	Number of Responses	Percentage
How long have you lived or worked in the area?	21 or more years	24	32.4%
	13-20 years	16	21.6%
	6-12 years	20	27.0%
	0-5 years	13	17.6%
	No Answer	1	1.4%

Question 3

Question 3 was a multiple choice question asking that respondents indicate their level of concern or interest in the Topock Site. Approximately fifty-eight percent of the respondents indicated they have high concern or interest in the Topock Site.

Question 3	Responses	Number of Responses	Percentage
What is your current level of concern or interest in the Topock Site, if any?	High	43	58.1%
	Moderate	19	25.7%
	Low	5	6.8%
	None	4	5.4%
	No Answer	3	4.1%

Question 4

Question 4 was a "fill in the blank" format question requesting that respondents comment on any concerns they might have about the Topock Site. The highest recorded concerns among the respondents were water quality for drinking, aquifer, and well contamination. The table below presents their responses, separated into categories. Fifty-two percent of the respondents commented on this question; some of the respondents had multiple comments that were separated out into the categories found below. Forty-eight percent of respondents did not comment on this question.

Question 4	Categories of Responses	Number of Responses
Do you have any specific questions about the site? Please indicate which ones are most important to you?	Water Quality	13
	Health Concerns	8
	Quality of Colorado River	8
	Property values	5
	Remedy of the site (outline)	4
	Unbiased or contradictory information	3
	No	3
	Toxicity information of chromium	2

Question 4	Categories of Responses	Number of Responses
	Comparison to other sites (Hinkley)	2
	Layman terms	2
	Well tests	2
	Water company accuracy of information	2
	Secondary site cleanup	1
	Water quality of the Topock Marsh	1
	Water quality of Lake Havasu	1
	Hire locals for work	1
	Filtration system needs	1

Below are respondents' written responses to Question 4: "Do you have any specific questions about the site? Please indicate which ones are most important to you?" These comments have been placed into several general categories.

Groundwater Impacts/Water Quality

- I am concerned about recent reports that there may be hexavalent chromium contamination of the aquifer that provides our water for drinking and other domestic uses here in Golden Shores. I have heard that some private wells and possibly the GS Water Co. wells have been independently tested and showed an alarming amount of Chromium 6. I want to know if this is true or not?
- When will the contamination eventually reach the river?
- What is the possibility of the Colorado River and Topock Marsh being contaminated?
- At the 12-12-11 Golden Shores meeting, the Project Manager, began by saying that there is no chromium 6 on the Golden shores side of the river. There were later statements from others indicating varying levels of Chromium 6 that had recently been found in wells, and tap water (from the G.S. Water wells). Which of these contradictory statements is accurate? Will you continue to test GS water Co. wells periodically? Where can I send sample from my water source for evaluation?
- What problems can occur to our drinking water in Topock? If our water is contaminated, what do you intend to do about it? Why did you not take steps to keep the hexavalent Chromium discharge in check?
- Don't understand how the chromium-6 toxic plume has not impacted the Colorado River, very close proximity and just stopped short of impacting the quality of the water? How is the phenomenon explained? It's somewhat difficult for the common lay-person, non-geologist type to comprehend.
- Are you positive [there is] no river contamination?
- Asked for a risk assessment on municipal water supply in Golden Shores for Chromium 6: Nov 2011 test as follows in 3 wells: <5.0 ppb, 9.0 ppb, <5.0ppb. Keeping in mind the following how many people in a million might get cancer from chromium 6--inhalation and oral assessment requested.
- Will it affect our water in Golden Shores-Topock Area?
- What are you doing about the contamination in my drinking water?
- How is it possible for the contaminated groundwater not to get in the river water?

- I'm concerned about the quality of our water. I attended a meeting where well test results were claimed to be suspect for health concerns. The meeting in Topock in December appeared to contradict those prior results without addressing them directly. It again becomes an issue of who is telling the truth?
- The chromium six in the water [is a concern].
- Why were they allowed to dump in the Colorado River? How many years have they dumped there? Has anyone been paid off to allow this situation to exist?
- The water is poison just like the town of Hinkley. What are you doing about it?

Health Concerns

- If this is the cause of different medical issues.
- Toxic health problems regarding chromium.
- Most important, are the health effects from ground water aquifer plume infected in the Golden Shores Water-like evaporative coolers, shower steam, drinking, skin, etc. It is my understanding there are no safe levels of hexavalent chromium and is not naturally occurring. Future property values may be affected negatively.
- Health is my concern. We are having a kidney transplant March 13, 2012 from previous cancer-is this a reason of this problem or not? The health concerns go back in time with us and future concerns worry me also.
- Why if everything is being done, why are you trying to convince us there is nothing to be afraid of regarding our drinking water.
- I have cancer caused by Chromium 6. What are you doing to get the Chromium 6 out of my drinking water?
- Health risks now and down the road[is a concern].

Adequate Communication

- I am concerned that we were told that there are no contaminated wells in Topock, yet there was a 2005 study done that shows numerous wells being contaminated. I'm concerned that we won't be given true information.
- Explain problems in terms ordinary people can understand.
- Why is our local water company telling customers they have contamination in their wells? Erin Brockovich is scaring the public, they are ill informed and trying to force PG&E to redo their wells.
- I am not qualified to determine what is or is not satisfactory testing of the water-I must rely on persons involved in water quality to make decisions.
- [I] have not been informed on the danger that is happening in the Topock area.
- Keep me informed about all aspects.
- Why don't you people quit sending us all this "technical" language that the majority of us do not understand and tell us if our wells are contaminated or what is going on with them. I went to the last monthly meeting at the community center-what a joke that was. If our wells are contaminated start furnishing this town with bottled water.

Cleanup Process

- I want to know why the public hasn't been advised about a secondary cleanup. It seems Chromium 6 may be the least of our concerns if the second site has the contaminants I think it does.
- Why are you stealing good water from Topock's AZ warm springs aquifer to pump into your bad water when you could go a few miles up or down and pump your own water? Because the California Department of Environmental office and you have some selfish ideas. I don't know how AZ allows it. I would not! Until you

change that I will never support your efforts. How about bringing in an unbiased agency like US DEQ or even better the U.S. Department of Justice? Then I would believe your reports!

- They didn't know what they were doing when they put the chromium 6 in the water now where are they putting the bacteria? Now it's in my water and they better damn get it out and what are they doing with this six thousand pounds of dirt where are they putting the dirt in a hole somewhere?

Property Values

- We have a Commercial building in Golden Shores and hope it does not de-value our property value.
- If there is no problem with Chromium 6 levels, will you publicize that periodically so that our property values may recover?
- We own a home in Golden Shores, and we are concerned with contamination of the water supply and/or [the] negative impact on property values.

Miscellaneous

- Will it become another Hinkley? Is it as bad as Hinkley, or could it become worse?
- Will locals be hired for help in construction? Will any other jobs become available for local residents?
- How much money are we going to squeeze out of PG&E? 2. Will I have a chance to meet Erin Brockovich? 3. Can Hexavalent chromium close Lake Havasu?
- The biggest issue I see affecting the community is a sense of panic caused by ignorance. Several individuals in the community appear to be actively spreading fear in an attempt to further their own personal agendas.
- Am I being put at risk by living here and using the water. What is it doing to our food, people and all the animals that depend on this water just to stay alive, eat, drink, be the young, old, all of us?
- For DTSC to state that Chromium 6 [is not] in Golden Shores is reckless and presumptuous. Our problem may or may not be the result of activities at PG&E, but it is a problem and not of natural origin. DTSC forgot to notify the public of a second onsite problem. Although [the public found out] through another agency, [which] discredits [DTSC] and compromises [DTSC's] integrity [and] findings.

Question 5

Question 5 was a multiple-part question asking if the respondents were aware of community involvement activities at the site. Approximately sixty-eight percent were aware of the activities, but most had not been involved in the site (81.8%), nor were they aware of any active community leaders (75.7%). Of the respondents that knew of community leaders, both the Golden Shores Water Co. and Erin Brockovich group were the most recognized. Question 5bc asked if the respondents felt like their concerns are being addressed (multiple choice question). Approximately forty-three percent did not answer this question, although twenty-three percent stated a belief that their concerns are "adequately raised" and approximately twenty-two percent believe there concerns are "not raised at all".

Question 5	Responses	Number of Responses	Percentage
Are you aware of DTSC's ongoing community involvement activities regarding the environmental cleanup at the Site?	Yes	50	67.6%
	No	21	28.4%
	No Answer	3	4.1%

Question 5a	Responses	Number of Responses	Percentage
Have you been actively involved with the Site in any way?	Yes	6	8.1%
	No	60	81.1%
	No Answer	8	10.8%
Question 5b	**Responses**	**Number of Responses**	**Percentage**
Are you aware of any individuals or groups who have emerged as leaders among the interested community regarding this Site?	Yes	15	20.3%
	No	56	75.7%
	No Answer	3	4.1%
Question 5ba	**Responses**	**Number of Responses (Total number represents 'yes' in Question 5b)**	**Percentage**
If yes, who?	Golden Shores Water Company	3	20%
	Erin Brockovich group	3	20%
	Chemehuevi and Fort Mohave Indian Tribe	2	13.3%
	Civic Center leaders	2	13.3%
	Cee Edrick Hunt	2	13.3%
	Golden Shores Community group	1	6.6%
	Angela Buckler	1	6.6%
	KTOX 1340	1	6.6%
	No Comment	0	0%
Question 5bb	**Responses**	**Number of Responses**	**Percentage**
Do you feel they adequately represent your perspective?	Yes	13	17.6%
	No	15	20.3%
	No Answer	46	62.2%
Question 5bc	**Responses**	**Number of Responses**	**Percentage**
Do you feel that your concerns are:	Adequately raised	17	23.0%
	Raised but not addressed	9	12.2%
	Not raised at all	16	21.6%
	No Answer	32	43.2%

Question 6

Question 6 was a two-part question, where the respondents were asked if they had been informed about the site. Approximately forty-seven percent responded yes, while forty-three percent responded no. The second part was a "fill in the blank" question, where the respondent could comment on how they could be better informed on this site.

The table below represents categories of their responses, not the actual written responses. Some of the respondents had multiple comments that were separated into the categories found below, while other respondents had no comment on this question. Of the 74 respondents, fifty-percent (37 respondents)

- Somewhat don't think the whole truth has come out.
- How can we believe DTSC when they are paid off by PG&E? It's political and involves money. PG&E pays CA legislation and individuals for campaign finance and support, and throws off in turn support PG&E. That's why nothing ever gets done between 2007 and 2011. Can we believe that honesty prevails now? Why? I'm the same as Congressional Lobbying-that's one reason for the Gridlocking of Progress-Pay as you GO!
- What are you doing about the contamination in my drinking water filter.
- In frequent reports you should contact the radio 760-326-4500 or web site.
- Our local newspaper has written only 1 or 2 articles on this.
- Long overdue, action should be taken-not just studies. Filters should be put on all our wells.
- Not enough information.
- Just tell the truth don't cut cost because it cost too much. There are too many people and animals that both eat the food and take in the water through their skin.
- The meeting in December put on by various State and Federal agencies provided technical information in a matter of fact way. It did not address the fact that there appears to be claimed conflicting well test results from other sources.
- The information included with the survey ("FACT SHEET-January 2012") did not provide specifics regarding levels of contaminants in the wells near the site.
- Your fact sheet gets sent out June, July, Aug, Sept. the months that no one can go outside or there snow birds. I know that Cr6 is on the AZ side.
- They don't seem to want to tell anyone about what is really going on.
- Not in the news.
- Conflicting information.
- From the very beginning they should have told everybody.
- I brought up some information on it but am puzzled by the lack of detail on whether it is in the ground water which is used by the Golden Shores community.

Question 7

Question 7 asked if the respondents had received fact sheets from the DTSC about the Topock Site. Seventy-three percent responded that they had received fact sheets; the highest percentage (39.7%) said they had received 1 to 2 factsheets. The survey also had a rating system; the table presents the averages of how they rated the fact sheet. With "1" being strongly disagree with the question, and "5" strongly agree, most of the averages fell in the middle (3.6 to 3.7). Most of the respondents that answered yes to receiving the fact sheet did rate their experience.

