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November 10, 2024

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Office of Environmental Policy and Compliance (OEPC)
US Department of Interior

Mr. Christopher Ioan
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Subject: October 2024 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup, PG&E Topock Compressor Station, Needles, California
(Document ID: TPK_Monthly_Progress_Rpt_October_2024_20241110)

Dear Ms. Dickerson and Mr. Ioan:

In compliance with the *1996 Corrective Action Consent Agreement* (Attachment 6, Part E, Section 9a and Attachment 7) and the *2013 Remedial Design/Remedial Action Consent Decree* (Paragraph 32 and Appendix C, Section 5), and pursuant to the *Construction/Remedial Action Work Plan (C/RAWP)* (Section 2.6.3.1), this monthly report describes activities taken at Pacific Gas and Electric Company's (PG&E's) Topock Compressor Station in October 2024, as well as activities planned for the next six weeks (November 3 to December 14, 2024), and presents available results from sampling and testing, if any, performed in the reporting period.

This report also discusses material deviations from the approved design documents and/or the C/RAWP, if any, that PG&E has proposed to the California Department of Toxic Substances Control (DTSC) and U.S. Department of the Interior (DOI), or that have been approved by DTSC and DOI. This report highlights key personnel changes, if any, and summarizes activities performed and activities planned in support of DOI's 2012 Community Involvement Plan and DTSC's 2019 Community Outreach Plan, as well as contacts with the local community, representatives of the press, and/or public interest groups, if any. This report also includes data from samples collected as part of the sitewide groundwater monitoring program within 60 days of sample collection, as required by the Condition of Approval # xi in DTSC's approval letter dated August 24, 2018.

Please note that since activities conducted to comply with the project's Applicable or Relevant and Appropriate Requirement and the Subsequent Environmental Impact Report mitigation measures are currently reported in separate compliance reports, this information is not repeated in the monthly reports. Monthly progress reports will be submitted to DTSC and DOI by the 10th day of the following month during construction and startup of the groundwater remedy at the Topock Compressor Station which officially began on October 2, 2018. This is the 73rd monthly progress report. Please contact me at (628) 219-8380 if you have any questions or comments regarding this submittal.

Sincerely,

A handwritten signature in black ink that reads 'Kristina Bonnett'. The signature is written in a cursive, flowing style.

Kristina Bonnett
Topock Technical Project Manager

Topock Project Executive Abstract

<p>Document Title: <i>October 2024 Monthly Progress Report for the Groundwater Remedy Construction and Startup, PG&E Topock Compressor Station, Needles, California</i></p> <p>Submitting Agency: DOI, DTSC</p> <p>Final Document? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p>Date of Document: 11/10/2024</p> <p>Who Created this Document? (i.e. PG&E, DTSC, DOI, Other) PG&E</p>
<p>Priority Status: <input type="checkbox"/> HIGH <input type="checkbox"/> MED <input checked="" type="checkbox"/> LOW</p>	<p>Is this time critical? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>
<p>Type of Document:</p> <p><input type="checkbox"/> Draft <input checked="" type="checkbox"/> Report <input type="checkbox"/> Letter <input type="checkbox"/> Memo</p> <p><input type="checkbox"/> Other / Explain:</p>	<p>Action Required:</p> <p><input checked="" type="checkbox"/> Information Only <input type="checkbox"/> Review and Input</p> <p><input type="checkbox"/> Other / Explain:</p>
<p>What does this information pertain to?</p> <p><input type="checkbox"/> Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA)/Preliminary Assessment (PA)</p> <p><input type="checkbox"/> RCRA Facility Investigation (RFI)/Remedial Investigation (including Risk Assessment)</p> <p><input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS)</p> <p><input checked="" type="checkbox"/> Corrective Measures Implementation/Remedial Action (RA)</p> <p><input type="checkbox"/> California Environmental Quality Act/ Environmental Impact Report (EIR)</p> <p><input type="checkbox"/> Interim Measures</p> <p><input type="checkbox"/> Other / Explain:</p>	<p>Is this a Regulatory Requirement?</p> <p><input checked="" type="checkbox"/> Yes</p> <p><input type="checkbox"/> No</p> <p>If no, why is the document needed?</p>
<p>What is the consequence of NOT doing this item? What is the consequence of DOING this item?</p> <p>The consequence for not doing this item is PG&E will be out of compliance with the 1996 Corrective Action Consent Agreement (CACA) and the 2013 Remedial Design/ Remedial Action Consent Decree (CD), as well as the Construction/Remedial Action Work Plan (C/RAWP).</p>	<p>Other Justification/s:</p> <p><input type="checkbox"/> Permit <input type="checkbox"/> Other / Explain:</p>
<p>Brief Summary of attached document:</p> <p>This monthly report describes activities taken in October 2024 as well as activities planned for the next six weeks (November 3 to December 14, 2024) and presents available results from sampling and testing in the reporting period. In addition, this report discusses material deviations from the approved design documents and/or the <i>Construction/ Remedial Action Work Plan (C/RAWP)</i>, if any, that PG&E has proposed to the California Department of Toxic Substances Control (DTSC) and the U.S. Department of the Interior (DOI) or that have been approved by DTSC and DOI. This report also highlights key personnel changes, if any, and summarizes activities performed and activities planned at the Topock Compressor Station in support of DOI's 2012 Community Involvement Plan and DTSC's 2019 Community Outreach Plan, as well as contacts with local community, representatives of the press, and/or public interest groups, if any.</p> <p>Written by: Pacific Gas and Electric Company</p>	
<p>Recommendations:</p> <p>Provide input to PG&E.</p>	
<p>How is this information related to the Final Remedy or Regulatory Requirements:</p> <p>This submittal is required in compliance with the CACA, CD, and pursuant to the C/RAWP.</p>	
<p>Other requirements of this information?</p> <p>None.</p>	



October 2024
Monthly Progress Report for the
Final Groundwater Remedy Construction and Startup

PG&E Topock Compressor Station
Needles, California

Document ID: TPK_Monthly_Progress_Rpt_October_20241110

November 2024

Prepared for
U.S. Department of the Interior and California Department of Toxic Substances Control

On Behalf of
Pacific Gas and Electric Company



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¹ Sections/Tables/Attachments denoted with * have no changes since last reporting period. They will not appear in the body of the report. This abbreviated reporting format has been implemented since the March 2024 Monthly Progress Report.

