

COMMUNITY UPDATE

Department of Toxic Substances Control - Our mission is to protect the people, communities and environment of California from harmful chemicals by cleaning up contaminated sites, enforcing hazardous waste laws, and compelling the development of safer products.

PACIFIC GAS & ELECTRIC COMPANY (PG&E) TOPOCK COMPRESSOR STATION ENVIRONMENTAL CLEANUP UPDATE

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 and adjacent land, collectively known as the Topock Site. The Topock Site is located in Bernardino County, California. This Community Update provides the latest information about the environmental investigation and cleanup activities at the Topock Site.

FINAL GROUNDWATER REMEDY CONSTRUCTION, STARTUP AND INITIAL OPERATION UPDATE:

DTSC and the U.S. Department of the Interior (DOI) selected "In-Situ Treatment with Freshwater Flushing" as the final groundwater remedy for the Topock Site in 2011. The concept of the remedy is to install a network of injection and extraction wells along the **National Trails Highway (NTH)** approximately 600 feet west of the Colorado River; this network of wells is called the **In-situ Reactive Zone (IRZ)**. Ethanol will be added into the contaminated groundwater to stimulate the growth of naturally occurring, harmless and helpful bacteria. The bacteria will temporarily alter the geochemical conditions in the groundwater and help convert **hexavalent chromium (Cr(VI))** to non-soluble **trivalent chromium**. The area where the geochemical adjustment will occur is called the "reactive zone." Several injection wells located around the Cr(VI) **groundwater plume** will pump freshwater into the groundwater aquifer to push the contaminated water toward the reactive zone.

PG&E began construction of the final groundwater remedy on October 2, 2018. A PG&E Public Information Office, located at the northwest corner of Park Moabi Road and the NTH, was created to provide project information to anyone interested, and to be accessible to answer questions on the status of the construction. Phase 1 of the remedy construction is substantially complete. It consists of the NTH IRZ and its supporting components, over 74,000 linear feet of conveyance pipes, 41,000 feet of electrical conduits, 75 monitoring wells (for measuring water levels and quality), and 22 remediation wells (for injection and/or extraction). The installed components are being integrated and tested to make sure they function properly. After testing is complete, PG&E will inform DTSC and DOI. With DTSC and DOI agreement, PG&E will turn off the **interim measure** system, which began in 2005, and turn on the

NTH IRZ. The interim measure system must be turned off to avoid interference with the remedy.

Start-up activities will include addition of ethanol into the NTH injection wells to establish the reactive zone, conducting water level measurements, balancing the chemistry in the groundwater, and adjusting the amount of ethanol used as needed to ensure the best possible treatment conditions. It is typical to see a greater need for troubleshooting and system adjustments at the initial start-up phase since the subsurface conditions will change rapidly during this phase of operation.

PG&E plans to start up the NTH IRZ in the fall of 2021 and monitor initial operation for approximately 24 months. After this two-year period, additional components of the final remedy will be constructed (Phase 2). The timeline on the following page shows the sequence of the various project phases. DTSC and DOI will conduct the first "5-year review" in mid-2023 to assess the remedy performance and its degree of success in protecting human health and the environment.

DTSC and DOI staff will continue to provide oversight of the remedy, as well as providing regular updates to the **Consultative Work Group (CWG)**. PG&E also publishes monthly construction status reports which can be found at the project website at:

<https://dtsc-topock.com/documents/cleanup-implementation/groundwater/construction-documents/monthly-progress-reports>

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SOIL INVESTIGATION REPORT, RISK EVALUATION, AND CORRECTIVE ACTION:

Soil sampling related to soil investigation at the Topock Site was conducted between December 2015 and March 2016, January through March 2017, and the later part of April 2017. After the soil sampling activities, PG&E prepared a risk assessment by following the approved 2008 Soil Risk Assessment Work Plan, its addenda in 2009 and 2015, as well as additional direction from DTSC provided in November 2017. The risk assessment provides a conservative estimate of potential human health threats and ecological risks from chemicals detected in soil. The results of the risk assessment will be used by DTSC in the decisions on the need for soil cleanup.