Question 7	Responses	Number of Responses	Percentage
Have you received fact sheets from DTSC about the Site?	Yes	54	73.0%
	No	16	21.6%
	No Answer	4	5.4%
Question 7a	**Responses**	**Number of Responses**	**Percentage**
If yes, how many?	1-2	29	39.7%
	3-4	14	19.2%

Question 7	Responses	Number of Responses	Percentage
	5 or more	7	9.6%
	No Answer	21	31.5%
If yes, please rate your experience: 1=Strongly disagree 5=Strongly Agree			
		Average	**Number of Responses**
Question 7b_1	The fact sheet was easy to understand	3.6	51
Question 7b_2	The fact sheet was well organized	3.7	50
Question 7b_3	The fact sheet provided important information	3.6	51
Question 7b_4	Technical terms and procedure were clearly explained in the fact sheet	3.6	50
Question 7b_5	Community outreach activities and opportunities were clearly provided in the fact sheet	3.6	50

Question 8

Question 8 referred to the type of internet access the respondents have. Approximately sixty-six percent responded that they had internet access, and most of these respondents have DSL.

Question 8	Responses	Number of Responses	Percentage
Do you have internet access?	Yes	49	66.2%
	No	22	29.7%
	No Answer	3	4.1%
Question 8a	**Responses**	**Number of Responses**	**Percentage**
If yes, what type?	DSL	35	71.4%
	Cable	2	4.1%
	Smartphone	4	8.2%
	Dial-up	3	6.1%
	No Answer	5	10.2%

Question 9

Question 9 asked if the respondents had been to the PG&E Topock website. Approximately seventy-two percent responded that they had not seen the website. The survey also had a rating system for the website, included as a multi-part Question 9b. Of the 17 people that responded that they have seen the website, between 13 and 15 filled out various questions on the rate chart. One respondent provided a rating of "strongly disagree" and five provided a rating of "strongly agree," leading to an average for all parts of between 2.9 and 4.1.

Question 9	Responses	Number of Responses	Percentage
Have you been to the PG&E Topock Compressor Station Project website?	Yes	17	23.0%
	No	53	71.6%
	No Answer	4	5.4%

If yes, please rate your experience: 1=Strongly disagree 5=Strongly Agree			
		Average	Number of Responses
Question 9b_1	The website is easy to navigate and it is easy to find information on the website	2.9	16
Question 9b_2	The website provides important information and project updates	3.3	15
Question 9b_3	The website is easy to access	3.5	15
Question 9b_4	It is easy to download project documents on the website	3.1	15
Question 9b_5	I would visit the website again to get Site information	4.1	14

Question 10

Question 10 summarized the information repository information as a several part question. Approximately seventy-four percent of respondents indicated that they had not visited the repository at their local site. Of the 16 respondents that had visited the repository, the Golden Shores and Topock libraries were the most used. Most of the respondents that had visited the repository had said it was helpful (62.5%); for those who said it was not helpful, documentation of some of their responses are listed in Question 10c. This table presents their responses, separated into categories.

Question 10	Responses	Number of Responses	Percentage
Have you visited or do you know about the local information repositories where project documents are available for your review on CDs and in hardcopy?	Yes	16	21.6%
	No	55	74.3%
	No Answer	3	4.1%
Question 10a	**Responses**	**Number of Responses**	**Percentage**
If yes, which information repository location?	Topock Library	4	25%
	Golden Shores Library	5	31.2%
	Chemehuevi Environmental Department	2	12.5%
	Lake Havasu Library	1	6.2%
	Needles Branch Library	1	6.2%
	No Answer	3	18.7%

Appendix D: 2012 & 2018 Community Interview Questions

2012 & 2018 Community Interview Questions

1. Prior to receiving the community update, were you aware of the cleanup efforts taking place related to the PG&E Topock Compressor Station?

2. If so, where have you received the information related to the PG&E Topock Compressor Station?

3. Was the information received understandable?

4. What is your current level of concern about this project?
   _____ No Concern

   _____ Low Concern

   _____ Moderate Concern

   _____ High Concern

5. Are there any aspects of the Topock Project or Site cleanup that concern you? If so, please explain.

6. Do you understand the role that DTSC and other regulatory agencies play in the cleanup

7. What officials, groups organizations or individuals should we contact regarding this project?

8. Do you think a public meeting in the future would be:

   _____ Necessary _____ Beneficial _____ Helpful _____ Not Helpful

9. What do you feel would be the best location to hold a public meeting?

10. On a scale of 1 to 10 (1 being poor and 10 being excellent) how would you rate the outreach associated with the PG&E Topock Compressor Station Cleanup.

11. What would be the best way for DTSC to provide information regarding the PG&E Topock Compressor Station project?

_____ Fact Sheet _____ Email _____ Work Notice _____ Public Notice

_____ Postcard _____ Newspaper _____ DTSC Topock Website _____ Radio Ad

_____ Pubic Meeting _____ Other

Appendix E: Information Repositories & Suggested Meeting Locations

Information Repositories

Department of Toxic Substance Control
5796 Corporate Avenue
Cypress, California 90630
Monday-Friday 8:00 am - 5:00 pm
Call for an appointment

Needles Branch Library
1111 Bailey Avenue
Needles, California 92363
Monday-Wednesday: 11:00am - 7:00pm
Thursday: 10:00am - 6:00pm
Friday: Closed
Saturday: 9:00am - 5:00pm

Golden Shores/Topock Station Library
13136 Golden Shores Parkway
Topock, Arizona 86436
Monday: Closed
Tuesday, Thursday, Saturday: 9:00am - 1:00pm
Wednesday 2:00pm - 5:00pm

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, California 92363
Monday - Friday: 8:00am - 4:00pm

Lake Havasu City Library
1770 McCulloch Boulevard
Lake Havasu City, Arizona 86403
Monday & Wednesday: 9:00am-6:00pm
Tuesday & Thursday: 9:00am-8:00pm
Friday & Saturday: 9:00am-5:00pm

Colorado River Indian Tribes Library
2nd Avenue and Mohave Road
Parker, Arizona 85344
Monday-Friday: 8:00am-noon; 1:00pm-5:00pm

Appendix F: Community Updates (Fact Sheets)

Department of Toxic Substances Control

The mission of DTSC is to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation and pollution prevention.

State of California

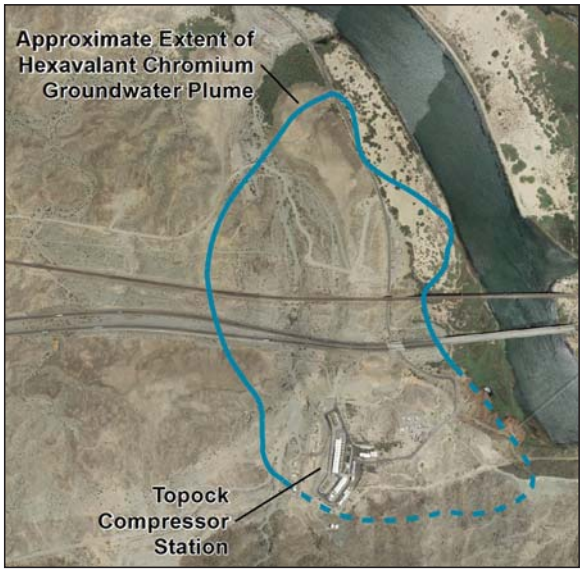
California Environmental Protection Agency

FACT SHEET – January 2012

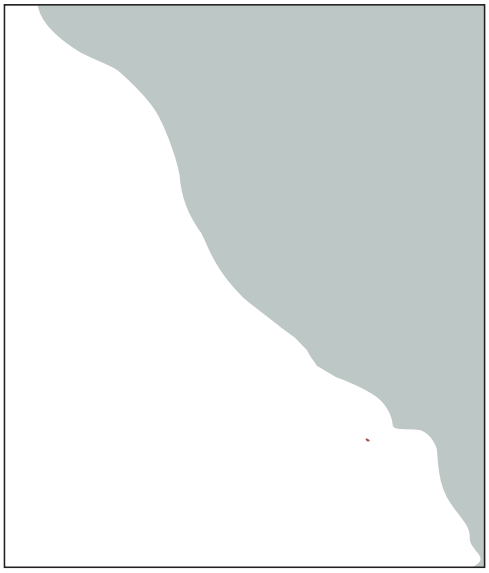
PG&E Topock Environmental Investigation Update

Introduction

The California **Department of Toxic Substances Control (DTSC)** is the lead state agency overseeing the soil and **groundwater** investigation and cleanup (also known as **remediation**) at the Pacific Gas and Electric Company (PG&E) Topock Compressor Station (Station) and adjacent land, collectively known as the Topock Site (Site) in San Bernardino County, California.



Map of Topock project site and approximate affected groundwater plume boundary



Topock site location map showing the compressor station and surrounding communities

Site Background and History

The Station is located in eastern San Bernardino County, California. It is located approximately 12 miles southeast of Needles, California, south of Interstate 40.

In 1951, the Station began compressing natural gas for transportation through pipelines to PG&E's service area in central and northern California. As natural gas is compressed, its temperature increases and the compressed gas must be cooled. From 1951 to 1985, PG&E added chromium to the water used in the cooling towers and other equipment to prevent corrosion of the cooling tower equipment. During parts of those years, cooling tower wastewater containing **hexavalent chromium** was discharged into a natural wash adjacent to the Station. Over time, the hexavalent chromium seeped into the groundwater and created a plume that extends from below the Station towards the Colorado River. Based on results from periodic testing of the river water, the hexavalent chromium plume is not impacting the quality of the river water.

In 1996, PG&E signed an agreement with DTSC to conduct investigations to identify and clean up past environmental contamination. In 2005, PG&E signed a similar agreement with the United States **Department of the Interior (DOI)** as the federal

Words in **bold** *appear in the glossary on Page 4 of the fact sheet.*

lead agency to protect lands owned by the federal government. Environmental investigations since this time have shown groundwater at the site contains elevated levels of chemicals, including **total chromium**, hexavalent chromium, **molybdenum**, **selenium**, and **nitrates**.

Groundwater Remedy Adopted

DTSC selected a final groundwater remedy approach for the site and certified the Topock **Environmental Impact Report (EIR)** on January 31, 2011. The selected remedy involves **in-situ treatment** with freshwater flushing. The concept of the remedy is to install injection and extraction wells along a road approximately 600 feet west of the Colorado River. This water stimulates the growth of harmless, but helpful, naturally occurring bacteria which then create geochemical conditions that remove hexavalent chromium from groundwater by converting it to non-soluble **trivalent chromium**. Extraction wells near the river act as a barrier to prevent contamination from reaching the river. Additional injection wells located around the plume inject fresh water and groundwater, removed from locations near the river, to push the plume toward the treatment zone. DTSC identified mitigation measures in the EIR to minimize the potential environmental impacts associated with the remedy during its construction, operation and maintenance. PG&E will implement these measures as required by the EIR as part of the remedy.

Groundwater Remedy Implementation Timeline

Groundwater Remedy Design

Efforts are currently underway on the design of the approved groundwater remedy. PG&E anticipates the design to be completed by November 2012. After DTSC and DOI approve the design, construction and start–up of the remedy will occur. Operation and maintenance of the groundwater remedy will continue until the cleanup goals are achieved. PG&E estimates cleanup will be complete in approximately 30 years.

Focused Groundwater Evaluation

Groundwater investigation at the Site revealed contamination under the Station and in an adjacent area called East Ravine. Additional data is being collected in these areas to assist in the design of the remedy. Throughout 2011, PG&E installed 11 new wells in these areas and collected monthly groundwater samples during the ongoing groundwater investigation. This additional information will be used to refine the **groundwater conceptual model**, or the understanding of groundwater conditions, in the vicinity of the East Ravine/ Station and will be incorporated in the Site-wide **Groundwater Monitoring Program**.