Acronyms and Abbreviations

Acronym	Definition
AOC	area of concern
CACA	Corrective Action Consent Agreement
C/RAWP	Construction/Remedial Action Work Plan
CD	Consent Decree
DOI	United States Department of the Interior
DTSC	California Department of Toxic Substances Control
ERTC	Environmental Release to Construct
IM-3	Interim Measure No. 3
IRZ	in-situ reactive zone
O&M	operations and maintenance
PG&E	Pacific Gas and Electric Company
RCRA	Resource Conservation and Recovery Act
SEIR	Subsequent Environmental Impact Report
TCS	Topock Compressor Station

1. Introduction

Pacific Gas and Electric Company (PG&E) is implementing the final groundwater remedy to address chromium in groundwater near the PG&E Topock Compressor Station (TCS), located in eastern San Bernardino County 15 miles southeast of the city of Needles, California. The U.S. Department of the Interior (DOI) is the lead federal agency overseeing remedial actions at the TCS. PG&E and the United States executed a Remedial Design/Remedial Action Consent Decree (CD), on behalf of the DOI, under the Comprehensive Environmental Response, Compensation, and Liability Act in 2012, which was approved by the U.S. District Court for the Central District of California in November 2013 (DOI, 2013). Paragraph 32 and Appendix C (Section 5) of the CD requires PG&E to submit to DOI monthly electronic progress reports during construction of the remedial action, and to submit progress reports on a quarterly basis after the selected remedy has been implemented and demonstrated to be operating as intended.

The California Department of Toxic Substances Control (DTSC) is the lead state agency overseeing corrective actions at the TCS. Remedial activities are being performed in conformance with the requirements of the Resource Conservation and Recovery Act Corrective Action pursuant to a Corrective Action Consent Agreement (CACA) entered into by PG&E and the DTSC in February 1996 (DTSC, 1996). Attachment 6, Part E, Section 9a and Attachment 7 of the CACA require PG&E to provide certain information in monthly progress reports during construction of the corrective action.

In compliance with the CACA and CD requirements, PG&E proposed a template for the monthly progress reports in Exhibit 2.6-2 of the Construction/Remedial Action Work Plan (C/RAWP) (CH2M, 2015b). The C/RAWP was approved by DOI on April 3, 2018 (DOI, 2018) and DTSC on April 24, 2018 (DTSC, 2018a).

This is the 73rd of the monthly progress reports that will be submitted to DOI and DTSC for the duration of the remedy construction and startup. This monthly progress report documents activities during October 2024, and follows the content and format described in Exhibit 2.6-2 of the approved C/RAWP. The report is organized as follows:

- Sections 2.1 through 2.7 describe completed construction activities; data collected, generated or received; nature and volume of waste generated; waste handling/disposal; issues encountered; actions taken to rectify problems/issues; personnel changes; and Work Variance Requests (i.e., material deviations from the design documents, the C/RAWP, or other approved work plans), if any, as well as agencies' actions on those requests, and potential schedule impacts.
- Sections 2.8 through 2.9 summarize key project personnel changes, if any, contacts with representatives of the press, local community, or public interest groups during the reporting period, other activities provided to assist DTSC and/or DOI in support of the Community Outreach Plan (DTSC, 2019) and/or Community Involvement Plan (DOI, 2012), respectively, and anticipated near-term (approximately next six weeks) activities in support of the Community Outreach and Community Involvement Plans.
- Section 2.10 provides information relating to the construction schedule progress, sequencing of activities, information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule, and a description of efforts made to mitigate those delays or anticipated delays, if any.
- Section 2.11 presents validated data from samples collected as part of the sitewide groundwater monitoring program within 60 days of sample collection, as required by the Condition of Approval # xi in DTSC's approval letter dated August 24, 2018 (DTSC, 2018a).
- Section 3 lists the references cited in this report.

Note that Sections/Tables/Attachments that have no changes since last reporting period, will not appear in the body of the report. This abbreviated reporting format has been implemented since with the March 2024 Monthly Progress Report.

Please note that since activities conducted to comply with the project’s Applicable or Relevant and Appropriate Requirement and the Subsequent Environmental Impact Report (SEIR) (DTSC, 2018b) mitigation measures are currently reported in separate compliance reports, the same information is not repeated in the monthly reports.

2. Monthly Update

2.1 Work Completed

Phase 1 remedy construction, which began on October 2, 2018, includes the National Trail Highway In-situ Reactive Zone (IRZ) with 22 remediation wells (for injection and/or extraction) and a robust network of 75 monitoring wells (for measuring water levels and quality), as well as a network of over 74,000 linear feet of water conveyance piping and 41,000 feet of electrical conduits that connect the remediation wells to the power supply system, the carbon amendment building, and the Remedy-Produced Water Conditioning system. Figures 2-1 and 2-2 show the locations of key areas and wells.

Phase 1 systems and components were integrated and tested to make sure they function properly. On December 22, 2021, PG&E initiated injection of ethanol into the groundwater at select National Trail Highway IRZ wells using temporary power (i.e., portable generator). On March 24, 2022, the permanent power system (from TCS) was put in service. The Remedy-Produced Water Conditioning system inside TCS was fully operational on June 24, 2022. Between March and August 2022, the groundwater remedy experienced intermittent power outages of various durations (the contributing factors, include but are not limited to, TCS operations load shedding [i.e., power to remedy was shut off by TCS due to gas operational reasons] and/or functionality of electrical components). Portable generators were used to supply power from end of August to end of October 2022. The permanent power supply issue was resolved at the end of October 2022. The portable generators were kept onsite temporarily as contingencies and removed from site at the end of January 2023.