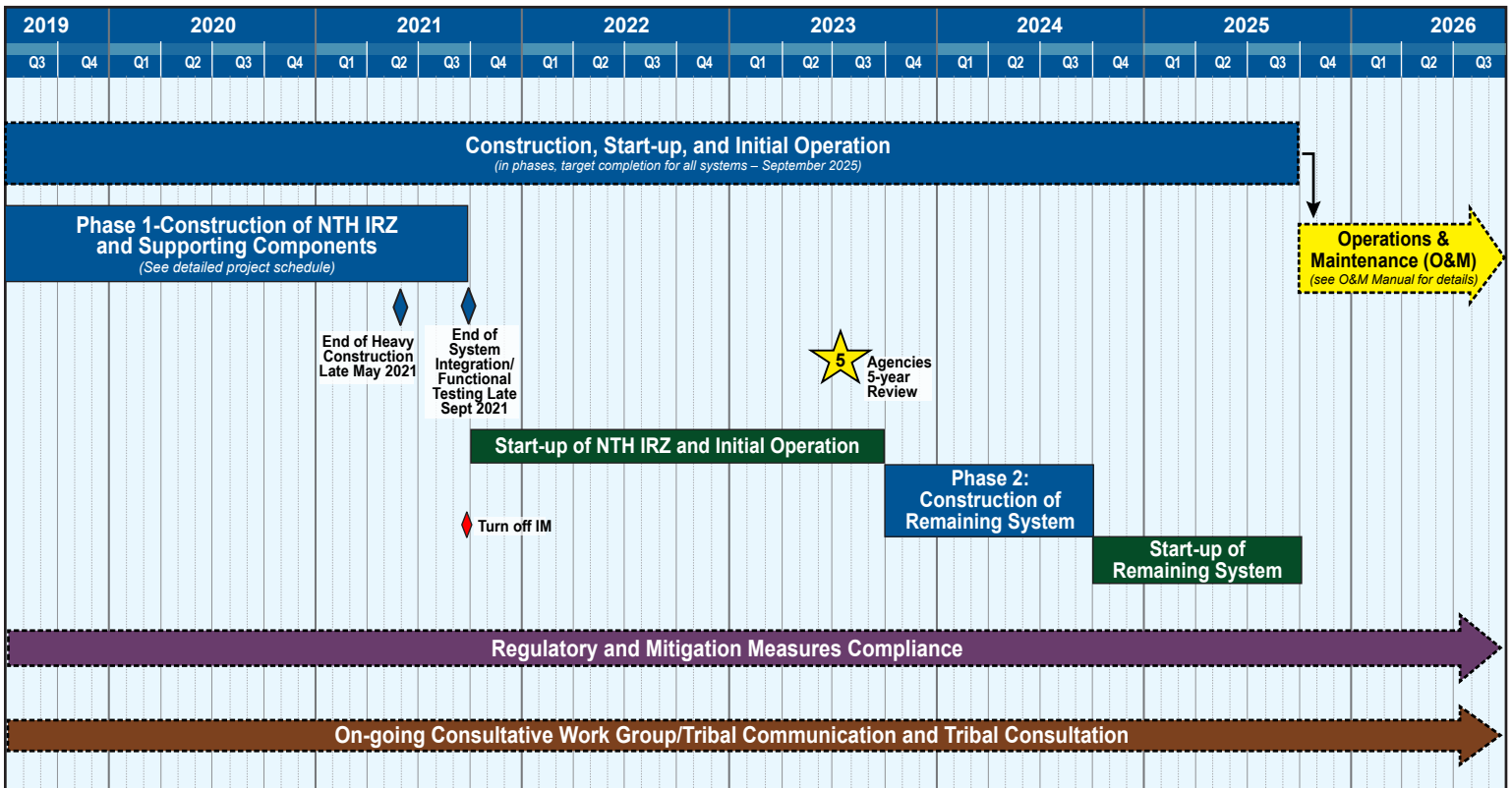
The final Soil Risk Assessment Report was approved by DTSC and DOI in May 2020. The report concludes that there is minimal unacceptable risk to human health and wildlife exposed to contaminated soil at the site. However, there are isolated areas with some potentially elevated risks to campers, hikers, off-highway vehicle (OHV) riders, and to desert shrews if there is prolonged exposure to the contaminated soil. DTSC will make a risk management decision in consideration of the risk assessment for potential cleanup actions.

Soil 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. A

draft RFI/RI Report for soil was published in December 2019. PG&E is preparing a revised draft report based on comments received. Currently, a revised RFI/RI report is anticipated in May 2021. Subsequent to approval of the final RFI/RI Report, a Corrective Measure Study (CMS) for soil will be prepared to evaluate and select clean-up actions for the soil if found necessary.