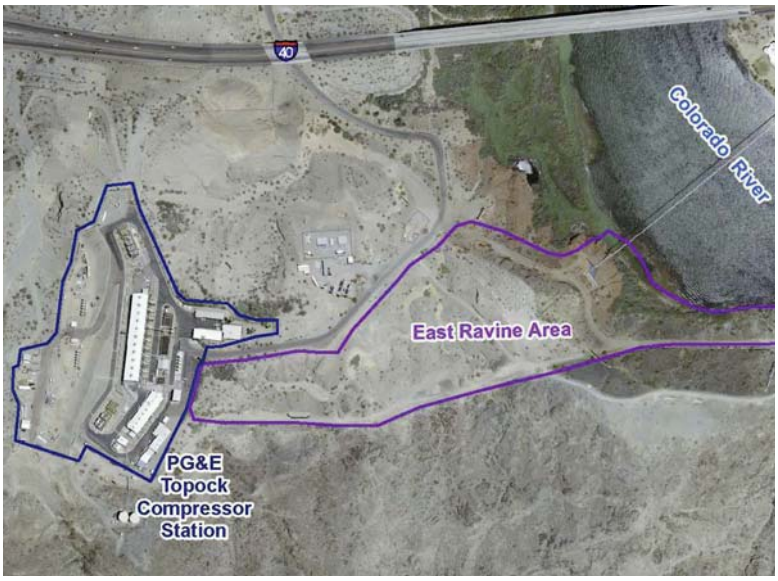
Well drilling in the East Ravine Area

Soil Investigation is Being Planned

PG&E is working with DTSC and DOI in planning and preparing a soil investigations **work plan**. The soil work plan will guide the field work in gathering data to assess any potential adverse impacts to the land that may have resulted from PG&E's historical operations. The work plan will investigate:

- Nine areas outside the Station which may have had historical activities
- Twenty five areas inside the Station
- Perimeter adjacent to the Station
- Onsite storm drains and their offsite outfalls

It is anticipated that the soil work plan will be approved by Summer 2012. After the completion



Site location map showing the PG&E Topock Compressor Station and East Ravine Area

of field work, PG&E will use the collected data to evaluate and recommend a cleanup action, if necessary. All the soil investigation data will be presented in the soil work plan in Summer 2012.

Community Outreach

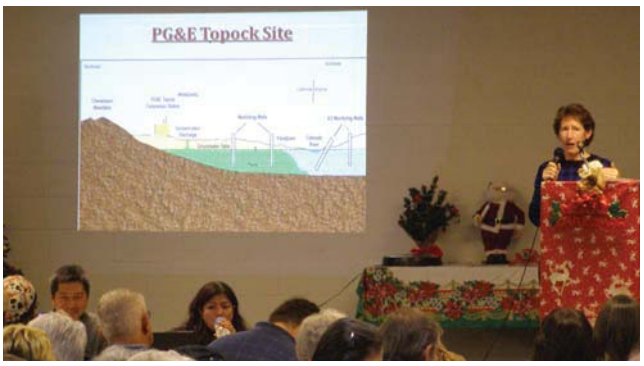
Community outreach continues to remain an integral and interactive part of the project. DTSC actively engages with stakeholders to obtain input and share information with tribes, communities, individuals and groups. In December 2011, DTSC convened a meeting to provide a project update for the Golden Shores Community and listen to community concerns. DTSC also continues to provide periodic updates and convene meetings with stakeholders including agencies, tribal leadership and representatives. As part of our outreach, we are working on updates to our community outreach strategy to be outlined in a Community Outreach Plan.

This Community Outreach Plan will be a revision of the June 9, 1998 Public Participation Plan, which was updated in February 2007 and appended in July 2009. The current plan can be found on the project website at www.dtsc-topock.com or at any of the information repositories listed on page 5 of this fact sheet. This plan uses a variety of communication tools to share information and to gain input from the community including surveys, fact sheets, meetings, written and electronic documents. We anticipate completing the Community Outreach Plan by September 2012.

The purpose of the Community Outreach Plan is to keep the community informed in a timely fashion, to formally document community perspectives regarding the environmental investigation and remediation at the Station, and to identify specific community outreach activities to be conducted to ensure community involvement in the agency decision-making process.

Part of the Community Outreach process is conducting a community survey, which is included with this fact sheet. There are two options for completing the survey: you can log on to www.dtsc-topock.com/survey to complete the survey online or you can fill out and return the enclosed hard copy by mail.

By completing this survey, you will share with us your knowledge of the investigation and remediation activities at the Station, your perspectives, your level of participation, and how best to keep you updated about Site activities. Your response within 30 days will help us to improve our process and interactions with you and the community. If you have any questions regarding the completion of this survey please contact Mona Bontty. Please see the “DTSC Welcomes Your Feedback” section of this fact sheet on page 5.



Karen Baker, Chief of DTSC’s Office of Geology, presents a project update at the Golden Shores Community Meeting held December 12, 2011.

Glossary of Terms

Department of the Interior (DOI): The principal conservation agency of the United States, responsible for stewardship of land, water, recreation, Native American lands and needs, and energy needs. The department is composed of member bureaus such as the Bureaus of Indian Affairs, Land Management, and Reclamation, among others.

Department of Toxic Substances Control (DTSC): A department within the California Environmental Protection Agency in charge of the regulation of hazardous waste from generation to final disposal, DTSC oversees the investigation and cleanup of hazardous waste sites.

Environmental Impact Report (EIR): A detailed review of a proposed project, its potential adverse impacts on the environment, measures that may avoid or reduce those impacts, and alternatives to the proposed project.

Final Design: The final design for the groundwater remedy.

Groundwater: Water beneath the Earth's surface that flows through soil and rock openings (aquifers).

Groundwater Conceptual Model: A description of how groundwater flows throughout the site and surrounding areas that has been developed using a combination of regional and site-specific data, as well as expert judgment based on site conditions.

Groundwater Monitoring Program: A network of groundwater wells installed to periodically test for different chemicals to assess the long-term site conditions.

Hexavalent Chromium: A form of chromium. Chromium is a metal naturally found in rocks, soil and the tissue of plants and animals. Hexavalent chromium is used in industrial products and processes and is a known carcinogen when inhaled (i.e., through breathing).

In-situ Treatment: Treatment of the contaminated groundwater in place (below the ground surface).

Molybdenum: A metallic element widely distributed in the Earth's crust that is used in industrial products and processes.

Nitrate: Nitrates and nitrites are nitrogen-oxygen chemical compounds which combine with various organic and inorganic compounds.

Plume: A body of contaminated groundwater. The movement of a groundwater plume can be influenced by such factors as local groundwater flow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

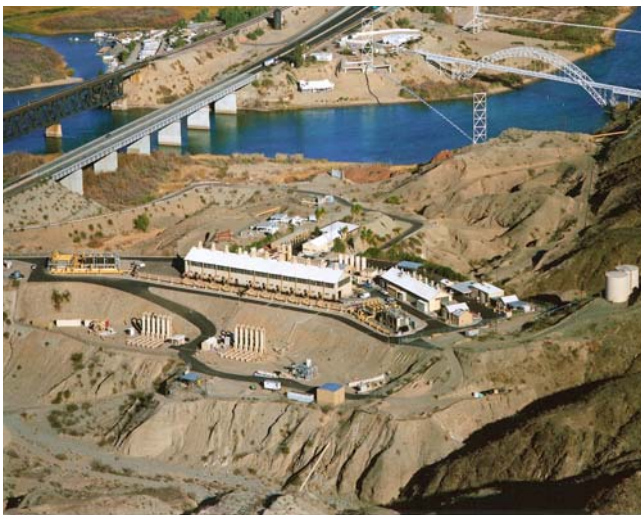
Remediation: Actions taken to remove or contain a toxic spill or a release of hazardous substances at a site.

Selenium: A non-metallic element abundant in the Earth's crust that is used in industrial products and processes.

Total Chromium: The additive of concentrations from all forms of chromium, mainly comprising hexavalent and trivalent forms. The California drinking water standard for total chromium is 50 micrograms per liter (or parts per billion), while the Federal standard is 100 micrograms per liter.

Trivalent Chromium: A form of chromium, a metal naturally found in rocks, soil and the tissue of plants and animals. Trivalent chromium is considered an essential nutrient and is relatively harmless. It does not dissolve in groundwater and tends to bind to soil; thus it does not travel readily in the environment.

Work Plan: A document that presents key elements of the approach for a proposed action. These may include health and safety, waste management, data collection, construction activities and methods, the schedule, approvals, a reporting plan and reporting schedule.



Topock Compressor Station and Surrounding Area

Where to find Project Information

Project reports, fact sheets, and other project documents can be found at the Information Repositories listed below:

On the Internet
www.dtsc-topock.com
www.dtsc.ca.gov

Needles Branch Library
1111 Bailey Avenue
Needles, CA 92363
Contact: Kristin Mouton, 760.326.9255
11am – 7pm, Monday through Wednesday
10am – 6pm, Thursday
Closed, Friday
9am – 5pm, Saturday

Golden Shores/Topock Station Library
13136 Golden Shores Parkway
Topock, AZ 86436
Contact: Kim Stoddard, 928.768.2235
9am – 1pm, Tuesday, Thursday, Saturday
2pm – 5pm, Wednesday

Chemehuevi Indian Reservation Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, CA 92363
Contact: Tom Pradetto, 760.858.1140
8am – 4pm, Monday – Friday

Lake Havasu City Library
1770 McCulloch Boulevard
Lake Havasu City, AZ 86403
Contact: Cindy Amador, 928.453.0718
9am – 6pm, Monday and Wednesday
9am – 8pm, Tuesday and Thursday
9am – 5pm, Friday and Saturday

Colorado River Indian Tribes Library
2nd Avenue and Mohave Road
Parker, AZ 85344
Contact: Elvira Bailey-Holgate, 928.669.1332
8am – noon, 1pm – 5pm, Monday – Friday

Parker Public Library
1001 Navajo Avenue
Parker, AZ 85344
Contact: Jeannie Smith, 928.669.2622
9am – 7pm, Monday – Thursday

California Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630
Contact: Julie Johnson, 714.484.5337
9 am–noon, 1 pm–4 pm, Monday–Friday
Please call for an appointment.

Alternate Format: *All documents made available to the public by DTSC can be made available in an alternative format (Braille, large format print, etc.) or in another language as appropriate, in accordance with state and federal law. Please contact Mona Bontty for assistance.*

DTSC Welcomes Your Feedback

If you have questions, comments, or would like to be added to the mailing list for the Topock Site, please contact the DTSC representatives listed below.

Aaron Yue
DTSC Project Manager
5796 Corporate Avenue
Cypress, CA 90630
714.484.5439
AYue@dtsc.ca.gov

Mona Bontty
DTSC Community Outreach Supervisor
5796 Corporate Avenue
Cypress, CA 90630
714.816.1978 or Toll Free: 866.495.5651 (press 5 and 1)
MBontty@dtsc.ca.gov

For Media Inquiries Contact
Jeanne Garcia, DTSC Public Information Officer
9211 Oakdale Avenue
Chatsworth, CA 91311
818.717.6573
JGarcia1@dtsc.ca.gov

Notice to Hearing-Impaired Individuals
You can obtain additional information about the Topock Compressor Station Site by using the California State Relay Service at 888.877.5378 (TDD). Ask them to contact Mona Bontty at 714.816.1978.

In This Fact Sheet

Mona Bontty
DTSC Community Outreach Supervisor
5796 Corporate Avenue,
Cypress, CA 90630-4732

COMMUNITY Notice

The mission of DTSC is to protect California's people and environment from harmful effects of toxic substances by restoring contaminated resources, enforcing hazardous waste laws, reducing hazardous waste generation, and encouraging the manufacture of chemically safer products.

Draft Soil Investigation Environmental Impact Report (EIR) for Pacific Gas & Electric Company (PG&E), Topock Compressor Station Available for Public Review and Public Meeting Announcement

The California *Department of Toxic Substances Control (DTSC)* is the lead state agency overseeing a soil and *groundwater* investigation and cleanup (also known as *remediation*) for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station (Station) and adjacent land, collectively known as the Topock Site (Site) in San Bernardino County, California. Pursuant to the *California Environmental Quality Act (CEQA)*, *DTSC* determined an *Environmental Impact Report (EIR)* should be prepared to evaluate potential environmental impacts of implementing soil investigation activities to determine the extent of contamination and gather data to determine if soil cleanup is needed. If soil cleanup is necessary, DTSC will conduct a separate *CEQA* evaluation for the future remedy selection in the future.

This Fact Sheet provides information on:

- Site Background and History
- Soil Investigation Overview
- *CEQA*
- What is Being Proposed - Draft *EIR*
- How You Can Participate
- Where to Find Project Information
- Next Steps and Groundwater Remedy Update
- Glossary of Terms

Soil sampling event at the Site in 2008. Soil sample collection in a ravine using a track mounted drilling rig.