Concurrently, after receipt of DTSC’s and DOI’s approvals, PG&E turned off the Interim Measure No. 3 (IM-3) extraction wells (TW-2D and TW-3D) on December 21, 2021, and started to prepare IM-3 for lay-up. The preparation for lay-up was completed on March 21, 2022. PG&E notified the agencies that IM-3 is in lay-up mode on March 22, 2022. When the IM-3 system is in a lay-up condition, the system will be left in a safe, secure, and preserved state and will not operate again until agency approval is received for decommissioning and removal of the system.

Phase 2 remedy construction commenced on March 2, 2022, and includes additional wells (located in Bat Cave Wash [BCW]/TCS, on the Transwestern Bench [TWB], and along historic route 66), and pipelines connecting some of the additional wells as well as a pipeline connecting the previously installed Riverbank (RB) wells. Due to a supply chain issue for vault panels which delays the delivery of those components, a temporary pause of Phase 2A heavy construction activities was planned for mid-June to September 2023. The vault panels were received in August 2023 and installed by October 2023. On August 15, 2023, PG&E informed DTSC and DOI that PG&E intends to extend the pause as PG&E awaited further direction on the Phase 2b design modification proposal submitted to the agencies December 2022. On October 31, 2024, DTSC and DOI issued a decision on the Phase 2b design modification proposal.

Below is a summary of activities and work completed in October 2024:

- On July 13, 2018, PG&E sent via email the first weekly six-week look-ahead schedule for the remedy construction field work. The weekly emails provide highlights of field activities in the previous week, field activities scheduled for the next week, and planned activities for the next six weeks. Recipients of the weekly emails are DOI, DTSC, the U.S. Fish and Wildlife Service, the California Regional Water Quality Control Board, Colorado River Basin Region, the Metropolitan Water District of Southern California, Tribes, and the Technical Review Committee. PG&E continues to send these

weekly emails to date. As of October 31, 2024, a total of 324 six-week look-ahead schedule emails have been sent. Of those, four six-week look-ahead schedule emails were sent in October 2024 (on October 7, 15, 21, and 28).

- On August 10, 2018, PG&E issued the first Environmental Release to Construct (ERTC) to contractors. As of October 31, 2024, a total of 113 ERTCs (including addenda) and 10 Environmental Release to Operate (ERTOs, including addenda) were issued for construction and operation activities. The ERTCs are listed in Tables 2-1a and 2-1b. The ERTOs are listed in Table 2-1c.

In October 2024, two new ERTOs were issued for the repair of storm-damaged riprap within the jurisdictional wash at the CHQ (ERTO #7) and the installation and O&M of a gate at the northern entrance to the floodplain (ERTO #8). In addition, one addendum to an existing ERTO (Addendum #2 to ERTO #1) was issued for removal of soil/sediment accumulated behind the AOC4 gabions.

- Starting on October 4, 2018, PG&E has published a daily construction activities list and discussed the list at the morning tailboards with Tribes and agency representatives. This daily list is intended to inform and facilitate observation by Tribes and agency representatives on site on that day. PG&E continues to publish these daily lists and discuss the list at the daily morning tailboards to date. One daily activity list was issued in October 2024.
- In October 2024, PG&E performed the following remedy O&M activities:
 - **September 29 to October 5 activities:**
 - Continued IRZ circulation and ethanol injection O&M activities, including O&M support activities. Example O&M activities include:
 - Process monitoring -- Inspect wells and system areas, adjust operational parameters including extraction and injection well flowrates and ethanol dosing concentrations;
 - Well and system maintenance – Backwash injection wells, chemical and physical rehabilitation of IRZ wells, operate water conditioning system, perform routine preventative maintenance; and
 - General system/site inspection – inspection of access roads and monthly inspection of industrial SWPPP best management practices.
 - **October 6 to 12 activities:**
 - Continued IRZ circulation and ethanol injection O&M activities, including O&M support activities. See example O&M activities in the first bullet above.
 - Conducted groundwater and river sampling.
 - **October 13 to 19 activities:**
 - Continued IRZ circulation and ethanol injection O&M activities, including O&M support activities. See example O&M activities in the first bullet above.
 - **October 20 to 26 activities:**
 - Continued IRZ circulation and ethanol injection O&M activities, including O&M support activities. See example O&M activities in the first bullet above.
 - Completed conduit field measurements and mandrel testing.

2.2 Freshwater Usage, Waste Generation, and Management

In October 2024, freshwater usage, waste generation, and management are as follows:

2.2.1 Freshwater and Wastewater

- In October 2024, an approximate total of 2,175 gallons of freshwater was used for IRZ wells rehabilitation and 9,973 gallons was used for O&M activities in the revegetation areas.

- For the reporting period, an estimated 64,870 gallons of remedy-produce water (after conditioning) was re-injected into the aquifer. Prior to reinjection, the conditioned water is sampled in accordance with the approved sampling plan in the O&M Plan. Analytical data for remedy-produced water is included in Attachment G. To date, there has been no offsite disposal, or disposal to the PG&E TCS evaporation ponds, of remedy-produced water generated from O&M activities.

2.2.2 Displaced Materials/Soils/Clay

- No displaced materials/soils were generated from remedy activities in October 2024.

2.2.3 General Construction Waste, Sanitary Waste, and Recyclables

- In October 2024, approximately one cubic yard of general waste was generated and hauled to local landfills.
- Sanitary waste from construction trailers/portable toilets is hauled offsite as needed.

2.3 Worker Training and Education

- In October 2024, seven personnel took the WEAT.

2.4 Status of Work Variance Requests

On October 14, 2024, PG&E submitted the proposed Work Variance Request (WVR) #13 to relocate in-vault power and controls equipment at well IRZ-39 to aboveground panels on a new stanchion with a sunshade. This is needed to restart IRZ-39 for purposes of nitrate treatment and enhance the long-term operability of the well. DTSC forwarded the draft WVR to Tribes and stakeholders on October 15, 2025 and requested input, if any, by October 29, 2024. No input was received. On October 30, 2024, DTSC and DOI issued the approved WVR #13 to PG&E.

