



Linda S. Adams
Acting Secretary for
Environmental Protection



Department of Toxic Substances Control

Leonard E. Robinson
Acting Director
5796 Corporate Avenue
Cypress, California 90630



Edmund G. Brown Jr.
Governor

MEMORANDUM

TO: Karen Baker
Performance Manager
Office of Geology

FROM: Aaron Yue 
Project Manager
Office of Geology

DATE: January 31, 2011

SUBJECT: CERTIFICATION OF THE PG&E TOPOCK COMPRESSOR STATION
GROUNDWATER REMEDIATION PROJECT FINAL ENVIRONMENTAL
IMPACT REPORT (FEIR)

Project Description

The following summarizes the PG&E Topock Compressor Station Groundwater Remediation Project and related Environmental Impact Report (EIR) prepared pursuant to the California Environmental Quality Act (CEQA). Additional detailed information concerning each component of the project is set forth in Chapter 3.0 of the DEIR and Section 3.0 of Volume 2 to the FEIR. As noted in the FEIR, the project description was clarified in response to comments received and to include additional specific information regarding the proposed project that has since been discovered through, for example, preparation of the East Ravine Groundwater Investigation and Topock Compressor Station (ERGI/TCS) Addendum Work Plan (December 31, 2010). (See Final EIR, Appendix ER).

In consideration of the additional specific information provided by PG&E in the Final ERGI/TCS Addendum Work Plan, and in response to comments received on behalf of FMIT, clarifications have been added to Chapter 3, "Project Description," to include the more recent information regarding the East Ravine investigation and the use of a backup generator during peak electrical demand or when the existing electrical supply is otherwise interrupted. Cumulative project 1M has therefore been removed from Chapter 6. These clarifications and revisions are provided in Volume 2 of the FEIR to address the

specific activities which are now known, as described in the Final ERGI/TCS Addendum Work Plan (December 31, 2010). The revisions and clarifications to the Project Description were reprinted in its entirety to provide context to the reader (rather than including the revisions as part of a “Clarifications and Corrections” Section of the Final EIR, Vol. 1).

The proposed project involves manipulation of subsurface water flow to move the contaminated groundwater plume through a treatment zone. This treatment zone or “in situ reactive zone (IRZ)” is created by introduction of a carbon substrate such as, but not limited to, ethanol, molasses, lactate or whey to induce microbial growth, which, in turn creates an environment where the chromium is reduced and precipitated. The carbon substrate delivery is controlled by a series of extraction and injections wells along National Trails Highway with additional extraction wells installed near the Colorado River to hydraulically control the plume. The water extracted by the Colorado River is then injected, along with additional carbon substrate into the western edge of the contaminated groundwater plume to accelerate cleanup of the contaminated groundwater. Additional extraction wells or injection of carbon substrates might be used within the East Ravine area to control the contamination in bedrock. Uncontaminated freshwater will be used around the groundwater plume to flush the groundwater with elevated Cr(VI) through the IRZ. The proposed project consists of five main elements:

- (1) Creation of an IRZ zone between a portion of the National Trails Highway and the Colorado River shoreline;
- (2) Extraction wells near the Colorado River and possibly in the East Ravine area would pump approximately 640 gallons per minute (gpm) of contaminated groundwater that would be amended with organic carbon to enhance chemical reduction of Cr(VI) while it is reinjected in the western end portion of the plume;
- (3) Injection of approximately 500 gpm of freshwater outside the plume boundaries to the northwest, west, and southwest of the plume to accelerate (flush) groundwater flow toward the IRZ;
- (4) Institutional controls limiting the use of groundwater at the project area until Cr(VI) concentration within the main plume area is comparable to the established background level of 32 micrograms per liter ($\mu\text{g/l}$); and
- (5) Monitoring of the chemical parameters and hydraulic properties of the groundwater at the site, including concentrations of the three chemicals of potential concern and possible byproduct of treatment within and around the groundwater plume.

