CLEANUP PROGRAM

March 2023

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.

MAJOR MILESTONES ACHIEVED IN 2022 AND INTO 2023 ON GROUNDWATER AND SOIL CLEANUP AT PACIFIC GAS & ELECTRIC COMPANY TOPOCK COMPRESSOR STATION

The California Department of Toxic Substances Control (DTSC) is the lead state agency, and the U.S. Department of Interior (DOI) is the lead federal agency overseeing the soil and groundwater investigation and cleanup at the Pacific Gas & Electric Company (PG&E) Topock Compressor Station (site).

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. It is surrounded by federal land and is situated within a Traditional Cultural Property as determined by the federal Bureau of Land Management.

Construction of the new groundwater treatment system includes thousands of linear feet of water pipeline. Phase 1 of the new system is now operating.

PROTECTING THE COLORADO RIVER

As the drinking water source for more than 20 million people, protecting the Colorado River is the primary goal of the ongoing environmental cleanup at the site. Equally important is *how* the cleanup work is done in an area with sensitive cultural and biological resources that need to be protected for future generations.

MAJOR PROGRESS IN 2022 AND INTO 2023

Several major milestones were achieved in 2022 and progress continues this year to reduce the footprint of hexavalent chromium and other contaminants in groundwater and soil.

- ✓ The groundwater treatment interim measure was put in standby mode after successfully removing over 8,000 pounds of chromium since 2005
- ✓ Phase 1 construction of the groundwater remedy wrapped up in 2022 and the new in-situ reactive zone (IRZ) is now treating groundwater in place, meaning underground rather than pumping water to an aboveground treatment system
- ✓ Phase 2 construction is now underway to continue development of the approved design
- ✓ Dozens of new groundwater remediation wells have been added, and the monitoring well network is also greatly expanded to help track performance of the groundwater remedy
- ✓ A non-time-critical removal action is underway to remove contaminated soil from several locations on PG&E property and adjacent federal land

FINAL GROUNDWATER REMEDY UPDATE

After many years of study and engineering design, the final groundwater remedy began initial operation on December 22, 2021.

The focus of Phase 1 construction was to install the IRZ and supporting infrastructure, including:

- 42 remediation wells to establish the IRZ along National Trails Highway; as part of the "in-situ treatment with freshwater flushing" remedy, ethanol is injected along this series of wells to stimulate the growth of naturally occurring bacteria. That biological activity creates conditions that convert hexavalent chromium to trivalent chromium, a naturally abundant substance. Once converted, trivalent chromium leaves the groundwater to become part of the surrounding soil
- 74,000 linear feet of water pipelines to connect the IRZ wells and other parts of the system
- 41,000 linear feet of electrical conduits to provide power and a complex array of operational controls
- 75 new monitoring wells to help agencies and PG&E keep close track of cleanup progress

Phase 2 construction began on March 2, 2022, to install more pieces of the final remedy, including additional piping, extraction wells, and injection wells for a freshwater flushing component of the remedy to help push contaminants toward the IRZ for treatment.

The regulatory agencies and PG&E will continue to analyze data from the extensive network of monitoring wells and use the data to optimize operation of the IRZ treatment system and all remedy components. Visit the project website to learn more about remedy design, construction, operations, and maintenance (see page 4).

SOIL INVESTIGATION AND CLEANUP UPDATE

Based on hundreds of soil samples collected and the results of the Soil Risk Assessment Report approved in May 2020, DOI directed PG&E in April 2021 to remove contaminated soil from several locations on PG&E property and adjacent federal land. This non-time-critical removal action (NTCRA) began in July 2022 and is expected to be completed in 2023.

Contaminated soil is removed using excavators and dump trucks, rocks and debris may be separated, and then the soil is sent to approved and permitted landfills. The soil on all sides of the excavation is sampled to confirm that the cleanup goal has been met. Work is monitored along the way to help ensure the removal action is done safely and in a way that protects workers, irreplaceable cultural resources, and sensitive plants and wildlife.

The results of the soil sampling and conclusions of the human health and ecological risk assessments are being finalized in an updated and complete report—the Resource Conservation and Recovery Act Facility Investigation/Remedial Investigation (RCRA RFI/RI) report. This report, in conjunction with a revised risk evaluation after the NTCRA, will inform DTSC and DOI of the final actions needed for the soil cleanup.

Soil investigation and NTCRA related documents and information are available on the project website (see page 4)

Shown below is soil remediation in an area east of the Topock Compressor Station. Water is applied to help prevent dust.

Dozens of stewardship measures are required during cleanup work, including biological surveys to help protect bat maternity colonies for species such as the Yuma myotis in upper right (by Dave Johnston).

Other measures are taken to avoid or replace vegetation affected by the project, such as Beavertail cactus shown here in upper left and lower right. Working together, Tribal representatives, PG&E, and the agencies also conduct annual assessments of cultural resources to help assure the protection of those resources.

