Department of Toxic Substances Control

The Mission of the Department of Toxic Substances Control is to provide the highest level of safety, and to protect public health and the environment from toxic harm.

State of California

California Environmental Protection Agency

FACT SHEET – June 2010

PG&E Topock Project Update

Public Comments Requested on Proposed Remedy and Draft Environmental Impact Report Now Available for Public Review

The State of **California Department of Toxic Substances Control (DTSC)** is the lead state agency that is overseeing the investigation and cleanup (also known as **remediation**) of the contaminated **groundwater** at and in the vicinity of the Pacific Gas & Electric (PG&E) Topock Compressor Station in San Bernardino County, California. The groundwater was contaminated by historical releases of chemicals, including total chromium, **hexavalent chromium**, **molybdenum**, **selenium**, and **nitrates**. DTSC reviewed nine clean-up options considered in the Final Groundwater **Corrective Measures Study/Feasibility Study (CMS/FS)** Report prepared by PG&E. DTSC is proposing In Situ Treatment with Freshwater Flushing as the cleanup action that best balances the ability to achieve cleanup goals consistent with the remedy selection criteria, while minimizing the potential impacts to the environment during implementation.

Topock Compressor Station

The **Statement of Basis** is a document that describes the rationale for the preferred groundwater remedy and is prepared by DTSC in accordance with the administrative process of the **Resource Conservation and Recovery Act**. The proposed **final remedy** and alternatives are evaluated in the draft **Environmental Impact Report (EIR)** prepared by DTSC under the requirements of the **California Environmental Quality Act (CEQA).** The draft EIR analyzes the expected environmental impacts of the proposed final remedy. The EIR also identifies actions (called mitigation measures) which may be taken to avoid or reduce environmental impacts. Simultaneously, the U.S. **Department of the Interior (DOI)** is also releasing a **Proposed Plan** identifying In Situ Treatment with Freshwater Flushing as DOI's preferred cleanup action among the nine options considered in accordance with the requirements of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)** process. These documents, along with related project materials and references, are available for public review and comment from June 4 to July 19, 2010.

Project Background

The Compressor Station is located 12 miles southeast of Needles, California and 1,500 feet west of the Colorado River. In 1951, the Compressor Station began compressing natural gas for transportation through pipelines to PG&E's service territory in Central and Northern California. From 1951

PUBLIC COMMENT PERIOD

June 4, 2010 - July 19, 2010

Comments may be submitted to DTSC and/or DOI during the public comment period in writing, by mail, email, fax, or in person at the public hearings. Written comments must be postmarked, emailed, or faxed no later than July 19, 2010.

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Words in **bold** appear in the Glossary of Terms on page 3

to 1985, PG&E added chromium to the water used in the cooling towers and other equipment to control corrosion of the cooling tower equipment.

During parts of those years, cooling tower wastewater containing hexavalent chromium was discharged directly to the ground surface. Over time, the hexavalent chromium seeped into the groundwater and created a **plume**, which is a body of contaminated groundwater that extends from below the Compressor Station to beneath the Colorado River.

In 1985, PG&E discontinued the use of hexavalent chromium. In 1996, PG&E signed an agreement with DTSC to conduct environmental investigations to identify and cleanup past contamination to the environment. In 2004, PG&E signed a similar agreement with DOI.

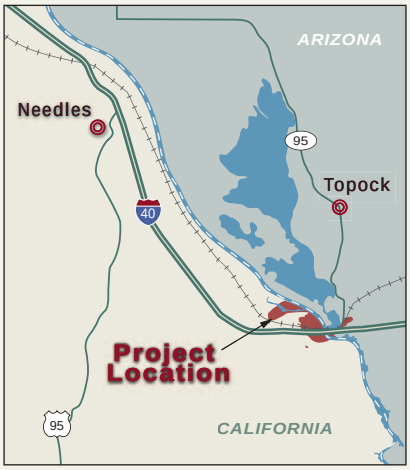
Overview of Proposed Final Remedy

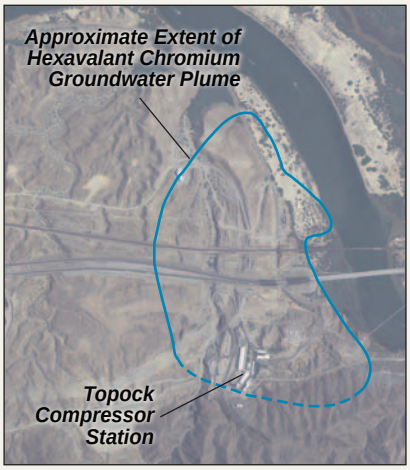
The objective of the proposed final remedy is to cleanup groundwater and ensure protection of the Colorado River. The proposed final remedy involves flushing the plume below ground with clean water through a treatment area made up of a series of **injection** and **extraction wells**, known as an **in-situ reactive zone** or treatment zone. The treatment zone would be made by adding nutrients, known as reductants, to stimulate the growth of harmless, but helpful, naturally occurring bacteria. The growth cycle of these helpful bacteria then creates chemical conditions that convert hexavalent chromium to the less harmful and less **soluble** trivalent chromium, thereby removing hexavalent chromium from groundwater. The plume would be pushed through the treatment zone by injecting clean freshwater at the western (or back end) of the plume, while the groundwater would also be pulled through the treatment zone using extraction wells located near the Colorado River. After treatment is complete, bacteria levels would return to normal (pretreatment) conditions.