The project description is divided into sequential phases of project implementation: construction, operations and maintenance, long-term monitoring, and decommissioning. It

is estimated that the duration of these four project phases is 3 years, 29 years (could be up to 110 years), 10 years, and 2 years, respectively.

This project description is consistent with the description contained in the Statement of Basis (attached hereto as Attachment C) and is based largely on information contained within the Final CMS/FS (CH2M Hill 2009, included in Appendix CMS of this EIR). The Final CMS/FS examined nine remedy alternatives. This project description is based on what is identified in the Final CMS/FS as Alternative E—In Situ Treatment with Freshwater Flushing.

Because DTSC recognizes that the variable nature of the geologic materials beneath the site may result in some localized areas being resistant to in situ treatment and freshwater flushing, DTSC's preferred alternative includes monitored natural attenuation as a long-term component to address residual Cr(VI) that may remain in portions of the aquifer formation after a majority has been treated by in situ treatment with freshwater flushing. Monitored natural attenuation relies on the naturally occurring degradation and reductive properties of the groundwater system to change Cr(VI) to Cr(III). Furthermore, because of the heterogeneity of the bedrock, the design of the hydraulic system to control plume migration toward the Colorado River in East Ravine may include a series of extraction wells along a portion of the National Trails Highway or within the areas in the East Ravine (see Section 5.3.1 of the Final CMS/FS, which is included as Appendix CMS of the EIR). The groundwater characterization and borehole/monitoring well installation, as part of the ERGI/TCS Addendum Work Plan, would help to define the exact location of extraction and monitoring wells for the East Ravine and the compressor station. Evaluation of the data collected in 2009, and the additional characterization data required based on the evaluation, was summarized in Appendix A of the Final CMS/FS.

Aside from the investigation and monitoring well areas identified in the ERGI/TCS Work Plan Addendum for the East Ravine and the compressor station area (See Exhibit 3-5 and Figure 2 Appendix ER), the ultimate number and specific locations of the elements that make up the proposed project (e.g., remediation wells, monitoring wells, pipelines, freshwater intake locations, and associated infrastructure) have not been determined at this time and are dependent on the final remediation system design and changes to the design during construction and implementation. The EIR therefore considered a maximum worst case number of wells, including, for example, up to 110 extraction wells and 60 monitoring wells. The actual number, location, and configuration of the extraction, treatment, and injection systems and/or changes to the type, method, and configuration of the treatment delivery systems may occur to enhance performance of the remedy to attain the cleanup goals and to respond to site conditions and performance issues.

During the project design phase (which will occur subsequent to certification of the EIR and approval of the proposed remedy), locations of remedial structures will be determined through communication and discussions with the landowners and/or other entities with rights-of-way. Remedial structure locations also would be determined in consideration of

treatment efficiency, accessibility for construction and operation and maintenance, topography, sensitive cultural and biological resources, and existing infrastructure. The estimated maximum number of new wells that would be installed in the project area considered within this EIR is 170, as noted above, which includes both remediation and monitoring, but does not include replacement wells that may be necessary during the operation and maintenance phase (see Table 1-1). The project description provided above is based upon Chapter 3 of the FEIR, Project Description.

The CEQA Process

The PG&E Topock Compressor Station Final Groundwater Remediation Project and related CEQA process is complete. The process included the following:

1. Notice of Preparation (NOP) Issued – May 2, 2008 and circulated for 30-days of public review and comment;
2. Agency and Public Scoping Meetings held – May 27 to June 5, 2008;
3. Draft Environmental Impact Report (EIR) Released for Public Comment - June 4, 2010 - July 19, 2010;
4. Public Meetings/Open Houses on the Draft EIR – June 22, 2010 (Parker, Arizona); June 23, 2010 (Lake Havasu City, AZ); June 29, 2010 (Needles, CA); and June 30, 2010 (Topock, AZ); and
5. Response to Comments Sent to Public Agencies for 10-day Review Period – January 18, 2011.