SOIL ENGINEERING EVALUATION AND COST ANALYSIS:

Based on results of the soil investigation and the approved Soil Risk Assessment Report, DOI is evaluating a potential non-time critical removal action in areas with soil contamination on federal lands and/or with potential to impact federal lands. A draft Soil Engineering Evaluation/ Cost Analysis (EE/CA) to address contaminated soil on federal lands adjacent to the Topock Compressor Station was released for a 60-day public review and comment period from June 3 to August 5, 2020. 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 the Colorado River, the U.S. Bureau of Land Management is conducting consultation with Tribes on the Soil EE/CA. DOI received comments on the EE/CA from Tribes, DTSC, and the Metropolitan Water District of Southern California in August 2020. DOI prepared and sent responses to the commenters in November/ December 2020. At this time, comment resolution is anticipated during the first quarter of 2021.



GROUNDWATER REMEDY CONSTRUCTION, START-UP, AND INITIAL OPERATIONS AND MAINTENANCE TIMELINE



INSTALLATION OF PIPING AND CONDUITS IN THE FLOODPLAIN TO THE MW-20 BENCH

SITE BACKGROUND AND HISTORY:

The Topock Compressor 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, 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 Cr(VI) was discharged into a natural wash adjacent to the Station. In addition, historical operations at the Station have also resulted in contamination of soils located both outside and inside the fence line. Over time, the Cr(VI) 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 Cr(VI) contamination is not impacting the quality of the river water.

INSTALLATION OF A TANK FARM INSIDE THE COMPRESSOR STATION TO MANAGE WASTEWATER FROM THE GROUNDWATER REMEDY



GLOSSARY OF TERMS:

Consultative Work Group (CWG): A group consisting of stakeholders, Tribal Nations, and multiple state and federal agencies that have an interest in the cleanup of the site. The CWG meets regularly to discuss project status, actions and decisions.

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

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 to final disposal. DTSC oversees the investigation and cleanup of hazardous waste sites.

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, as well as by operation of groundwater extraction and injection systems such as the one being constructed for the final groundwater remedy at the Topock Site.

Hexavalent Chromium (CrVI): Cr(VI) is a form of chromium, 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 Reactive Zone (IRZ): An interconnected series of injection and extraction wells installed along NTH to target and remediate Cr(VI)-impacted groundwater.

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.

Interim Measure: Short-term cleanup actions to protect public health and the environment while long-term solutions are being developed.

National Trails Highway (NTH): Also known as Route 66, more than 250 miles of the NTH are in the County of San Bernardino.

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 RFI/RI is 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 the need for remediation.

Risk Assessment: A study prepared to assess health and environmental risks due to potential exposure to hazardous substances.

Trivalent Chromium: A trace element that is naturally present in many foods and available as a dietary supplement.

WHERE TO FIND PROJECT INFORMATION

Soil Investigation reports, Final Design Report, Environmental Impact Reports, Soil Risk Assessment, fact sheets/Community Updates, and other project documents can be found online and at the Information Repositories listed below.

Online: www.dtsc-topock.com/documents or
www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=80001836



Scan for additional information on DTSC sites through our EnviroStor database.

PROJECT REPOSITORIES:

Needles Branch Library

1111 Bailey Avenue
Needles, California 92362
Phone: (760) 326-9255
Hours of Operation:
Monday-Wednesday: 11am-7pm
Thursday: 10am-6pm
Friday & Sunday: Closed
Saturday: 9:00am-5:00pm

Golden Shores/Topock Shores Library

13136 South Golden Shores Parkway
Topock, Arizona 86436
Phone: (928) 768-2235
Hours of Operation:
Monday, Friday & Sunday: Closed
Tuesday, Thursday & Saturday: 9am-1pm
Wednesday: 2pm-5pm

Chemehuevi Indian Reservation

Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, California 92363
Phone: (760) 858-1140
Hours of Operation:
Monday – Friday: 7:30am – 4pm
Saturday & Sunday: Closed

Colorado River Indian Tribe Library

26600 Mohave Road
Parker, Arizona 85344
Phone: (928) 669-1332
Hours of Operation:
Monday-Friday: 8am-5pm
Saturday: 9am-1pm
Sunday: Closed

Department of Toxic Substance Control

5796 Corporate Avenue
Cypress, California 90630
Phone: (714) 484-5337
Hours of Operation:
Monday-Friday: 9am-noon & 1pm-4pm
*Please contact Julie Johnson for an appointment

Lake Havasu City Library

1770 North McCulloch Boulevard
Lake Havasu, Arizona 86403
Phone: (928) 453-0718
Hours of Operation:
Monday & Wednesday: 9am – 6pm
Tuesday & Thursday: 9am – 8pm
Friday & Saturday: 9am – 5pm
Sunday: Closed

NOTE: Information Repository hours may be modified due to COVID-19 restrictions.

DTSC INFORMATION CONTACTS:

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MEDIA INQUIRIES:

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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 Tim Chauvel, DTSC Public Participation Specialist, for assistance with alternative formats.