

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.

Site Background and History

The Station compresses natural gas so it can be transported through pipelines to PG&E's customers in



Topock site location map showing the compressor station and surrounding communities

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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. 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
(760) 326-9255
Mon – Wed: 11am – 7pm
Thurs: 10am – 6pm
Fri: Closed
Sat: 9am – 5pm

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
Havasus 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

TTY 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.

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

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.

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

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