2.5 Use of Future Activity Allowance

On October 15, 2024, DTSC determined that the relocation of the in-vault power and controls equipment at well IRZ-39 to aboveground panels is considered an activity under the Future Activity Allowance (FAA). The following infrastructures were considered in the FAA determination, based on information provided by PG&E in the proposed WVR #13 (see above):

- New conduits (2-inch in diameter) containing electrical and communication/fiber optic wires will be installed aboveground from the new panels to belowground trenches (approximately 2 feet wide) that connect to the existing IRZ-39 well vault and the existing electrical pull box. Approximate total length of new conduits is 50 feet and new trench is 15 feet. The estimated volume of soil to be displaced from trenching is up to 5 cubic yards.

2.6 Issues Encountered and Actions Taken to Rectify Issues/Problems*

No changes to report this month.

2.7 Key Personnel Changes*

No changes to report this month.

2.8 Communication with the Public*

No changes to report this month.

2.9 Planned Activities for Next Six Weeks

The planned activities for next six weeks (November 3 to December 14, 2024) include the following:

- Continue IRZ O&M including revegetation and maintenance of revegetation area.
- Remove soil/sediment accumulated behind the AOC4 gabions.
- Maintenance repairs to riprap within the jurisdictional wash at the CHQ.
- Perform work to restart IRZ-39 (e.g., replace flood-damaged in-vault equipment, relocate in-vault power and controls equipment to aboveground panels on stanchion with sunshade, electrical connection at IRZ-39, etc.).
- Electrical pull between Electrical Node 1 (Transwestern Bench) and Node 2 (South entrance to the Floodplain) including IRZ-39.
- Install sunshade at Electrical Node 1.
- Continue groundwater sampling.
- Continue to conduct inspection of Stormwater Pollution Prevention Plan best management practices, as needed.
- Continue to manage displaced soil per the approved Soil Management Plan, as needed.

Attachment G contains the six-week look-ahead schedule available at this time. Any adjustments to the schedule will occur as needed via the weekly emails (sent at the start of each week) and/or the daily list of construction activities (published daily and discussed with agency and Tribal representatives on site on that day).

2.10 Construction Schedule Review*

No changes to report this month.

2.11 Available Sitewide Groundwater Monitoring Data (DTSC Condition of Approval xi)

Pursuant to Condition of Approval # xi in DTSC's approval letter dated August 24, 2018 (DTSC, 2018a), PG&E is required to report data from samples collected as part of the sitewide groundwater monitoring program within 60 days of sample collection. In compliance with this requirement, PG&E submitted validated data to DTSC via monthly emails. For ease of recordkeeping and to minimize the number of ad-hoc compliance reports/emails, PG&E has included data in each monthly progress report starting with the November 2018 monthly report. The data are included in Attachment G of this report.

2.12 IM-3 Shutdown and Preparation for Layup*

No changes to report this month.

2.13 Summary of Releases Occurred During Groundwater Remedy Construction*

No changes to report this month.

3. References

California Department of Toxic Substances Control (DTSC). 1996. *Corrective Action Consent Agreement (Revised), Pacific Gas and Electric Company's Topock Compressor Station, Needles, California*. EPA ID No. CAT080011729. February 2.

California Department of Toxic Substances Control (DTSC). 2018a. *Acceptance and Conditional Approval of Groundwater Remedy Design and Corrective Measures Implementation Workplan at Pacific Gas and Electric Company, Topock Compressor Station, Needles, California*. April 24.

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CH2M HILL, Inc. (CH2M). 2014. *Final Programmatic Biological Assessment for Pacific Gas and Electric Topock Compressor Station Final Groundwater Remedy*. April 28.

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CH2M HILL, Inc. (CH2M). 2015b. *Construction/Remedial Action Work Plan for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California*. November 18.

United States Department of the Interior (DOI). 2012. [Community Involvement Plan, Pacific Gas and Electric Topock Compressor Station, Needles, California](#). September.

United States Department of the Interior (DOI). 2013. *Remedial Action/Remedial Design Consent Decree (CD) between the United States of America and Pacific Gas & Electric Company*. Case 5:13-cv-00074-BRO-OP, Document 23. Entered November 21.

United States Department of the Interior (DOI). 2018. *Approval of PG&E Topock Compressor Station Remediation Site – Basis of Design Report/Final (100%) Design Submittal and Construction/Remedial Action Work Plan for the Final Groundwater Remedy and the Supplemental and Errata Information for the Final (100%) Design for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California*. Letter from Pamela Innis/DOI to Curt Russell/PG&E. April 3.

Tables

The following tables did not have any updates, and are not included in this monthly report:

Table 2-1a. Summary of Non-Well Environmental Release-To-Constructions

Table 2-1b. Summary of Well Environmental Release-To-Constructions

Table 2-2. Monitoring Wells Nomenclature Changes

Table 2-4. Summary of Cumulative Percent Completeness of Key Phase 2 Construction Activities

Table 2-5. Summary of Releases Occurred During Groundwater Remedy Construction

Table 2-1c. Summary of Well Environmental Release-To-Operate

*October 2024 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California*

ERTO Number	Brief Description of Covered Areas and Scope of Authorized Activities	Original Issue Date
1	Scope included the removal of sediments accumulated behind the AOC4 gabion	September 2, 2021
Addendum 1 to ERTO 1	Scope included the maintenance of the v-ditch, a stormwater pollution prevention feature located just south of the Construction Headquarters fence	February 9, 2024
Addendum 2 to ERTC 1	Scope included the removal of sediments accumulated behind the AOC4 gabion	October 23, 2024
2	Scope included the operation and maintenance of the revegetation areas at UHR-1 and in the floodplain	June 7, 2022
3 ^[a]	Scope included localized repair of road washouts upstream of the culverts along IM-3 access road	June 22, 2022
4	Scope included chemical rehabilitation of IRZ wells	December 13, 2022
Addendum 1 to ERTO 4	Scope included chemical rehabilitation of well PTI-1D.	May 31, 2023
5	Scope included redevelopment of select monitoring wells	April 14, 2023
6	Scope included planned, non-routine remedy O&M activities that involve ground disturbance on MW-20 Bench only	March 11, 2024
7	Scope included maintenance repairs to riprap in the jurisdictional wash at the CHQ	October 23, 2024
8	Scope included the installation, maintenance, and removal of the gate at the northern entrance of the floodplain.	October 25, 2024

^[a] ERTO #3 was renewed on February 1, 2023 for localized repair of the IM-3 access road at the culverts.