Public Comment Period

July 7th – August 21st, 2014
All public comments on the draft *EIR* must be post-marked or e-mailed by **August 21st, 2014**, and sent to:

Aaron Yue, Project Manager
Dept. of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Aaron.Yue@dtsc.ca.gov

Two Upcoming Public Meetings & How You Can Participate

Please join us to learn more about the CEQA Project and to submit public comments. An informal Open House will precede each Public Hearing:

July 22, 2014 – Needles, CA
Open House: 5:30 – 6:30 pm
Public Hearing: 6:30 – 8:00 pm

July 23, 2014 – Golden Shores, AZ
Open House: 5:30 – 6:30 pm Public Hearing: 6:30 – 8:00 pm

Public meeting location addresses provided on page 3 under Draft *EIR* Content.

Italicized words appear in the glossary on pages 4 and 5.

Site Background and History
The PG&E Topock Compressor Station compresses natural gas so it can be transported through pipelines to PG&E's customers in northern and central California. The Station is 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.

In 1951, the Station began compressing natural gas for transportation through pipelines to PG&E's service area in central and northern California. As natural gas is compressed at the Station, its temperature increases and must be cooled. From 1951 to 1985, PG&E added *chromium* to the water used in the cooling towers and other equipment to prevent equipment corrosion. From 1951 to 1964, cooling tower wastewater containing *hexavalent chromium* was discharged into a natural wash adjacent to the Station. Over time, the *hexavalent chromium* seeped into the *groundwater* and created a *groundwater plume* that extends from below the Station towards the Colorado River. Based on results from periodic testing of the river water, the *hexavalent chromium plume* is not impacting the quality of the river water. In addition, historical operations at the Station have also resulted in contamination in soils located both outside and inside the Station fence line. The known soil contamination is based on past soil sampling activities and additional sampling is now currently proposed (see Soil Investigation Overview below).

In 1996, PG&E entered into a voluntary agreement with *DTSC* to investigate the nature and extent of contamination at the Site and to clean up any such contamination. In 2005 and 2013, PG&E signed similar agreements with the United States *Department of the Interior (DOI)* as the federal lead agency to protect lands owned by the federal government.

Soil Investigation Overview
On January 14, 2013, a revised Soil *Resource Conservation Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI) Work Plan* was submitted to *DTSC* that details soil investigation activities that are necessary for the Site (see Soil Investigation Areas Figure, page 6). Perimeter areas outside of the Station fence line and the storm drains leading from the Station to areas outside the fence line are also included in the investigation.

The purpose of the *Work Plan* is to describe the investigation work that is proposed to define potential contaminants in soils at the Site by collecting soil samples for chemical analysis. In addition to the sampling activities in the *Work Plan*, DTSC is also considering additional activities that would provide data to support future decisions on the cleanup of contaminated soil at the Site including geotechnical data collection, plant or biota sampling, and bench/pilot testing of clean up technologies. These activities collectively are defined as the Project.

CEQA
CEQA is a state law that requires a project's lead agency to consider and disclose potential environmental effects of its proposed actions before approving the actions. Pursuant to *CEQA*, *DTSC* is currently evaluating the potential environmental impacts associated with the Project. *DTSC* will consider the approval of the Project after public comments are received and considered. PG&E will implement the field investigation after the certification of the *EIR* and approval of the proposed soil investigation activities. Results of the investigation will be made available to the public, in the Information Repositories (page 3) and on the Project website (www.dtsc-topock.com).

Draft EIR Content
In accordance with *CEQA*, a draft *EIR* has been prepared to evaluate the potential environmental impacts of implementing the proposed Soil Investigation and other work necessary for a separate future soil remedy decision. If a soil remedy is needed, a separate *CEQA* evaluation will be conducted for the remedy decision. The draft *EIR* is organized to include a summary, introduction, project description, and an analysis of environmental resource areas that could potentially be affected by the Project. These include, but are not limited to:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise

The draft *EIR* also addresses other topics that are required by *CEQA* such as *growth inducement*, *cumulative impacts*, alternatives to the proposed Project and areas where no effect by implementation of the proposed action are found.

Italicized words appear in the glossary on pages 4 and 5.

How You Can Participate – Public Comment Period and Public Meetings

We want to know what you think of the draft *EIR*. A 45-day public comment period is being held to accept public comments on the draft *EIR*. **The 45-day public comment period begins July 7th, and ends August 21st, 2014.** *DTSC* **will evaluate and respond to all comments received during the public comment period prior to making a decision on the Project. Public comments must be postmarked or e-mailed no later than August 21st, 2014, and sent to**:

Aaron Yue, Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Aaron.Yue@dtsc.ca.gov

DTSC is also hosting two public meetings about the draft *EIR* and will also accept public comments at those meetings. The draft *EIR* and the Soil Investigation *Work Plan* will be available for viewing.

Please join us to learn more:

Needles Senior Citizens Center
1699 Bailey Avenue
Needles, CA 92363-3119
July 22nd, 2014
Open House: 5:30 – 6:30 pm
Public Hearing: 6:30 – 8:00 pm

Golden Shores Community Center
13136 S. Golden Shores Parkway
Topock, AZ 86436-1356
July 23rd, 2014
Open House: 5:30 – 6:30 pm
Public Hearing: 6:30 – 8:00 pm

If you require an accommodation due to a disability or need a translator/interpreter for this event, please contact Stacey Lear Public Participation Specialist (714) 484-5354 or toll free 1-888-877-5378 (press 4 then 5) no later than 10 business days before the scheduled event.

Where to Find Project Information
Project reports, fact sheets, and other Project documents can be found at the Information Repositories listed to the right.

On the internet: www.dtsc-topock.com, or http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=80001836

Needles Branch Library
1111 Bailey Avenue
Needles, CA 92362-3101
(760) 326-9255
Mon – Wed: 11 am – 7 pm
Thurs: 10 am – 6 pm
Fri: Closed
Sat: 9 am – 5 pm

Golden Shores/Topock Station Library
13136 S. Golden Shores Parkway
Topock, AZ 86436-1356
(928) 768-2235
Mon: Closed
Tues, Thurs, Sat: 9 am – 1 pm
Wed: 2 pm – 5 pm

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, CA 92363
(760) 858-1140
Mon – Fri: 8 am – 4 pm

Lake Havasu City Library
1770 North McCulloch Boulevard
Lake Havasu City, AZ 86403-6559
(928) 453-0718
Mon and Wed: 9 am – 6 pm
Tues and Thurs: 9 am – 8 pm
Fri and Sat: 9 am – 5 pm
Sun: Closed

Colorado River Indian Tribes Library
26600 Mohave Road
Parker, AZ 85344
(928) 669-1332
Monday - Friday: 8 am - 5 pm
Saturday: 10 am – 2 pm
Sunday: Closed

Parker Public Library
1001 Navajo Avenue
Parker, AZ 85344-4930
(928) 669-1332
Mon – Thurs: 10 am – 7 pm
Fri – Sun: Closed

Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
(714) 484-5337
Mon – Fri: 8 am – 5 pm
Please contact Ms. Julie Johnson at the above number to make an appointment.

Italicized words appear in the glossary on pages 4 and 5.

Alternate Format: Documents made available to the public by *DTSC* may be made available in an alternative format (Braille, large format print, etc.) or in another language as appropriate, in accordance with state and federal law. Please contact Stacey Lear, *DTSC* Public Participation Specialist, for assistance with alternative formats.

Whom to Contact at DTSC for Information
If you have any questions about the Project, draft *EIR* or other related Project activities, please contact the following *DTSC* staff:

Aaron Yue, Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Aaron.Yue@dtsc.ca.gov
(714) 484-5439

Stacey Lear, Public Participation Specialist
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Stacey.Lear@dtsc.ca.gov
(714) 484-5354

For more information about our department, please visit our website at www.dtsc.ca.gov.

Notice to Hearing Impaired Individuals
TYY users may use the California Relay Service at 711 in state or 1-800-855-7100 outside California. You may also call (714) 484-5354 to reach Stacey Lear, *DTSC* Public Participation Specialist or toll-free 1-866-495-5651.

Next Steps
DTSC will consider all public comments received on the draft *EIR* during the public comment period before making a final decision on the Project and the certification of the *EIR*.

Groundwater Remedy Update
The cleanup of *groundwater* contamination at the Site is proceeding on a separate timeline from the proposed soil investigation work. The *Groundwater* Remedy Design, which will define the technical specifications of the final remedy (a network of *groundwater* wells, pumps, and pipelines) to clean up contaminated *groundwater* is being developed.

The final *groundwater* remedy will require a supply of fresh water. On January 28th, 2013, PG&E submitted the Final Implementation Plan for Evaluation of Alternative Freshwater Sources in the Topock Remediation Project Area.

On September 4, 2013, *DTSC* and *DOI* approved the Final Implementation Plan and field work commenced on October 2, 2013 and continues in 2014. It is anticipated that PG&E will submit the Pre-Final (90%) Design during the third quarter of 2014. The 90% Design Report will include a fresh water source from a *groundwater* well in Arizona.

Media Inquiries
Sandy Nax, Public Information Officer
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806
(916) 327-9114
E-mail: Sandy.Nax@dtsc.ca.gov

Glossary of Terms:

California Environmental Quality Act (CEQA): A law mandating review of environmental impact of governmental action. It requires that public agencies study the significant environmental effects of proposed activities and that the public be informed and allowed to comment on project decisions.

Cumulative Impacts: Total effect on a natural resource, ecosystem, or human community due to past, present, and future activities or actions of federal, non-federal, public, and private entities.

Department of the Interior (DOI): The United States department charged with conservation and development of natural resources. The U.S. Department of the Interior uses sound science to manage and sustain America's lands, water, wildlife, and energy resources, honors our nation's responsibilities to tribal nations, and advocates for America's island communities.

Department of Toxic Substances Control (DTSC): The department within the California Environmental Protection Agency in charge of the regulation of hazardous waste from generation to final disposal. DTSC oversees the investigation and cleanup of hazardous waste sites.

Environmental Impact Report (EIR): A report designed to examine the potential environmental impacts of proposed activities.

Groundwater: Water beneath the Earth's surface (aquifers) that flows through soil and rock openings.

Italicized words appear in the glossary on this page and page 5.

Growth Inducement: The effects of a proposed project could have on economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment.

Hexavalent Chromium: Hexavalent chromium is a form of chromium. Chromium is a metal naturally found in rocks, soil, and the tissue of plants and animals. Hexavalent chromium can be found naturally at low concentrations, but it is also used in industrial products and processes and is a known carcinogen. On May 28, 2014, the California Department of Public Health adopted a new California drinking water standard at 10 parts per billion for hexavalent chromium.