The extraction wells installed near the Colorado River would prevent the plume from reaching the river. Additionally, extraction wells would be installed in the southeast edge of the plume to extract contaminated water that is not able to flow through the treatment zone. The contaminated water extracted from this area would be transported by pipelines and recirculated through the treatment zone, or injected along the western edge of the plume along with nutrient amended water to treat the contamination.

The proposed remedy would include the following:

- Use of roads, pipelines, and utility connections to power the remediation system and provide access to the wells and related remediation facilities.
- Use of water for freshwater injection from one of three sources: freshwater wells in California, freshwater wells in Arizona, or directly from the Colorado River.
- Four phases: construction of new facilities (estimated 3 years), operation and maintenance of the remediation system (estimated 29 years, but up to 110 years), long-term monitoring (estimated 10 years), and decommissioning of facilities following successful remediation (estimated 2 years).
- **Monitored natural attenuation** as a potential long-term component to address any remaining contamination that may be present in portions of the groundwater after treatment.
- The **Interim Measures** currently operating would be decommissioned once the final remedy is functioning adequately.





The proposed project consists of five main elements:

1. A treatment zone consisting of a series of wells along a portion of National Trails Highway where nutrients would be added to stimulate the growth of helpful bacteria.
2. Extraction wells near the Colorado River that would provide a barrier to protect the river. The extracted groundwater would be pumped to the western end of the plume where additional nutrients would be added.
3. Injection of clean freshwater west of the plume to accelerate groundwater flow towards the treatment zone.
4. Restrictions on groundwater use (known as **institutional controls**) to protect human health and the environment.
5. Continued monitoring of the plume.

Glossary of Terms

***California Environmental Quality Act (CEQA)*:** Enacted in 1970 to provide long-term environmental protection, this law requires that governmental decision makers and public agencies study the environmental effects of proposed activities and that significant adverse effects be avoided or reduced where feasible.

***Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)*:** A federal law, commonly known as "Superfund", enacted in 1980 by Congress to provide broad Federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment.

***Corrective Measure Study/Feasibility Study (CMS/FS)*:** A study conducted by the facility owner/operator, in this case PG&E, to identify and evaluate alternative cleanup options to address contamination at a project site.

***Cumulative Impact*:** The 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. Cumulative impacts may also include the effects of natural processes and events. Accordingly, there may be different cumulative impacts on different environmental resources.

***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 Fish and Wildlife Service, Bureau of Land Management, and Bureau Reclamation, among others.

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

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

***Extraction Wells*:** Wells that are used primarily to remove contaminated groundwater. Water level measurements and water samples can also be collected from extraction wells.

***Final Remedy*:** The final cleanup action proposed for managing contaminants at a project site.

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

***Growth Inducement*:** The effects 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*:** Known as Cr(VI), a form of chromium, which is a metal naturally found in rocks, soil, and the tissue of plants and animals. Hexavalent chromium is also used in industrial products and processes and is a known carcinogen when inhaled (i.e., through breathing).

***Injection wells*:** Wells used to introduce a substance to groundwater or to return water to the aquifer.

***In-situ Reactive Zone* :** A series of injection and extraction wells that create a treatment zone for the contaminated groundwater.

***Institutional Controls*:** Non-engineered instruments, such as administrative and legal controls, that help minimize the potential for human exposure to contamination and/or protect the integrity of the remedy.

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

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

***Monitored Natural Attenuation*:** Monitoring of the naturally occurring degradation and dilution properties of the groundwater system.

***Nitrates*:** Nitrates and nitrites are nitrogen-oxygen chemical compounds which combine with various organic and inorganic compounds. Once taken into the body, nitrates are converted into nitrites.

***Plume*:** A body of contaminated groundwater. The movement of a plume in groundwater 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.

***Proposed Plan*:** A CERCLA document, made available for public comment, which proposes a preferred alternative for a site cleanup.

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

***Resource Conservation and Recovery Act*:** A federal law that establishes a regulatory system to track and provide safe procedures for management of hazardous wastes from the time of generation to final disposal.