AOC = area of concern

ERTO = Environmental Release-To-Operate

IM-3 = Interim Measure No. 3

Table 2-3. Summary of Work Variance Requests

October 2024 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California

WVR Number	Brief Description of Work Variance Request	Approval Dates
1	<p>This WVR addressed PG&E’s proposed modification to the brine tanks containment for use by the remedy, specifically:</p> <ul style="list-style-type: none"> • Upgrade the existing lined containment to concrete - The original synthetic liner material has degraded from exposure to ultraviolet light, heat, and abrasion and must be replaced. PG&E proposed to replace the synthetic-lined containment (including K-rails) with a concrete containment to support the groundwater remedy. The concrete color will be desert tan, and information on this proposed concrete color will be submitted to the agencies for review. The proposed concrete material will be similar to the material of the truck lane in the final remedy design (refer to Appendix E of the Final Basis of Design Report [CH2M, 2015a], Section 033 00, Cast-In-Place Concrete). • Shorten the length of the containment - This containment will have the same height as the existing containment, but with a slightly smaller footprint (the length is 5 feet shorter). This smaller footprint still meets the required volume for a secondary containment and allows for more space for remedy construction at the tight MW-20 bench. 	<p>DOI approved WVR #1 on June 22, 2018 DTSC approved WVR #1 on July 5, 2018</p>
2	<p>PG&E proposed to relocate the tie-in point for remedy construction water to an aboveground location inside TCS and below the TCS Water Storage Tanks. This is to eliminate the risk of damaging the existing pressurized 6-inch water line and to avoid any interference with PG&E Gas Operations control of the TCS’s water supply. The WVR addressed this relocation, specifically:</p> <ul style="list-style-type: none"> • Relocate the construction water tie-in point to an aboveground location below the TCS Water Storage Tanks, inside TCS – The final design calls for the temporary construction water line to hot-tap into the existing 6-inch steel water line just as the line turns southwest to continue to TCS. PG&E proposed to move the tie-in point to an aboveground valve manifold, located below the TCS Water Storage Tanks in the boneyard area. • Extend the temporary construction water line to the new tie-in point, along Pipeline 300A access road – The planned 4-inch HDPE temporary construction water line will be extended, following the route of the Pipeline 300A access road, to the new tie-in point inside TCS. This pipeline extension is approximately 1,950 feet and is also made of 4-inch HDPE. The pipe will be laid on ground surface and to the south of the 6-inch water line where possible. At the crossing with the Southern California Gas pipeline access road, the pipeline will be at grade with fill to allow for vehicle crossing. 	<p>DOI/DTSC approved WVR #2 on August 29, 2018</p>
3	<p>PG&E proposed changes within the CHQ fence line to avoid/minimize the overall amount of soil disturbance during construction, reduce the number of truck trips to haul wastewater, and allow for additional working space within the yard. There are no proposed changes to the CHQ footprint nor its fence line. The specifics are described as follows:</p> <ul style="list-style-type: none"> • Relocate the decontamination pad from the western fence to the northern fence (near the western corner). Based on recent survey data collected during construction, the difference in ground elevation between northern and southern end of the pad is about 4 feet. Moving the pad to the northern fence would eliminate the difference in ground elevation and reduce the amount of soil disturbance by at least 80 cubic yards. • Bring the remedy-produced wastewater tank from belowground to aboveground, increase the tank volume from 1,000 to 2,500 gallons, and place the aboveground, double-walled tank adjacent to the decontamination pad. The change from belowground to aboveground reduces the amount of soil disturbance by at least 50 cubic yards. The change to a bigger tank will reduce the amount of truck trips needed to haul wastewater. The placement of the tank adjacent to the decontamination pad allows for the pad to function as a secondary containment for the haul truck during off-loading of the wastewater. • Defer construction of the underground sewage tanks. Deferral of the underground tanks reduces the overall amount of soil disturbance by at least 800 cubic yards. All sanitary wastes will be managed in aboveground sewage tanks (similar to the ones currently used for the SPY trailers) or portable toilets. • Swap the location of the construction trailers and the sunshade and change the configuration of the sunshade from a rectangle to a square. This change will allow for more working space within the CHQ. All functions that would occur in the Workshop/Sampling Processing building will be conducted in the construction trailers. 	<p>DOI/DTSC approved WVR #3 on January 4, 2019</p>