Groundwater Plume: A body of contaminated groundwater. The movement of a groundwater plume can be influenced by such factors as local groundwater flow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

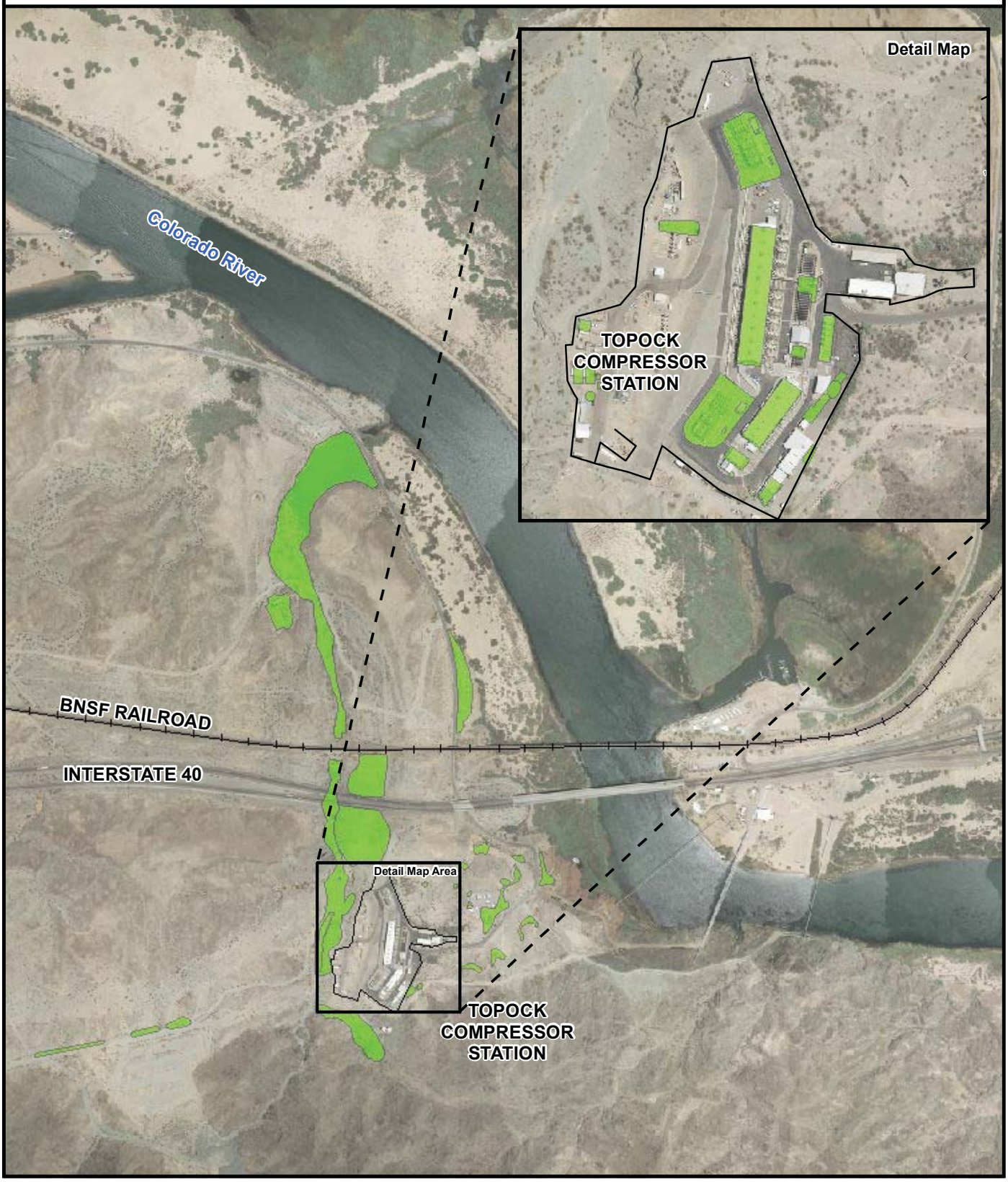
Remediation: Actions taken to remove or contain a toxic release or spill of hazardous substances at a site.

Resource Conservation Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI): An investigation that occurs in the corrective action process following a Facility Assessment under RCRA and/or a Site Inspection under Comprehensive Environmental Response, Compensation, and Liability Act. It is an in-depth study designed to gather data needed to determine the nature and extent of contamination at a site.

Soil Investigation Work Plan: A document that presents key elements of the approach for collecting soil samples at various areas requiring investigation. It may also include health and safety, waste management, data collection, construction activities and methods, the schedule, approvals, a reporting plan and reporting schedule.

Soil sampling event at the Site in 2008 using a backhoe.

Soil Investigation Areas Outside Compressor Station



Legend

Soil Investigation Areas

Site Fence Boundary

N

0 500 1,000 Feet

Note: Perimeter and Storm Drain Investigation Areas not shown.

PUBLIC COMMENT FORM

45-Day Public Comment Period for Draft Soil Investigation Environmental Impact Report for PG&E Topock Compressor Station Site, Needles, CA July 7th – August 21st, 2014

You can use this form to send in your written public comments on the draft Environmental Impact Report (EIR). You may also ask to be added or deleted from the PG&E Topock Site mailing list. If you know of anyone or any organizations that would like to be on the Project mailing list, please use this form to notify us. Please address all mailings to Aaron Yue, DTSC Project Manager, Department of Toxic Substances Control, 5796 Corporate Avenue, Cypress, CA 90630-4732. You may also e-mail this same information to: Aaron.Yue@dtsc.ca.gov.

Reminder: All public comments on the draft Environmental Impact Report (EIR) must be postmarked or e-mailed by August 21st, 2014.

NAME: _____

AGENCY OR ORGANIZATION (if applicable): _____

ADDRESS: _____

Telephone #_____

____ Please add me to the PG&E Topock Site mailing list.

_____ Please delete me from the PG&E Topock Site mailing list.

Comments: _____

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DTSC mailings are solely for the purpose of keeping persons informed of DTSC activities. Mailing lists are not routinely released to outside parties. However, they are considered public records and, if requested, may be subject to release.

Department of Toxic Substances Control – Fact Sheet

September 2015

COMMUNITY Notice

The mission of DTSC is to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation and pollution prevention.

Final Soil Investigation Work Plan and Environmental Impact Report Approved for PG&E Topock Compressor Station

The California Department of Toxic Substances Control (DTSC) is the lead state agency overseeing a soil and groundwater investigation and cleanup (also known as remediation) for the Pacific Gas and Electric Company (PG&E) Topock Compressor Station and adjacent land, collectively known as the Topock Site in San Bernardino County, California.

Soil Investigation Overview

DTSC is testing for potential soil contamination at and near the Topock Compressor Station. In January 2013, PG&E revised and submitted to DTSC a Soil Investigation Work Plan that details the activities needed to collect soil samples at the Station, around its perimeter, in storm drains from the Station, and from other nearby areas that were historically used or affected by Station operations.

Soil sampling is expected to begin this Fall and be completed within several months. After the sampling program is complete, DTSC may direct PG&E to conduct additional activities that support future decisions about investigation and cleanup of contaminated soil. These activities may include geotechnical data collection, plant or biota sampling, and bench/pilot testing of cleanup technologies. If any of these follow-up activities become necessary, the specific actions will be further described in an additional work plan.

Inside this Fact Sheet

Soil investigation activities are expected to begin this Fall and continue for several months to gather enough data for sound decision making. Sampling will occur on the Topock Compressor Station property and in pre-defined locations surrounding the Station, such as in Bat Cave Wash shown in the foreground of the photo at left.

See page 3 of this fact sheet for a more detailed map of the investigation area.

Soil Investigation Environmental Impact Report Complete and Certified

In July 2014, in compliance with the California Environmental Quality Act, DTSC released a draft Environmental Impact Report (DEIR) for public review and comment on the Soil Investigation Project. Public meetings were held in July 2014 to provide an opportunity for public comment. Approximately 27 individual comment letters and oral comments were received during the public comment period.

On April 15, 2015, DTSC released the Partially Recirculated DEIR, which was limited to Biological Resources, for public review and comment during a 45-day review period that ended on June 1, 2015. DTSC chose to recirculate the Biological Resources section of the DEIR based on additional information recently made available to the agency. For example, noted in the vicinity of the Station are potential suitable roosting habitat for the Townsend's big-eared bat, named by the California Fish and Wildlife service as a candidate for protection as an endangered species. Approximately 12 comment letters were received on the partially recirculated DEIR.

DTSC reviewed, considered, and responded to all the comments received and then published a final EIR (FEIR) that included responses to comments and all revisions made to the DEIR as a result of the comments received.

On August 24, 2015, DTSC certified the FEIR for the Soil Investigation Project; adopted a Statement of Decision and Resolution of Approval and Mitigation Monitoring Reporting Program; and filed a Notice of Determination. Concurrently, DTSC and the Department of the Interior (DOI) approved the revised final Soil Investigation Work Plan. Implementation of the sampling activities is expected to begin in Fall 2015.

Soil Investigation Next Steps

With oversight from DTSC and DOI, PG&E will implement the field work in accordance with the approved work plan and the mitigation measures provided in the certified FEIR. Collectively, these provisions focus on assuring the health and safety of all workers and others during the work at and around the Station. Equally important are several measures required to protect natural and cultural resources present in the area. DTSC expects the following to occur:

- Investigation activities on and adjacent to the Station property are currently planned to begin in November 2015 and end in March 2016.
- Similar to previous soil sampling activities, a truck-mounted drill rig and a backhoe/excavator will be used, as will pickup trucks, small all-terrain vehicles, and delivery trucks.
- Activities may be visible from Interstate 40 and National Trails Highway, but work in any specific location is expected to be completed within a week or two.

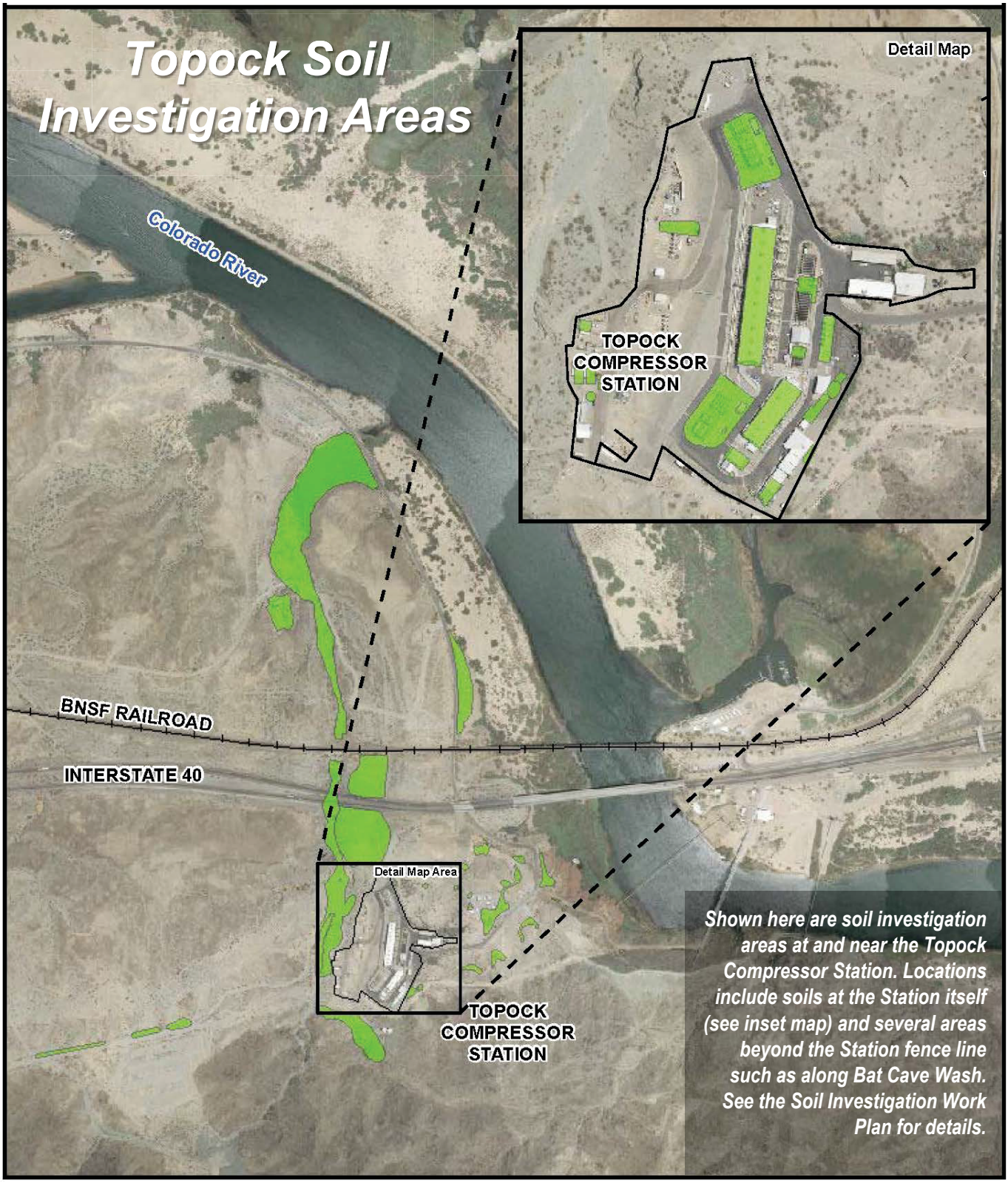
Results of the investigation will be included in the Volume 3 - RFI/RI Report on Soil Characterization.

Health and safety of all workers and others during field work is a top priority, as is protection of natural and cultural resources. Access to sampling areas and sampling methods that avoid or minimize impacts will be used wherever possible.

Groundwater Remedy Update

Since 2005 the Interim Measures' goal of maintaining contaminated groundwater flow away from the Colorado River continues to be met, as reported in the Quarterly Performance Monitoring/Groundwater Monitoring Reports. Through its operation, the Interim Measures system has also removed approximately 8,334 lbs. of chromium from groundwater (through July 2015). Once the water is treated it is injected back underground.

In February 2015, PG&E submitted to DTSC and DOI the groundwater remedy Pre-Final Design Report. Comments were received from stakeholders and Native American tribes, and comment resolution is underway.



Legend

Soil Investigation Areas

Site Fence Boundary

0 500 1,000 Feet

Note: Perimeter and Storm Drain Investigation Areas not shown.

In May 2015, DTSC announced the preparation of a Subsequent EIR (SEIR) for the groundwater remedy. The SEIR will evaluate potential environmental impacts resulting from modification of the remedy design that occurred since approval of the conceptual Groundwater Remediation Project in the 2011 EIR and the 2013 Addendum to the EIR.

The groundwater remedy Final Design is pending completion of the SEIR. After agency approval of the SEIR and Final Design, PG&E will begin construction of the final groundwater remedy.

Site Background and History

The PG&E Topock Compressor Station compresses natural gas so it can be transported through pipelines to PG&E's customers in northern and central California. The Station is 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.

In 1951, the Station began compressing natural gas for transportation through pipelines to PG&E's service area in central and northern California. As natural gas is compressed at the Station, its temperature increases and must be cooled. From 1951 to 1985, PG&E added chromium to the water used in the cooling towers and other equipment to prevent equipment corrosion. From 1951 to 1964, cooling tower wastewater containing hexavalent chromium was discharged into a natural wash adjacent to the Station.

Over time, the hexavalent chromium seeped into the groundwater and created a groundwater plume that extends from below the Station towards the Colorado River. Based on results from periodic testing of the river water, the hexavalent chromium plume is not impacting the quality of the river water. In addition, historical operations at the Station have also resulted in contamination in soils located both outside and inside the Station fence line.

In 1996, PG&E entered into a voluntary agreement with DTSC to investigate the nature and extent of contamination at the Site and to clean up any such contamination. In 2005 and 2013, PG&E signed similar agreements with the United States DOI as the federal lead agency to protect lands owned by the federal government.

Where to Find Project Information

Project reports, fact sheets, and other Project documents can be found at the Information Repositories listed below.

On the internet: **www.dtsc-topock.com** or www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=80001836

Needles Branch Library
1111 Bailey Avenue
Needles, CA 92362-3101
(760) 326-9255
Mon – Wed: 11 am – 7 pm
Thurs: 10 am – 6 pm
Fri: Closed
Sat: 9 am – 5 pm

Golden Shores/ Topock Station Library
13136 S. Golden Shores Parkway
Topock, AZ 86436-1356
(928) 768-2235
Mon: Closed
Tues, Thurs,
Sat: 9 am – 1 pm
Wed: 2 pm – 5 pm

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, CA 92363
(760) 858-1140
Mon – Fri: 8 am – 4 pm

Lake Havasu City Library
1770 North McCulloch Boulevard
Lake Havasu City, AZ 86403-6559
(928) 453-0718
Mon and Wed: 9 am – 6 pm
Tues and Thurs: 9 am – 8 pm
Fri and Sat: 9 am – 5 pm
Sun: Closed

Colorado River Indian Tribes Library
26600 Mohave Road
Parker, AZ 85344
(928) 669-1332
Monday - Friday: 8am - 5pm
Saturday: 10a m – 2 pm
Sunday: Closed

Parker Public Library
1001 Navajo Avenue
Parker, AZ 85344-4930
(928) 669-1332
Mon – Thurs: 10 am – 7 pm
Fri – Sun: Closed

Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
(714) 484-5337
Mon – Fri: 8am – 5pm
Please contact Ms. Julie Johnson at the above number to make an appointment.

Alternate Format: Documents made available to the public by DTSC may be made available in an alternative format (Braille, large format print, etc.) or in another language as appropriate, in accordance with state and federal law. Please contact Stacey Lear, DTSC Public Participation Specialist, for assistance with alternative formats.

Whom to Contact at DTSC for Information

If you have any questions about the Project, EIR or other Project activities, please contact the following DTSC staff:

Aaron Yue, Project Manager
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5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Aaron.Yue@dtsc.ca.gov
(714) 484-5439

Stacey Lear, Public Participation Specialist
Department of Toxic Substances Control
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E-mail: Stacey.Lear@dtsc.ca.gov
(714) 484-5354

Media Inquiries
Sandy Nax, Public Information Officer
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806
(916) 327-9114
E-mail: Sandy.Nax@dtsc.ca.gov

For more information about our department, please visit our website at www.dtsc.ca.gov.

Notice to Hearing Impaired Individuals

TYY users may use the California Relay Service at 711 in state or 1-800-855-7100 outside California. You may also call (714) 484-5354 to reach Stacey Lear, DTSC Public Participation Specialist or toll-free 1-866-495-5651.

Glossary of Terms

California Environmental Quality Act (CEQA): A law mandating review of environmental impact of governmental action. It requires that public agencies study the significant environmental effects of proposed activities and that the public be informed and allowed to comment on project decisions.

Department of the Interior (DOI): The United States department charged with conservation and development of natural resources. The U.S. Department of the Interior uses sound science to manage and sustain America's lands, water, wildlife, and energy resources, honors our nation's responsibilities to tribal nations, and advocates for America's island communities.

Department of Toxic Substances Control (DTSC): The department within the California Environmental Protection Agency in charge of the regulation of hazardous waste from generation to final disposal. DTSC oversees the investigation and cleanup of hazardous waste sites.

Environmental Impact Report (EIR): A report designed to examine the potential environmental impacts of proposed activities.

Groundwater: Water beneath the Earth's surface (aquifers) that flows through soil and rock openings.

Groundwater Plume: A body of contaminated groundwater. The movement of a groundwater plume can be influenced by such factors as local groundwater flow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

Hexavalent Chromium: Hexavalent chromium is a form of chromium. Chromium is a metal naturally found in rocks, soil, and the tissue of plants and animals. Hexavalent chromium can be found naturally at low concentrations, but it is also used in industrial products and processes and is a known carcinogen. On May 28, 2014, the California Department of Public Health adopted a new California drinking water standard at 10 parts per billion for hexavalent chromium.

Remediation: Actions taken to remove or contain a toxic release or spill of hazardous substances at a site.

Resource Conservation Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI): An investigation that occurs in the corrective action process following a Facility Assessment under RCRA and/or a Site Inspection under Comprehensive Environmental Response, Compensation, and Liability Act. It is an in-depth study designed to gather data needed to determine the nature and extent of contamination at a site.

Soil Investigation Work Plan: A document that presents key elements of the approach for collecting soil samples at various areas requiring investigation. It may also include health and safety, waste management, data collection, construction activities and methods, the schedule, approvals, a reporting plan and reporting schedule.

Aaron Yue, Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732

Postage

COMMUNITY Notice

Final Soil Investigation Work Plan and Environmental Impact Report Approved for PG&E Topock Compressor Station

The California Department of Toxic Substances Control has approved the Revised Final Soil Investigation Work Plan, and approved and certified the associated Final Environmental Impact Report. These major milestones allow soil sampling to begin during Fall 2015 at and near the PG&E Topock Compressor Station located in eastern San Bernardino County, California.

See inside this fact sheet for details,
including progress on the groundwater remedy and other activities.

COMMUNITY Notice

The mission of DTSC is to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation and pollution prevention.

Project Update: Soil Investigation and Groundwater Remedy at Pacific Gas & Electric Company Topock Compressor Station

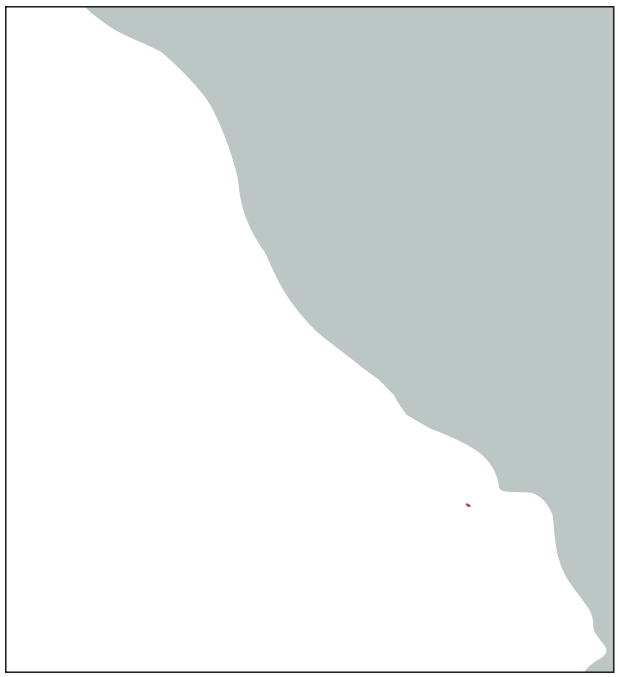
Introduction

The California **Department of Toxic Substances Control DTSC)** is the lead state agency overseeing the soil and **groundwater** investigation and cleanup at the Pacific Gas & Electric Company (PG E Topock Compressor Station (Station) and adjacent land, collectively known as the Topock Site in San Bernardino County, California. This fact sheet provides an update on the current status of the soil investigation and groundwater cleanup efforts at the Topock Site.

Inside This Fact Sheet

Site Background and History

The Station compresses natural gas so it can be transported through pipelines to PG E's customers in northern and central California. The Station is 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.



Topock site location map showing the compressor station and surrounding communities

In 1951, the Station began compressing natural gas for transportation through pipelines to PG E's service area in central and northern California. As natural gas is compressed at the Station, its temperature increases, and must be cooled. From 1951 to 1985, PG E added chromium to the water used in the cooling towers and other equipment to prevent equipment corrosion. From 1951 to 1964, cooling tower wastewater containing **hexavalent chromium** was discharged into a natural wash adjacent to the Station. Later, treated wastewater was discharged into ponds for storage and evaporation, until chromium use was discontinued in 1985. PG E uses a phosphate based non-toxic additive as a replacement.

Over time, the discharged hexavalent chromium seeped into the groundwater, and created a **groundwater plume** that extends from below the Station towards the

Colorado River. Based on results from periodic testing of the river water, the hexavalent chromium plume is not impacting the quality of the river water. Aside from water, historical operations at the Station have also resulted in contamination in soils located both outside and inside the Station fence line.

In 1996, PG E entered into a voluntary agreement with DTSC to investigate the nature and extent of contamination at the Topock Site, and to cleanup any such contamination. In 2005 and 2013, PG E signed similar agreements with the **Department of the Interior DOI)** as the federal lead agency, and to protect lands owned by the federal government.

Soil Investigation Update

A soil investigation was conducted to assess potential adverse impacts to the land that may have resulted from PG E's historical operations. Soil samples were collected at the Station, around its perimeter, in storm drains from the Station, and from nearby areas that were historically used or affected by Station operations. These soil samples were tested for potential contamination. Recent soil sampling field work took place between December 2015 and March 2016. These sampling activities were done according to the November 2015 approved work plan, and two subsequent data gap work plans dated February 2016 and March 2016. Soil investigation activities included:

- Collection of soil samples at 319 locations.
- Trenching of 10 locations to evaluate possible contamination.
- Collection of sediment and water samples from 10 locations at the edge of the river by East Ravine.

Results from those samples were reviewed to determine if additional soil collection would still be needed for understanding of the extent of soil contamination. As a result, in September 2016, PG E submitted a third data gap work plan that detailed additional soil sampling and laboratory testing needed to further the understanding of the potential contamination at and near the Topock Site. This third work plan has been reviewed by project stakeholders and Tribal Nations in October 2016. After consideration of all comments received, DTSC and DOI conditionally approved the Work Plan for implementation. Field work is scheduled to begin in early 2017.

Groundwater Remedy Update

Environmental investigations have shown groundwater at the site contains elevated levels of chemicals including total chromium, hexavalent chromium, molybdenum, selenium and nitrates.