DTSC will be considering the adequacy of the Final Environmental Impact Report (FEIR) for the project after the 10-day review period for commenting public agencies. The Final EIR consists of the Draft EIR, including revisions thereto, comments and recommendations received on the DEIR, a list of persons, organizations, and public agencies commenting on the DEIR, the responses to comments to significant environmental points raised in the review and consultation process, appendices to the DEIR and the FEIR, and the Errata to the FEIR.

Prior to approving the project, DTSC must certify that:

1. The FEIR has been completed in compliance with CEQA;
2. The FEIR was presented to DTSC and DTSC reviewed and considered the information contained in the FEIR prior to approving the project; and
3. The FEIR reflects DTSC's independent judgment and analysis.

The Resolution Certifying the Final Environmental Impact Report (attached hereto as Attachment A) should be adopted by DTSC if the Department chooses to certify the FEIR.

Once DTSC has certified the EIR, the Department can determine whether to approve the proposed project. Documents supporting the potential decision of DTSC to approve the project include:

1. Statement of Decision and Resolution of Approval

The Statement of Decision and Resolution of Approval for the PG&E Topock Compressor Station Final Remedy EIR (attached hereto as Attachment B) includes Conditions of Approval for the project including:

- (i) PG&E shall rent or otherwise obtain a single new primary 320 kW generator, of similar make and model of the existing generator (Isuzu Model 6WG1X), for purposes of providing backup electricity when needed at the site for implementation of the approved project.
- (ii) The total number of extraction and monitoring wells within the project area shall not exceed a total of 170, not including replacement wells which will be installed on an as needed basis with priority given to previously drilled locations.
- (iii) PG&E shall comply with financial assurance within 45 days of project approval. The initial financial assurance funding shall be equal to the high range estimate of the project alternative present value in the final December 2009 CMS/FS. PG&E shall refine the cost estimate with each iteration of the remedy design (Preliminary [30%], Intermediate [60%], Pre-final, and As-built) for DTSC approval and PG&E shall update the financial assurance annually for the life of the project.
- (iv) PG&E shall negotiate in good faith with DTSC all necessary land use covenants and restrictions required for the protection of the remedy, and file all such required restrictions with the County Recorder.
- (v) Consistent with the Settlement Agreement Between Fort Mojave Indian Tribe and DTSC in the matter of *Fort Mojave Indian Tribe v. Department of Toxic Substances Control* (Sacramento County Superior Court Case No. 05CS00437) (1/30/06), and prior to adoption of a final remedy design, DTSC shall verify and ensure that a detailed Title Search and GPS/GIS Mapping, consistent with Subdivision III (H)(1) and (2) of the terms of the Settlement Agreement, have been conducted including a radius of one mile beyond the physical perimeter of Site No. CA-SBr-219A, B, and C.

2. Findings of Fact and Statement of Overriding Considerations

Public Resources Code section 21002 provides that “public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures

available which would substantially lessen the significant environmental effects of such projects[.]” The same statute states that the procedures required by CEQA “are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.” Section 21002 goes on to state that “in the event [that] specific economic, social, or other conditions make infeasible such project alternatives or such mitigation measures, individual projects may be approved in spite of one or more significant effects thereof.”