WVR Number	Brief Description of Work Variance Request	Approval Dates
4	PG&E proposed to revise a segment of Pipeline C near the I-40 bridge, to meet the permit requirement in Caltrans Encroachment Permit No. 08-18-6-MW-0533. The revision involves relocating a small segment of Pipeline C to within National Trails Highway to meet a minimum distance of 10 feet from current and future I-40 bridge footings. The treatment measure specified for Segment X of National Trails Highway in the Cultural and Historic Property Management Plan will be implemented during installation of this pipeline segment.	DOI/DTSC approved WVR #4 on May 14, 2019
5	PG&E proposed to phase the remedy-produced water conditioning system within the approved footprint inside TCS.	DOI and DTSC approved WVR #5 on July 19 and July 22, 2019, respectively.
6	<p>In early October 2018, PG&E conducted a geotechnical investigation along the Pipeline F alignment on the entrance road to the TCS and the adjacent hill side. Based on the geotechnical results, the construction contractor (PIVOX) indicated that soldier piles and lagging would be required for temporary shoring. Over 40 soldier piles would be installed by drilling using a 330-sized excavator or larger. A 330-sized excavator has a general width of 11 feet, and counter weight clearance of approximately 4 feet. During operation, this rig would occupy a minimum 15 to 16 feet width of the TCS entrance road for about 12 days. The paved width of the road is between 22 to 24 feet in the area of shoring (per review of the location via Google Earth).</p> <p>Assuming a minimum clearance of 1 foot (which is still less than the recommended clearance) from any operating equipment, there will be approximately 5 to 8 feet of available lane width for access by TCS traffic. Large vehicles (tractor-trailers, delivery trucks, construction equipment) will likely not be able to pass by the active operation, and passenger vehicles may also not be able to pass the active operation in locations where the road narrows. Also, the excavator cannot be repositioned while soldier piles are being drilled. In sum, access to TCS will be severely restricted for about 12 days. This is not acceptable for Compressor Station operations.</p> <p>Therefore, PG&E proposed to realign Pipeline F (starting from segment F3) along the approved alignment of Pipelines B and J. Construction of Pipelines F, B, and J would occur in the same alignment and at the same time.</p>	DOI and DTSC approved WVR #6 on May 21 and May 22, 2019, respectively.
7	<p>This WVR proposed the following changes to remedy infrastructure at the CHQ and SPY.</p> <ul style="list-style-type: none"> a) Locate all temporary office and break trailers at the SPY. PG&E proposed to keep the three existing office trailers at their current locations in the SPY and add two additional office trailers and one break trailer for workers. The additional trailers will be equipped with aboveground sewage tanks, similar to the existing trailers. They will also be powered by Needles Electric. This will require the original SPY fence line to be extended south/southwest to encompass these trailers and the original truck entrance from National Trails Highway to the access road east of SPY. Neither changes reduce the overall area available for soil storage. b) Eliminate the workshop/sample processing building at the CHQ. The function planned for this building will be moved to the Carbon Amendment building at the MW-20 Bench. Removal of this building reduces the amount of soil disturbance by approximately 334 cubic yards. c) Eliminate the sunshade at the CHQ. The function for the sunshade will be replaced by the break trailer for the workers. Removal of the sunshade reduces the amount of soil distance (i.e., installation of the footings) by approximately 14 cubic yards. d) Convert the utility pad at the CHQ to a smaller transformer/electrical panel pad. With the relocation of the six trailers to SPY and elimination of the workshop/sample processing building, PG&E proposed to convert the utility pad to smaller pad for a smaller transformer/electrical panel to serve the remaining trailers at the CHQ. This reduces the amount of soil disturbance by approximately 61 cubic yards. 	DOI and DTSC approved WVR #7 on June 14, 2019.
8	On September 12, 2019, PG&E proposed a WVR to change the alignment of pipeline segment C6 on the eastern slope of the MW-20 Bench. The purpose of the WVR is to reduce the amount of soil disturbance, reduce the number of plants to be removed, reduce the safety risks associated with construction atop the MW-20 bench, and reduce the hazards associated with operation at the MW-20 bench during construction.	DTSC and DOI approved WVR #8 on October 4 and 8, 2019, respectively.
9	On March 20, 2020, and at DTSC's direction, PG&E submitted a WVR to relocate MW-A and convert IRZ-11 to a monitoring well.	DTSC and DOI approved WVR #9 on April 24, 2020.

WVR Number	Brief Description of Work Variance Request	Approval Dates
10	<p>On December 1, 2021, PG&E proposed a WVR to revise the following pipeline alignments for constructability and safety during Phase 2A construction, as well as future operations and maintenance:</p> <ol style="list-style-type: none"> 1. Outside the Compressor Station <ol style="list-style-type: none"> i. Realign Pipeline C18 in East Ravine. ii. Realign Pipeline I1 in Bat Cave Wash. 2. Inside the Compressor Station <ol style="list-style-type: none"> i. Consolidate piping/conduits (L1/L2/D1/D2) in the southern area of TCS into a common utility corridor ii. Realign Pipeline L3 to connect to Pipeline K. 	<p>DTSC and DOI approved WVR #10 on January 6 and 7, 2022, respectively.</p>
11	<p>On January 11, 2022, PG&E proposed a WVR for new mitigation planting areas in the floodplain. The purpose of the WVR is to propose new mitigation planting areas that are better suited for the mitigation plantings than some earlier identified areas.</p>	<p>DOI and DTSC approved WVR #11 on January 14 and 19, 2022, respectively.</p>
12	<p>The extraction well TWB-3 was a provisional well in the remedy design, therefore a pipeline associated with this well was not specified in the design. On September 23, 2022, PG&E submitted a WVR to add a pipeline (and conduits) to connect TWB-3 to the groundwater remedy. In addition, the WVR proposes the deferral of construction of the Operations Building on the TWB.</p>	<p>DTSC and DOI approved WVR #12 on October 19 and 20, 2022, respectively.</p>
13	<p>On October 14, 2024, PG&E submitted the proposed Work Variance Request (WVR) #13 to relocate in-vault power and controls equipment at well IRZ-39 to aboveground panels on a new stanchion with a sunshade. This relocation is necessary to restore the operation of well IRZ-39, and to ensure its long-term operability.</p>	<p>DTSC and DOI approved WVR #13 on October 30, 2024.</p>

Source: CH2M HILL, Inc. (CH2M). 2015a. Basis of Design Report/Final (100%) Design Submittal for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California. November 18.