In 2011, DTSC and DOI considered multiple proposed technologies and agreed with PG E in selecting the "**In-Situ Treatment** with Freshwater Flushing" as the final groundwater cleanup action for the Topock Site. This remedy will create a treatment zone by installing injection and extraction wells along the National Trails Highway, which is approximately 600 feet west of the Colorado River. Food grade nutrients, such as ethanol or molasses, will be injected into the groundwater to stimulate the growth of harmless, but helpful, naturally occurring bacteria. The bacteria will temporarily alter the subsurface condition and cause the hexavalent chromium in groundwater to change into the non-soluble, and less toxic, trivalent chromium form. The trivalent chromium will be released out of the water and be bound to the subsurface soil. Extraction wells near the river will recirculate the treated groundwater near the river as an added barrier to prevent contamination from reaching the river. Likewise, additional injection wells located outside of the contaminated groundwater plume will inject clean water from Arizona to control the plume, and to add additional push of the contamination toward the treatment zone to expedite groundwater cleanup.

Although the final cleanup technology was accepted in 2011, the remedy was designed by PG E with collaboration from Agencies, Tribes, and other stakeholders. A Final Remedy Design was submitted

Workers utilize a hydro-vac to conduct soil investigation activities.

to DTSC in November 2015. DTSC's approval of the groundwater Final Remedy Design is pending completion of the **Subsequent Environmental Impact Report (SEIR** , including public comment on the Draft SEIR. [See more on SEIR, below] DTSC will review, consider, and respond to all comments received on the SEIR prior to making a decision on the final design. PG E will begin construction, start up, operation, and monitoring of the final groundwater remedy after DTSC's approval of the remedy design.

Until the groundwater final remedy is approved and installed, an interim cleanup measure was installed in 2005 to continue to protect the Colorado River. To date, more than 8,700 pounds of chromium have been removed from groundwater, with the cleaned groundwater then recycled back into the aquifer. Additional details about the interim measures and other project activities are available in the Performance Monitoring/Groundwater Monitoring Reports, which can be found on DTSC's website at www.dtsc-topock.com.

CEQA and Draft SEIR

The **California Environmental Quality Act (CEQA** is a state law that requires a project's lead agency to consider and disclose potential environmental effects of its proposed actions before making a determination on a discretionary action. Although a Final Environmental Impact Report was certified on January 31, 2011 for the groundwater remedy, it became apparent that additional information contained within the November 2015 remedy design will require the preparation of an SEIR. The purpose of the Draft SEIR is to evaluate potential environmental impacts resulting from additional information on the groundwater remedy design details or modifications since DTSC approval of the conceptual cleanup action under the 2011 EIR. In May 2015, DTSC announced a Draft SEIR would be prepared. This SEIR would complement the 2011 certified Final EIR for the selected remedy.

The Draft SEIR is currently being prepared and is anticipated to be available for public comment in early 2017. The Draft SEIR (when available , Final Remedy Design Report, and all supporting documents will be available in the Information Repositories (page 5 and on the project website (www.dtsc-topock.com . After approval, all final documents will also be available at the Information Repositories and on the project website. Once approved, construction of the groundwater remedy may begin.

View of Topock Compressor Station.

Glossary of Terms

California Environmental Quality Act (CEQA : A law mandating review of environmental impact of governmental action. It requires that public agencies study the significant environmental effects of proposed activities, and that the public be informed and allowed to comment on project decisions.

Department of the Interior (DOI : The United States department charged with conservation and development of natural resources. The DOI uses sound science to manage and sustain America's lands, water, wildlife, and energy resources, honors our nation's responsibilities to tribal nations, and advocates for America's island communities.

Department of Toxic Substances Control (DTSC : The department within the California Environmental Protection Agency in charge of the regulation of hazardous waste from generation to final disposal. DTSC oversees the investigation and cleanup of hazardous waste sites.

Environmental Impact Report (EIR : An informational document that informs decision makers and the public of the significant environmental effect of a project and identifies ways to minimize the significant effects.

Groundwater: Water beneath the Earth's surface aquifers that flows through soil and rock openings.

Groundwater Plume: A body of contaminated groundwater. The movement of a groundwater plume can be influenced by such factors as local groundwater flow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

Hexavalent Chromium: Hexavalent chromium is a form of chromium. Chromium is a metal naturally found in rocks, soil, and the tissue of plants and animals. Hexavalent chromium can be found naturally at low concentrations, but it is also used in industrial products and processes, and is a known carcinogen. On May 28, 2014, the California Department of Public Health adopted a new California drinking water standard at 10 parts per billion for hexavalent chromium.

In-Situ Treatment: Treatment of contamination in place.

Subsequent Environmental Impact Report (SEIR : An informational document that provides additional evaluation of new information of substantial importance since the adoption of the project with a previously certified EIR.

View from the Colorado River of the Old Trails Bridge leading to the Topock Site on the left.

Where to Find Project Information

The Soil Investigation work plans, Draft SEIR (when available , Final Design Report, fact sheets, and other project documents can be found at the websites and Information Repositories listed below.

On the Internet: www.dtsc-topock.com or www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id_80001836

Needles Branch Library
1111 Bailey Avenue
Needles, CA 92362-3101
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Golden Shores Community Library
13136 S. Golden Shores Parkway
Topock, AZ 86436-1356
(928) 768-2235
Mon, Fri, Sun: Closed
Tues, Thurs, Sat: 9am – 1pm
Wed: 2pm – 5pm

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, CA 92363
760) 858-1140
Mon – Fri: 7:30am – 4pm
Sat and Sun: Closed

Lake Havasu City Library
1770 North McCulloch Boulevard
Lake Havasu City, AZ 86403-6559
(928) 453-0718
Mon and Wed: 9am – 6pm
Tues and Thurs: 9am – 8pm
Fri and Sat: 9am – 5pm
Sun: Closed

Colorado River Indian Tribes Library
26600 Mohave Road
Parker, AZ 85344
(928) 669-1332
Mon – Fri: 8am – 5pm
Sat: 9am – 1pm
Sun: Closed

Parker Public Library
1001 Navajo Avenue
Parker, AZ 85344-4930
(928) 669-1332
Mon – Thurs: 10am – 7pm
Fri – Sun: Closed

Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
714) 484-5337
Mon – Fri: 9am – 12pm, 1pm – 4pm
Please contact Ms. Julie Johnson at the above number to make an appointment.

Whom to Contact at DTSC for Information

If you have any questions about the Project, please contact the following DTSC staff:

Aaron Yue, DTSC Project Manager
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Aaron.Yue@dtsc.ca.gov
(714 484-5439

Stacey Lear, Public Participation Specialist
Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
E-mail: Stacey.Lear@dtsc.ca.gov
714) 484-5354

Media Inquiries
Sandy Nax, Public Information Officer
Department of Toxic Substances Control
P.O. Box 806
Sacramento, CA 95812-0806
E-mail: Sandy.Nax@dtsc.ca.gov
(916) 327-9114

Notice to Hearing-Impaired Individuals
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For more information about our department, please visit our website at www.dtsc.ca.gov.

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Stacey Lear
DTSC Public Participation Specialist
5796 Corporate Avenue
Cypress, CA 90630-4732

COMMUNITY Update

The mission of DTSC is to protect California's people and environment from harmful effects of toxic substances through the restoration of contaminated resources, enforcement, regulation and pollution prevention.

Pacific Gas & Electric Company (PG&E) Topock Compressor Station, Environmental Investigation Update

Introduction

The **California Department of Toxic Substances Control (DTSC)** is the lead state agency overseeing the soil and groundwater investigation and cleanup at the Paci□c Gas & Electric Company (PG&E) Topock Compressor Station and adjacent land, collectively known as the Topock Site in San Bernardino County, California. This Community Update provides current information about the environmental investigation and cleanup activities at the Topock Site.

Topock Compressor Station and Surrounding Communities

Content of Community Update

Final Groundwater Subsequent Environmental Impact Report

The **California Environmental Quality Act (CEQA)** is a state law that requires the lead agency of a project to consider and disclose potential environmental effects of its proposed actions before approving the actions. In May 2015, DTSC announced that a **Draft Subsequent Environmental Impact Report (SEIR)** would be prepared for the groundwater remedy Final Design Report. The purpose of the Draft SEIR is to evaluate potential environmental impacts that could result from implementing the □nal Remedy Design for the Groundwater **Remediation** Project that were not identi□ed or have substantially changed since DTSC's approval of the conceptual cleanup alternative in the 2011 EIR and the 2013 Addendum to the EIR.

In early January 2017, DTSC published a Notice of Availability of the Draft SEIR for public review and comment. The public notice announced the 47-day public comment period from January 12, 2017 to February 27, 2017. In addition, DTSC hosted two public meetings; held in Needles, California on January 31, 2017 and Golden Shores, AZ on February 1, 2017. During the comment period between January 12, 2017 through February 27, 2017, DTSC received over 300 comments. All comments received were considered in the preparation of the Final SEIR. Responses to all comments are compiled into Volume 1 of the Final SEIR. The Final SEIR for the groundwater remedy was certified and the Final Design was approved on April 24, 2018.

The Final SEIR, Final Design Report, and all supporting documents are available in the Information Repositories (page 5) and on the project website (www.dtsc-topock.com).

Ecological and Biological Update

State and federal agencies require PG&E to adhere to provisions designed to evaluate, survey and address potential biological and ecological adverse impacts. Protection of biological resources such as wildlife, plants and their habitats has been incorporated in investigative and cleanup activities at the Topock Site and addressed in the Final SEIR.

Planning for Groundwater Remedy Construction

With the Final Design approved on April 24, 2018, PG&E has begun the planning for the construction of the final groundwater remedy. PG&E anticipates beginning construction in the second quarter of 2018. At the onset of construction activities, a PG&E Public Information Office will be established at Moabi Regional Park to supplement existing outreach and project communications by providing real time information and answering questions on the project. Upon completion of necessary infrastructures, PG&E will manage the startup, operation, and monitoring of the final groundwater remedy with DTSC oversight.

Until the final groundwater remedy is installed, the interim measures in place since 2005 continues to protect the Colorado River. To date, approximately 8,930 pounds of chromium have been removed from groundwater. After chromium is removed, the cleaned water is then recycled back into the aquifer.

Soil Investigation and Evaluation

Soil sampling related to Soil Investigation field work was conducted between December 2015 and March 2016, January through March 2017, and the later part of April 2017.

Field Work included:

- Collection of over 1,000 soil samples at 364 locations.
- Trenching of 15 locations to evaluate possible contamination.
- Collection of sediment and pore water samples from 10 locations at the edge of the Colorado River by the East Ravine.

Upon completion of the soil investigation field work and evaluation for data gaps, DTSC and the U.S. **Department of the Interior (DOI)** concurred with PG&E to begin the soil risk assessment process following the approved 2008 Soil Risk Assessment Work Plan and its addendum in 2009 and 2015, as well as additional direction from DTSC in November 2017. The risk assessment will provide information about potential human health threats and ecological risks posed by contaminated soil, and assist DTSC in making risk management decision on the need for soil cleanup. The Soil Risk Assessment Report is anticipated to be completed in 2018.

Investigation results and the conclusions of the Soil Risk Assessment Report will be documented in the **Soil Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI)** Report. The RFI/RI Report for soil is anticipated to be completed in 2019.

View from the Colorado River of the "Topock Gorge"

Tribal and Stakeholder Communications Continue

Recognizing the importance of the environmental investigations and cleanup activities at the Topock Site to Tribal Nations who have cultural ties to the surrounding land and Colorado River, several focused work groups have been established to foster consultation and to gather input on the project. Federal and state laws provide for communication and consultation with Native American Tribal Governments, stakeholders and the community on this environmental project. Throughout the soil and groundwater investigation and cleanup, these work groups have continued to meet regularly and as needed to discuss project related issues.

Site Background and History

The Station is 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.

In 1951, the Station began compressing natural gas for transportation through pipelines to PG&E's service area in central and northern California. As natural gas is compressed at the Station, its temperature increases and must be cooled. From 1951 to 1985, PG&E added chromium to the water used in the cooling towers and other equipment to prevent equipment corrosion. From 1951 to 1964, cooling tower wastewater containing **hexavalent chromium** was discharged into a natural wash adjacent to the Station.

Over time, the hexavalent chromium seeped into the groundwater and created a **groundwater plume** that extends from below the Station towards the Colorado River. Based on results from periodic testing of the river water, the hexavalent chromium plume is not impacting the quality of the river water. In addition, historical operations at the Station have also resulted in contamination in soils located both outside and inside the Station fence line.