The mandate and principles announced in Public Resources Code Section 21002 are implemented, in part, through the requirement that agencies must adopt findings before approving projects for which EIRs are required. (See Pub. Resources Code, § 21081, subd. (a); CEQA Guidelines, § 15091, subd. (a).) For each significant environmental effect identified in an EIR for a proposed project, the approving agency must issue a written finding reaching one or more of three permissible conclusions. The three possible findings are:

1. Changes or alterations have been required in, or incorporated into, the project which mitigate or avoid the significant effects on the environment.
2. Changes or alterations to the project would mitigate or avoid the significant effects on the environment; those changes or alterations are within the responsibility and jurisdiction of another public agency; and those changes or alterations have been, or can and should be, adopted by that other agency.
3. Specific economic, legal, social, technological, other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

Because the EIR identified significant effects that may occur as a result of the project, and in accordance with the provisions of the Guidelines presented above, DTSC must adopt findings of fact and a statement of overriding considerations as part of the approval of the PG&E Topock Compressor Station Final Remedy project. Draft Findings of Fact and Statement of Overriding Considerations are attached hereto as Exhibit 1 to Attachment B.

3. Mitigation Monitoring and Reporting Program (MMRP)

CEQA Section 21081.6 requires that when a public agency is making the findings required by Section 21081, the public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval to mitigate or avoid significant effects on the environment. Because mitigation measures must be adopted to mitigate or avoid significant environmental effects of the project, a mitigation monitoring and reporting program has been prepared for the Topock Compressor Station Final Remedy project and must be adopted along with the findings for the project. The proposed mitigation monitoring and reporting program is attached hereto as Exhibit 2 to Attachment B.

Significant and Unavoidable Adverse Impacts

The MMRP includes a number of mitigation measures that avoid or substantially lessen the identified adverse impacts of the project to less than significant levels. However, as explained in the FEIR and Findings of Fact, the PG&E Topock Compressor Station Final Remedy project would result in significant and unavoidable adverse impacts including cultural resources (project and cumulative) and noise (project and cumulative). (See Section 2.1 of the Findings), DTSC has adopted all feasible measures to reduce these significant impacts, yet they remain significant after adoption of those measures. These impacts remain significant and unavoidable because the impacts could not be mitigated to less than significant levels.

Errata and Technical Memorandum to the FEIR

Attached as Exhibit 1 to Attachment A is an Errata to the Topock Compressor Station Final Remedy FEIR. The Errata reflects minor revisions to the FEIR as adopted by DTSC, but does not alter any of the FEIR conclusions.

Responses Received Following the 10-Day Review of Response to Comments

Responses were received since the Response to Comments document was sent to public agencies for the 10-day review, which ended January 28, 2011. One response received was from Mr. Bart Koch, representing the Metropolitan Water District of Southern California. The response expressed support for the selection of Alternative E and the groundwater remediation project. Similarly, another response was received from Mr. Christopher S. Harris, Acting Executive Director, of the Colorado River Board of California supporting the analysis and the preferred Alternative E.

A response was also received from the Fort Mojave Indian Tribe (FMIT). Chairman Williams, Ms. Nora McDowell-Antone and Ms. Linda Otero of FMIT requested via email and a telephone meeting with Acting DTSC Director Leonard Robinson and Acting Deputy Director Stewart Black a 30-day review and comment period for the responses to comments and FEIR. As no additional public review period for a FEIR is required by CEQA and because of the extensive communication and involvement DTSC has had with FMIT through out the EIR process, DTSC determined that additional time for FEIR review and comment is not required. Subsequently, FMIT's legal representative sent a letter to DTSC the day after the 10-day review period objecting to the project decision process and proposed decision unless the EIR is re-circulated for review. DTSC sent a response letter to FMIT's legal representative on January 31, 2011.

Recommendation

The following actions by DTSC are recommended:

1. Adopt the Resolution Certifying the Final Environmental Impact Report (attached hereto as Attachment A), and the Errata to the Final EIR;

2. Adopt the Statement of Decision and Resolution of Approval (attached hereto as Attachment B), the Findings of Fact and Statement of Overriding Considerations; and the Mitigation, Monitoring and Reporting Program (MMRP);
3. Direct staff to file a Notice of Determination (NOD) within five working days of approving the project at the State Office of Planning and Research; and
4. Direct staff to send a copy of the NOD to any person who has filed a written request for notices within five working days of approving the project.