CHQ = Construction Headquarters

DOI = Department of the Interior

DTSC = California Department of Toxic Substances Control

HDPE = high-density polyethylene

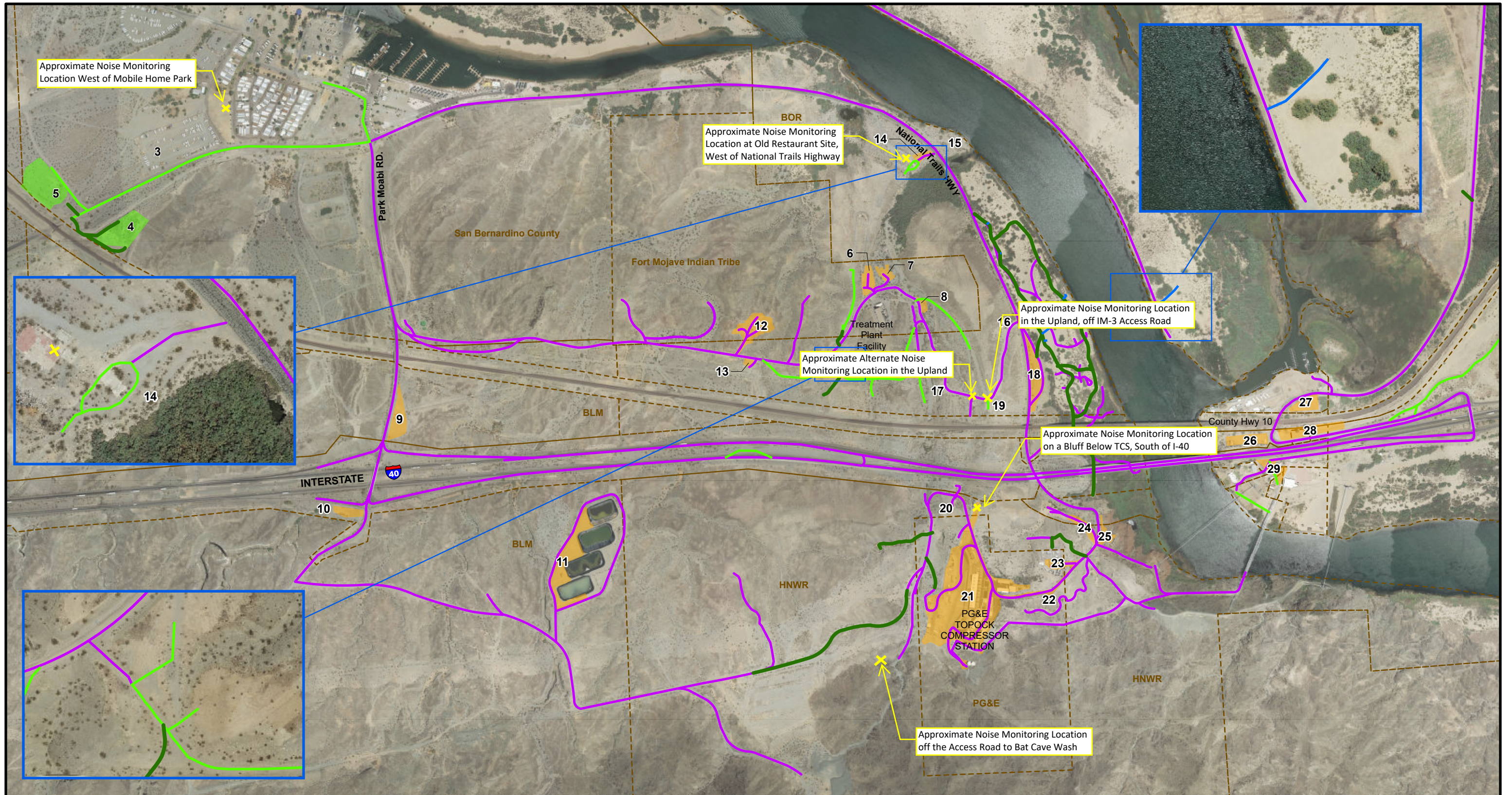
PG&E = Pacific Gas and Electric

SPY = Soil Processing Yard

TCS = Topock Compressor Station

WVRs = Work Variance Request

Figures



Approximate Noise Monitoring Location West of Mobile Home Park

Approximate Noise Monitoring Location at Old Restaurant Site, West of National Trails Highway

Approximate Noise Monitoring Location in the Upland, off IM-3 Access Road

Approximate Alternate Noise Monitoring Location in the Upland

Approximate Noise Monitoring Location on a Bluff Below TCS, South of I-40

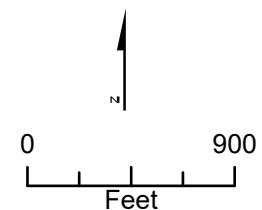
Approximate Noise Monitoring Location off the Access Road to Bat Cave Wash

LEGEND

- Existing Access Route (will continue to be used for remedial activities)
- Existing Route (proposed to be used as is for access to remedial activities)
- Roads to be improved or constructed for groundwater remedy
- Temporary Construction Access
- Potential Soil Storage and Staging Area Proposed Staging Areas for Remediation Project
- StagingAreas_90 Proposed Soil Processing (Area #5) and Construction Headquarter (Area #4) for Remediation Project

Notes:

1. Area #3 will not be used as the Construction Headquarter (CHQ). The CHQ will be moved to Area #4.
2. Area #4 will be used as the primary truck inspection area. Areas #9, 18, and 23 or other staging areas might also be used depending on the specific construction activity.
3. Decontamination pads will be located in Area #4 (Construction Headquarters), Area #21 (Topock Compressor Station), and Area #23 (Transwestern Bench).
4. Areas #15, 16, 17, 19, and 20 will not be used as staging areas. Areas #16, 17, and 19 may be part of the primary work zones for remedy infrastructure along the access road.
5. Area #20 may be part of the primary work zone for installation of future provisional well IRL-6 (if determined to be needed in the future) and associated piping/concrete/vault.
6. Public roadways outside of the EIR project area and the APE can also be used for remedy implementation.