In 1996, PG&E entered into a voluntary agreement with DTSC to investigate the nature and extent of contamination at the Topock Site and to clean up any such contamination. In 2005 and 2013, PG&E signed similar agreements with DOI as the federal lead agency to protect lands owned by the federal government.

In 2011, DTSC and DOI selected "In-Situ Treatment with Freshwater Flushing" as th□ □nal groundwater remedy for the Topock Site. The concept of the remedy is to install injection and extraction wells along a road approximately 600 feet west of the Colorado River. Nutrients are injected to the contaminated groundwater to stimulate the growth of harmless, but helpful, naturally occurring bacteria. The bacteria then create geochemical conditions that remove hexavalent chromium from groundwater by converting it to non-soluble trivalent chromium. Extraction wells near the river act as a secondary barrier to prevent contamination from reaching the river. Additional injection wells located around the plume inject fresh water and extracted groundwater to push the plume toward the treatment zone.

Workers collect soil samples at Solid Waste Management Unit 1 as part of the soil investigation in January 2017

Glossary of Terms

California Environmental Quality Act (CEQA): A law mandating review of environmental impact of governmental action. It requires that public agencies evaluate the environmental effects of proposed activities, and that the public be informed and allowed to comment on the project prior to agencies' decision.

Department of the Interior (DOI): The United States department charged with conservation and development of natural resources. The DOI uses sound science to manage and sustain America's lands, water, wildlife, and energy resources, honors our nation's responsibilities to tribal nations, and advocates for America's island communities.

Department of Toxic Substances Control (DTSC): The state department within the California Environmental Protection Agency in charge of the regulation of hazardous waste from generation t nal disposal. DTSC oversees the investigation and cleanup of hazardous waste sites.

Environmental Impact Report (EIR): An informational document that informs decision makers and the public of the signi cant environmental effect of a project and identi es ways to minimize the signi cant effects and to identify alternatives to the project.

Groundwater: Water beneath the Earth's surface (aquifers) tha ows through soil and rock openings.

Groundwater Plume: A body of contaminated groundwater. The movement of a groundwater plume can be in uenced by such factors as local groundwater ow patterns, the character of the aquifer in which the groundwater is contained, and the density of contaminants.

Hexavalent Chromium: Hexavalent chromium is a form of chromium. Chromium is a metal naturally found in rocks, soil, and the tissue of plants and animals. Hexavalent chromium can be found naturally at low concentrations, but it is also used in industrial products and processes, and is a known carcinogen.

In-Situ Treatment: Technology that treats contaminants in place within the soil or in groundwater. It typically involves injection of a material such as air, gases, chemical or biological reagents, or solid material (e.g., molasses or lactose) to chemically alter the contaminant or to encourage bacteria in the soil to aid in the treatment.

Remediation: Actions taken to remove or contain a toxic release or spill of hazardous substances at a site.

Resource Conservation and Recovery Act (RCRA) Facility Investigation/Remedial Investigation (RFI/RI): An investigation that occurs in the corrective action process following a Facility Assessment under RCRA and/or a Site Inspection under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). It is an in-depth study designed to gather data needed to determine the nature and extent of risks posed by uncontrolled hazardous waste sites and for evaluating potential remedial options.

Subsequent Environmental Impact Report (SEIR): An informational document that provides additional evaluation of new information of substantial importance since the adoption of the project with a previously certi ed EIR.

Where to Find Project Information

The Final SEIR, Soil Investigation work plans, Final Design Report, fact sheets/Community Updates, and other project documents can be found at the websites and Information Repositories listed below.

On the Internet: www.dtsc-topock.com or https://www.envirostor.dtsc.ca.gov/public/80000029asp?global_id=80001836

Needles Branch Library
1111 Bailey Avenue
Needles, CA 92362-3101
(760) 326-9255
Mon – Wed: 11am – 7pm
Thurs: 10am – 6pm
Fri: Closed
Sat: 9am – 5pm

Golden Shores/Topock Shores Library
13136 S. Golden Shores Parkway
Topock, AZ 86436-1356
(928) 768-2235
Mon, Fri, Sun: Closed
Tues, Thurs, Sat: 9am – 1pm
Wed: 2pm – 5pm

Chemehuevi Indian Reservation
Environmental Protection Of
2000 Chemehuevi Trail
Havasu Lake, CA 92363
(760) 858-1140
Mon – Fri: 7:30am – 4pm
Sat and Sun: Closed

Lake Havasu City Library
1770 North McCulloch Boulevard
Lake Havasu City, AZ 86403-6559
(928) 453-0718
Mon and Wed: 9am – 6pm
Tues and Thurs: 9am – 8pm
Fri and Sat: 9am – 5pm
Sun: Closed

Colorado River Indian Tribes Library
26600 Mohave Road
Parker, AZ 85344
(928) 669-1332
Mon – Fri: 8am – 5pm
Sat: 9am – 1pm
Sun: Closed

Department of Toxic Substances Control
5796 Corporate Avenue
Cypress, CA 90630-4732
(714) 484-5337
Mon – Fri: 9am – 12pm, 1pm – 4pm
Please contact Ms. Julie Johnson at the above number to make an appointment.

Alternate Format:
Documents made available to the public by DTSC may be made available in an alternative format (Braille, large format print, etc.) or in another language as appropriate, in accordance with state and federal law. Please contact Phil McPhaul, DTSC Public Participation Specialist, for assistance with alternative formats.

Whom to Contact at DTSC for Information

If you have any questions about the Project, please contact the following DTSC staff:

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Media Inquiries
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Notice to Hearing-Impaired Individuals
TYY users may use the California Relay Service at 711 in state or 1-800-855-7100 outside California.

For more information about our department, please visit our website at www.dtsc.ca.gov.

Phil McPhaul
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5796 Corporate Avenue
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Appendix G: Schedule of Activities for RCRA

Schedule of Activities for RCRA

Communication and outreach activities will be performed according to the requirements set out by the Resource Conservation and Recovery Act (RCRA) for corrective action. The table below was excerpted from Chapter 4 of California Department of Toxic Substances Control's (DTSC) Public Participation Manual (October 2001), and summarizes some of the public participation requirements, or activities, that correspond with RCRA corrective action milestones.

Corrective Action Process	Corresponding Public Participation Activities
RCRA Facility Assessment (RFA): A detailed, preliminary site assessment of a treatment, storage, and disposal facility that may be required to undergo some form of corrective action under RCRA.	• Update or complete Community Profile • Public availability of RFA • Update mailing list • Mail fact sheet (and place on DTSC Web site) • Initiate Public Participation Plan • Public meeting • Add RFA to repositories
RCRA Facility Investigation (RFI): An investigation in which the owner of a site (PG&E in this case), under the direction of DTSC, investigates the nature and extent of potential contamination and prepares an RFI report to summarize results. DTSC oversees fieldwork, reviews and approves the RFI report, and involves the public through fact sheets and public meetings.	• Develop a fact sheet summarizing RFI • Add RFI to repositories • Public notice in newspaper (and place on DTSC Web site) • Public meeting/open house/comment (if necessary) • Public Participation Plan
Interim Measures: Urgent cleanup actions taken to protect public health and the environment while long-term solutions are being developed. DTSC required Interim Measures to accelerate removal of chromium contamination and protect the Colorado River.	• Fact sheet • Public notice/hearing/open house (if necessary) • 30-day comment period (if necessary) • Place documents in the repositories • Respond to comments (if necessary)
Corrective Measure Study: A study conducted by the facility owner/operator to identify and evaluate alternative remedies (i.e., cleanup options) to address contaminant releases at a site.	• Public notice in newspaper • Fact sheet • Public hearing/meeting/open house (if necessary) • Update repositories
Remedy Selection: After a preferred remedy is tentatively selected, DTSC solicits public review and comment. After considering and responding to public comment, DTSC may adopt the remedy, adopt the remedy with changes, or reconsider other alternatives.	• Public notice in the newspaper • Fact sheet • Public hearing • 45-day review and comment period • Update repositories • Respond to comments • Notification of final decision
Corrective Measures Implementation **Requirements:** Description of the nature of work, the dates, hours of work, and any impacts on surrounding neighborhoods.	• Public meeting/notice (if necessary) • Place remedial design plans in repositories • Fact sheet
Remedy Completion	• Public review/comment • Prior to completion, hold a 45-day comment period

Appendix H: Glossary of Terms

Appendix H

Glossary of Terms

Aquifer: An underground geological formation, or group of formations, containing groundwater that can supply wells and springs. Geologists on this project performed well pumping tests to assess the physical characteristics of the aquifer and movement of groundwater near the Topock Compressor Station.

Blowdown: A process of cooling water that is periodically removed from the operating circuit because it contains too much salt generated from repeated evaporation of the cooling water.

California Department of Toxic Substances Control (DTSC): A department within the California Environmental Protection Agency (Cal/EPA) that oversees the investigation and remediation of hazardous waste sites.

California Environmental Quality Act (CEQA): A law mandating environmental impact review of governmental action. This law requires that public agencies study the significant environmental effects of proposed activities and that the public be informed and allowed to comment on the project decisions.

Corrective Action Consent Agreement (CACA): A voluntary agreement between a lead agency and responsible party in which the responsible party commits to investigate the nature and extent of contamination at and surrounding a site governed by RCRA, and to take corrective action.

Corrective Action Process: A process designed to evaluate the nature and extent of releases of hazardous substance and implement appropriate measures to protect public health and the environment

Corrective Measures Study (CMS): A study conducted by the facility owner/operator to identify and evaluate alternative remedies (i.e. cleanup options) to address contaminant releases at a site.

Chromium: A naturally occurring metal found in rocks, soil, and the tissue of plants and animals. Chromium in present in the environment most commonly in two different forms: hexavalent chromium (Cr[VI] or Cr6) and trivalent chromium (Cr[III] or Cr3). Hexavalent chromium is considered a human carcinogen when inhaled at high concentrations.

Final Remedy: The final cleanup action proposed for dealing with contaminants at a site

Groundwater: Water beneath the earth's surface that flows through soil and rock openings.

Hydraulic Control: The control of the movement of groundwater

Information Repository: A designated location that provides public access to site-related documents as required by DTSC

Interim Measures: Cleanup action taken to protect public health and the environment while long term solutions are being developed.

Lead Agency: A public agency that has the principal responsibility for ordering and overseeing site investigation and cleanup.

Mohave: Used when describing the Arizona desert and agencies

Mojave: Used when describing the Tribe or California desert

Natural Attenuation: Any combination of physical, chemical, or biological processes that, under favorable conditions, act without human intervention to reduce the mass, toxicity, mobility, volume, or concentration of contaminants in soil or groundwater.

Notice of Exemption: The environmental document that is prepared for projects or actions that meet specific criteria for exemption from the requirements of CEQA. Example of such actions include those taken to restore property damaged in a disaster area and those designed to prevent an emergency.

pH: A measure of the acidity or alkalinity of a solution, numerically equal to 7 for neutral solutions, increasing with increasing alkalinity and decreasing with increasing acidity. The commonly used pH scale ranges from 0 to 14.

Plume: A body of contaminated groundwater flowing from a specific source.

Community Outreach Plan (Plan): A plan that documents community concerns about a site and identifies specific actions to respond to them. The plan outlines the preferred way to involve the community in the DTSC decision making process.

RCRA Facility Investigation (RFI): An investigation in which the owner of a site (Pacific Gas & Electric Company, in this case), under the direction of DTSC, investigates the nature and extent of potential contamination and prepares and RFI Report to summarize results. DTSC oversees fieldwork, reviews and approves the RFI report, and involves the public through community updates (fact sheets) and public meetings.

Resource Conservation and Recovery Act (RCRA): A federal statute for safely managing and disposing of waste generated nationwide.

Remedial Plan: A plan that describes a specific program to address contaminants at a site.

Remediation: Cleanup, which may include control, containment, treatment, excavation and/or disposal.

Responsible Party: An individual or corporate entity considered legally liable for contamination found at a property and, therefore, responsible for cleanup of the site.

Statement of Basis: A milestone document in the RCRA process the describes the basis for a lead agency's proposed remedy and cleanup standards. The Statement of Basis is issued by the agency after the alternative remedies have been evaluated and the Corrective Measures Study is complete.