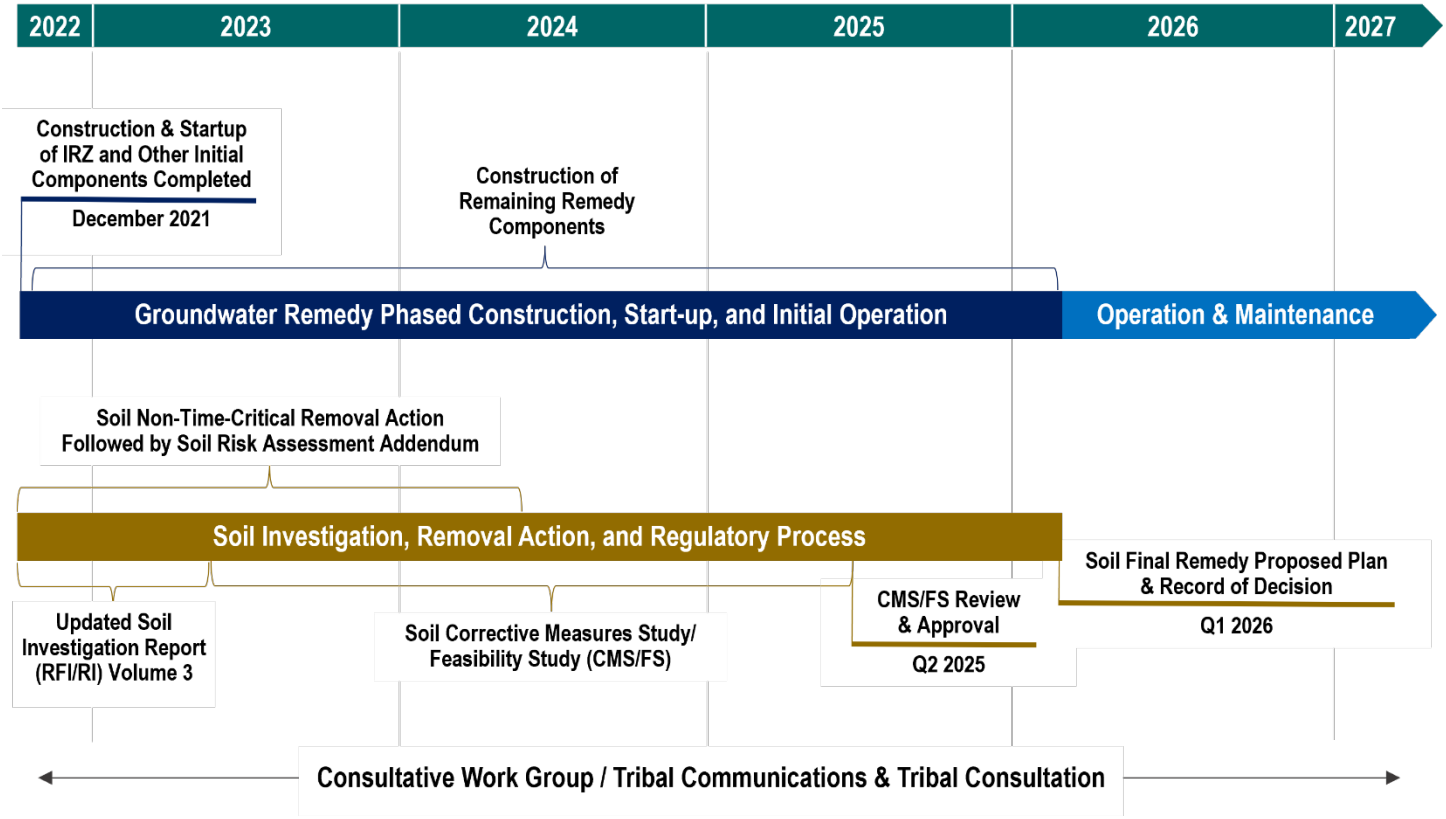
PROTECTING SENSITIVE RESOURCES

Monitoring and protection of sensitive plants, wildlife, and cultural resources is essential to success of the cleanup projects. Detailed records are kept about the condition of these resources before cleanup work began and how impact avoidance and mitigation measures are performed during project activities.

Biologists, archaeologists, compliance specialists, Tribal Monitors, and oversight agency representatives are on hand at active work zones to observe, take notes, and advise. All efforts and mitigation measures are guided by very detailed Environmental Impact Reports and numerous laws and regulations.

TOPOCK PROJECT TIMELINE

All milestones are estimated and subject to change.



WHERE TO FIND PROJECT INFORMATION

Groundwater and soil investigation reports, the groundwater remedy design documents, environmental impact reports, risk assessments, fact sheets, progress reports, and other documents are available online or at local libraries and other repositories listed below.

Project website: https://topockremediation.pge.com/
EnviroStor: www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=80001836
Progress reports: https://topockremediation.pge.com/documents/cleanup-implementation
Outreach plans and activities: https://topockremediation.pge.com/outreach-activities

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

Needles Branch Library
1111 Bailey Avenue
Needles, California 92363
Phone: (760) 326-9255

Golden Shores/Topock Library
13136 South Golden Shores Parkway
Topock, Arizona 86436
Phone: (928) 768-2235

Chemehuevi Indian Reservation
Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, California 92363
Phone: (760) 302-4058

Colorado River Indian Tribe Library
26600 Mohave Road
Parker, Arizona 85344
Phone: (928) 669-1332

DTSC Reading Room
5796 Corporate Avenue
Cypress, California 90630
Phone: (714) 484-5337

Lake Havasu City Library
1770 North McCulloch Boulevard
Lake Havasu, Arizona 86403
Phone: (928) 453-0718

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ALTERNATE FORMAT

Public documents 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 the DTSC Project Manager for assistance.

SITE BACKGROUND AND HISTORY

In 1951, the Topock Compressor Station began compressing natural gas for transportation through PG&E pipelines to its 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 corrosion, as was common industry practice at the time. From 1951 to 1964, cooling tower wastewater containing hexavalent chromium was discharged into Bat Cave Wash, a natural wash adjacent to the Station. Testing shows that some areas of soil on and near the Station were also affected by these historical operations.

Over time, hexavalent chromium seeped into the groundwater and created a groundwater plume. Extensive testing over many years shows that the plume is shrinking in extent and at no time has hexavalent chromium been detected in Colorado River water or sediments near the river.

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COMMUNITY Update

INSIDE:

- Major milestones achieved in groundwater and soil cleanup at PG&E's Topock Compressor Station
- Timeline of work in 2023 and beyond
- Where to find additional project-related information