**FIGURE 2-1
CONSTRUCTION SITE PLAN
AND ACCESS ROUTES**
GROUNDWATER REMEDY PHASE 1 CONSTRUCTION
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA



- LEGEND
- Project Area
 - Phase 2A Well
 - + Injection Well
 - Groundwater Monitoring Well
 - Water Supply Well
 - Remediation Well

Figure 2-2
Well Locations
 Groundwater Remedy Construction
 PG&E Topock Compressor Station
 Needles, California

Attachments

The following attachments did not have any updates, and are not included in this monthly report:

- A. Photographs
- B. Available Boring and Well Construction Logs, Groundwater Sample Results from Well Drilling, and Well Testing Activities
- C. Soil Sampling Locations and Available Soil Analytical Results
- D. Perimeter Air Sampling Analytical Results
- E. Noise Monitoring Results (SEIR NOISE-2 Requirement)

Attachment F
Six-Week Look-Ahead Schedule

Six-Week Look-Ahead Schedule
 PG&E Topock Compressor Station Remedial Activities

Activity	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Primary Planned Activities	11/3/2024	11/4/2024	11/5/2024	11/6/2024	11/7/2024	11/8/2024	11/9/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	No Work	No Work	No Work	No Work	No Work	No Work
Site Wide Construction G5*	No Work	No Work	No Work	No Work	No Work	No Work	No Work
Site Wide Revegetation F5*	No Work	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement	No Work
Primary Planned Activities	11/10/2024	11/11/2024	11/12/2024	11/13/2024	11/14/2024	11/15/2024	11/16/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	Monthly Sampling, River Sampling, Pond Sampling, Hydro 6 Sampling	Monthly Sampling, River Sampling, Pond Sampling, Hydro 6 Sampling	Monthly Sampling, River Sampling, Pond Sampling, Hydro 6 Sampling	Monthly Sampling, River Sampling, Pond Sampling, Hydro 6 Sampling	Monthly Sampling, River Sampling, Pond Sampling, Hydro 6 Sampling	No Work
Site Wide Construction G5*, E1*	No Work	^A AOC 4 Gabion Maintenance and CHQ Storm drain maintenance, Last Look	^A AOC 4 Gabion Maintenance and CHQ storm drain maintenance	^A AOC 4 Gabion Maintenance and CHQ storm drain maintenance	^A AOC 4 Gabion Maintenance and CHQ storm drain maintenance	^A AOC 4 Gabion Maintenance and CHQ storm drain maintenance	No Work
Site Wide Revegetation F5*	No Work	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement/Irrigation O&M/Watering	Irrigation Header Replacement	No Work
IRZ Injection System F5*	No Work	^A IRZ-39 Panels and Sunshade Install	^A IRZ-39 Panels and Sunshade Install	^A IRZ-39 Panels and Sunshade Install	^A IRZ-39 Panels and Sunshade Install	^A IRZ-39 Panels and Sunshade Install	No Work
Primary Planned Activities	11/17/2024	11/18/2024	11/19/2024	11/20/2024	11/21/2024	11/22/2024	11/23/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	Quarterly Sampling	Quarterly Sampling	Quarterly Sampling, MW-15 Sampling	Quarterly Sampling	Quarterly Sampling	No Work
Site Wide Construction G5*	No Work	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	No Work
Site Wide Revegetation F5*	No Work	^A Monitoring, Planting, Irrigation Header Replacement	^A Monitoring, Planting, Irrigation Header Replacement	^A Monitoring, Planting, Irrigation Header Replacement	^A Monitoring, Planting, Irrigation Header Replacement	No Work	No Work
Primary Planned Activities	11/24/2024	11/25/2024	11/26/2024	11/27/2024	11/28/2024	11/29/2024	11/30/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	Quarterly Sampling	Quarterly Sampling	Quarterly Sampling	No Work	No Work	No Work
Site Wide Construction G5*	No Work	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	Node 2 to Node 1 Conductor Pull and Sunshade and Panel Installation	No Work	No Work	No Work
Site Wide Revegetation F5*	No Work	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement/Irrigation O&M/Watering	No Work	No Work	No Work
Primary Planned Activities	12/1/2024	12/2/2024	12/3/2024	12/4/2024	12/5/2024	12/6/2024	12/7/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	Quarterly Sampling	Quarterly Sampling	Quarterly Sampling	Quarterly Sampling	Quarterly Sampling	No Work
Site Wide Construction G5*	No Work	No Work	No Work	Node 2 to Node 1 Electrical Connections and Sunshade and Panel Installation	Node 2 to Node 1 Electrical Connections and Sunshade and Panel Installation	Node 2 to Node 1 Electrical Connections and Sunshade and Panel Installation	Node 2 to Node 1 Electrical Connections and Sunshade and Panel Installation
Site Wide Revegetation F5*	No Work	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement	Irrigation Header Replacement/Irrigation O&M/Watering	Irrigation Header Replacement	No Work
Primary Planned Activities	12/8/2024	12/9/2024	12/10/2024	12/11/2024	12/12/2024	12/13/2024	12/14/2024
Start Time (PST)	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM	6:30 AM
Site Wide Groundwater Sampling G3*, F3*, E4*, F4*, G4*, D5*, E5*, F5*, G5*, D6*, E6*, F6*, & G6*	No Work	Monthly sampling and transducer downloads	Monthly sampling and transducer downloads	Monthly sampling and transducer downloads	Monthly sampling and transducer downloads	Monthly sampling and transducer downloads	No Work
Site Wide Construction G5*	Node 2 to Node 1 Electrical Connections and Sunshade and Panel Installation	No Work	No Work	No Work	No Work	No Work	No Work
Site Wide Revegetation F5*	No Work	No Work	No Work	No Work	Irrigation O&M/Watering	No Work	No Work



Figure showing a grid superimposed on the Topock site map. Each grid position is denoted by an letter followed by a number.

Attachment G
Groundwater Monitoring Data (DTSC
Condition of Approval xi)

(Groundwater Data Presented in Separate PDF)