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

***Soluble*:** Capable of being dissolved in some solvent (usually water).

***Statement of Basis*:** A document that describes the basis for the proposed remedy and cleanup standards.

Where to Find the Draft EIR and other Project Information

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

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

Needles Library
1111 Bailey Avenue
Needles, CA 92363
Contact: Kristin Mouton, 760.326.9255
10 a.m.–6 p.m., Monday and Tuesday
10 a.m.–4 p.m., Wednesday
10 a.m.–5 p.m., Thursday through Saturday

Chemehuevi Indian Reservation Environmental Protection Office
2000 Chemehuevi Trail
Havasu Lake, CA 92363
Contact: Gilbert Parra, 760.858.1140
8:00 a.m.–4 p.m., Monday–Friday

Golden Shores/Topock Station Library
13136 S. Golden Shores Parkway
Topock, AZ 86436
Contact: Kim Stoddard, 928.768.2235
8 a.m.–2 p.m., Tuesday and Thursday
3 p.m.–6 p.m., Wednesday

Lake Havasu City Library
1770 McCulloch Boulevard
Lake Havasu City, AZ 86403
Contact: Audrey LaCommare, 928.453.0718
9 a.m.–6 p.m., Monday and Wednesday
9 a.m.–8 p.m., Tuesday and Thursday
9 a.m.–5 p.m., Friday and Saturday

Colorado River Indian Tribes Library
Second Avenue and Mohave Road
Parker, AZ 85344
Contact: Elvira Bailey-Holgate 928.669.1285
8 a.m.–noon, 1 p.m.–5 p.m., Monday–Friday

Parker Library
1001 Navajo Avenue
Parker, AZ 85344
Contact: Jeannie Smith, 928.669.2622
9 a.m.–7 p.m., Monday–Friday
9 a.m.–2 p.m., Saturday

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

DTSC Welcomes Your Feedback

For more information about the draft Statement of Basis or draft EIR and other project documents, or to be added to the mailing list please contact the following DTSC representatives:

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cfu@dtsc.ca.gov

For media inquiries, please call:

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For more information about the Proposed Plan, please contact DOI:

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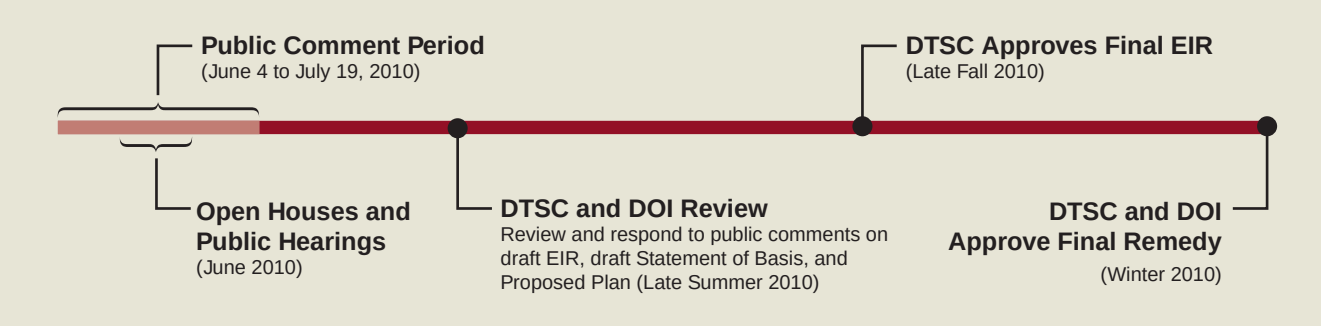
Public Review and Approval Process



Contents of the Draft Environmental Impact Report

In accordance with CEQA, a draft EIR has been prepared to evaluate the potential environmental impacts of the proposed final remedy and alternatives. The draft EIR is organized to include a summary, introduction, project description, and an analysis of environmental resource areas that could be affected by project phases, as follows:

- aesthetics, or visual quality
- air quality
- biological resources
- cultural resources
- geology & soils
- hazardous materials
- hydrology & water quality
- land use & planning
- noise
- transportation
- utilities & service systems
- water supply

The draft EIR also addresses other topics that are required by CEQA such as **growth inducement**, **cumulative impacts**, and alternatives to the proposed project.

Public Comment Opportunities

Members of the public and interested parties are encouraged to submit comments on the draft Statement of Basis, draft EIR, and Proposed Plan during the 45-day public comment period from June 4, 2010 to July 19, 2010. DTSC and DOI will host four public meetings in different locations during the public comment period. These meetings will consist of an open house followed by a public hearing. During the open house, information about the draft Statement of Basis, draft EIR, and Proposed Plan will be provided and the project documents will be available for viewing.

During the public hearing, members of the public will have the opportunity to provide verbal or written comments. All individuals and groups who are interested in this project are encouraged to attend. If you are unable to attend, written comments can be submitted using the comment card provided during the public comment period. However, the use of the comment card is not required and all forms of written comments will be accepted.

Next Steps

Following the close of the public comment period on July 19, 2010, DTSC and DOI will review all comments received and prepare a response to comments document and final EIR. However, only DTSC will be responding to comments on the draft EIR. The final remedy decision and the response to comments document will be made available as part of the remedy selection process. The proposed remedy may be modified as applicable based on comments received. If the proposed remedy is approved, DTSC and DOI will jointly oversee the implementation of the final remedy.

Public Open Houses and Hearings on Proposed Remedy

DTSC & DOI invites you to attend one of the four open house and public hearing sessions to be held on the following dates and locations during the 45-day public comment period. Oral and written comments will be accepted at the hearing immediately following the open house.

Tuesday, June 22, 2010
Open House: 5:00–6:30 p.m.
Public Hearing: 6:30–8:00 p.m.

Parker Community/Senior Center
1115 12th Street
Parker, Arizona 85344

Wednesday, June 23, 2010
Open House: 5:30–7:00 p.m.
Public Hearing: 7:00–8:30 p.m.

Lake Havasu City Aquatic Center, Relics and Rods Hall
100 Park Avenue
Lake Havasu City, AZ 86403

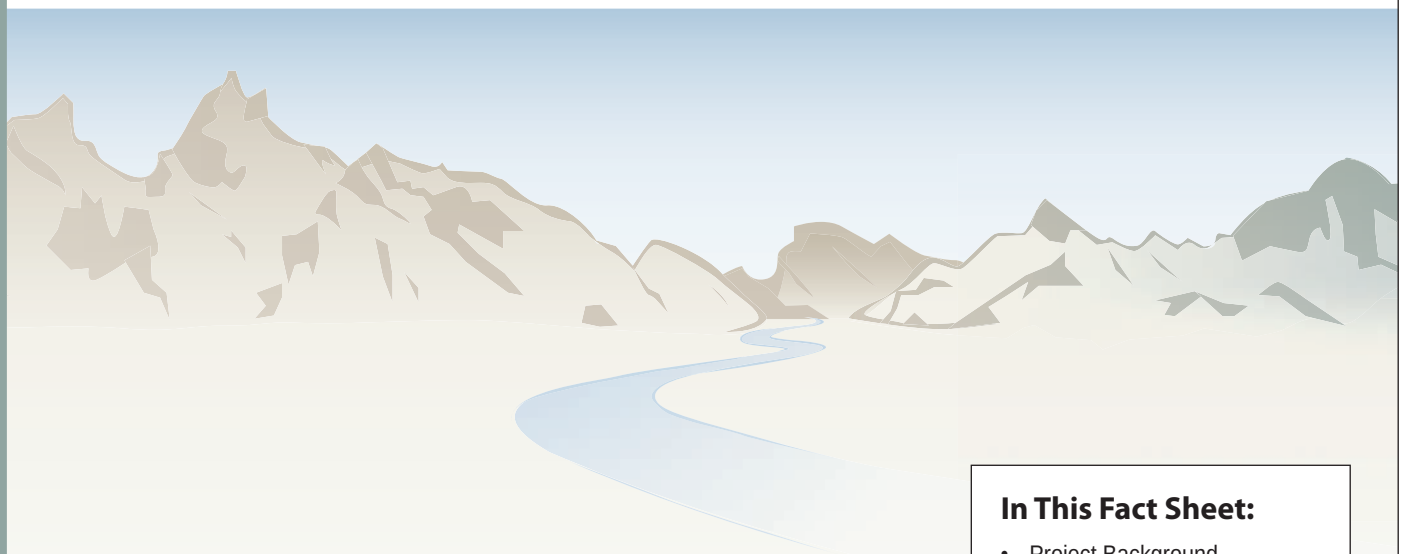
Tuesday, June 29, 2010
Open House: 5:00–6:30 p.m.
Public Hearing: 6:30–8:00 p.m.

Needles High School, Auditorium
1600 Washington Street
Needles, CA 92363

Wednesday, June 30, 2010
Open House: 5:00–6:30 p.m.
Public Hearing: 6:30–8:00 p.m.

Topock Elementary School, Auditorium
5083 East Tule Drive
Topock, AZ 86436

If you require an accommodation due to a disability or need a translator/interpreter for this event please call Christina Fu at (714) 484-5488 or toll free (866) 495-5651 no later than 10 business days before the scheduled event. In addition, you may contact Ms. Fu to receive this or related publications in an alternate format or language. TTY/TDD Speech to Speech users may dial 711.



FACT SHEET – June 2010

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MARK YOUR CALENDAR for Upcoming Open Houses and Public Hearings

VIEW DRAFT DOCUMENTS at www.dtsc-topock.com

In This Fact Sheet: