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March 10, 2019

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Subject: February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup, PG&E Topock Compressor Station, Needles, California
(Document ID: TPK_Monthly Progress Report_February 2019)

Dear Ms. Innis and Mr. Yue:

In compliance with the *1996 Corrective Action Consent Agreement* (CACA) (Attachment 6, Part E, Section 9a and Attachment 7) and the *2013 Remedial Design/Remedial Action Consent Decree* (CD) (§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 during February 2019 as well as activities planned for the next six weeks (March 10 through April 20, 2019), and presents available results from sampling and testing performed in February 2019.

In addition, this report 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 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 in support of DOI's 2012 Community Involvement Plan and DTSC's 2013 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 (ARARs) and the Subsequent Environmental Impact Report (SEIR) 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 start-up of the groundwater remedy at the Topock Compressor Station which officially began on October 2, 2018. This is the fifth monthly progress report. Please contact me at (760) 791-5884 if you have any questions or comments regarding this submittal.

Sincerely,

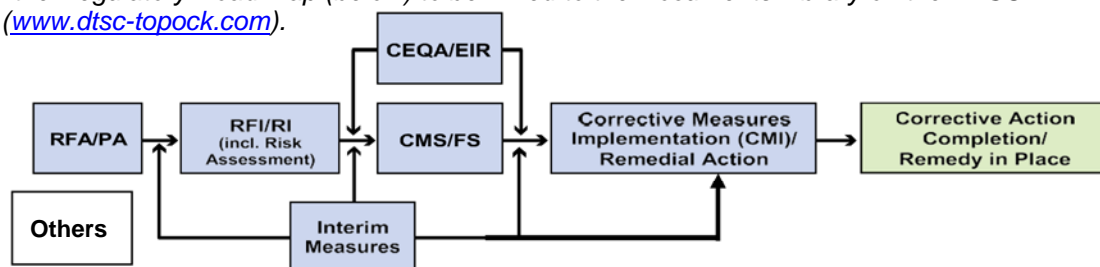
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Topock Project Executive Abstract

<p>Document Title: <i>February 2019 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: 3/10/2019</p> <p>Who Created this Document?: (i.e. PG&E, DTSC, DOI, Other) PG&E</p>
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<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>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 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 (RI) (including Risk Assessment)</p> <p><input type="checkbox"/> Corrective Measures Study (CMS)/Feasibility Study (FS)</p> <p><input checked="" type="checkbox"/> Corrective Measures Implementation (CMI)/ Remedial Action(RA)</p> <p><input type="checkbox"/> California Environmental Quality Act (CEQA)/ 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 during February 2019 and activities planned for the next six weeks (March 10 through April 20, 2019) and presents available results from sampling and testing in February 2019. 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 2013 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>	

Related Reports and Documents:

Click any boxes in the Regulatory Road Map (below) to be linked to the Documents Library on the DTSC Topock Web Site (www.dtsc-topock.com).



Legend

RFA/PA – RCRA Facility Assessment/Preliminary Assessment

RFI/RI – RCRA Facility Investigation/CERCLA Remedial Investigation (including Risk Assessment)

CMS/FS – RCRA Corrective Measure Study/CERCLA Feasibility Study



February 2019
Monthly Progress Report for the
Final Groundwater Remedy Construction and Startup

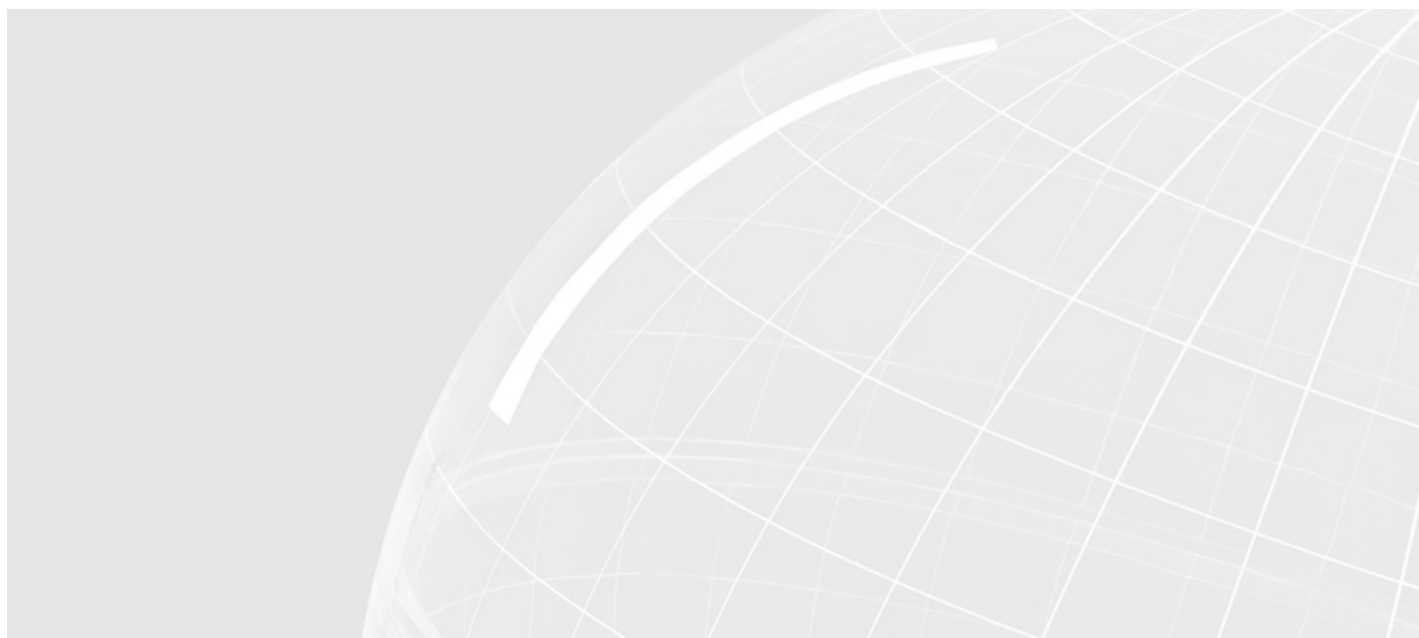
PG&E Topock Compressor Station
Needles, California

Document ID: TPK_Monthly Progress Report_February 2019

March 2019

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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Acronyms and Abbreviations

µg/m ³	micrograms per cubic meter
AOC	Area of Concern
APE	Area of Potential Effect
ARAR	applicable or relevant and appropriate requirement
bgs	below ground surface
BLM	U.S. Bureau of Land Management
BMP	best management practice
CACA	Corrective Action Consent Agreement
C/RAWP	Construction/Remedial Action Work Plan
CD	Consent Decree
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH2M	CH2M HILL, Inc.
CHQ	Construction Headquarters
DOI	United States Department of the Interior
DTSC	California Department of Toxic Substances Control
ERTC	Environmental Release to Construct
FCR	field contact representative
LOC	level of concern
NTH	National Trails Highway
PBA	Programmatic Biological Agreement
PG&E	Pacific Gas and Electric Company
RCRA	Resource Conservation and Recovery Act
SEIR	Subsequent Environmental Impact Report
SPY	Soil Processing Yard
SWPPP	Stormwater Pollution Prevention Plan
TCS	Topock Compressor Station
TRC	Technical Review Committee
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
WEAT	Worker Environmental Awareness Training
WVR	Work Variance Request

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 (CERCLA) 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 electronic progress reports during construction of the remedial action and 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 (RCRA) 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 above 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 HILL, Inc. [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 fifth of the monthly progress reports that will be submitted to DOI and DOI for the duration of the remedy construction and startup. This monthly progress report documents activities during February 2019, and follows the content and format described in Exhibit 2.6-2 of the approved C/RAWP. The report is organized as follows:

- **Section 2.1** describes 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 (WVRs; 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.
- **Section 2.2** summarizes 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, 2013) 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 2.3** describes the planned activities for the next six weeks (construction activities, sampling and monitoring events, etc.).
- **Section 2.4** 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 3** lists the references cited in this report.

Please note that since activities conducted to comply with the project's Applicable or Relevant and Appropriate Requirement (ARARs) 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 Description of Activities and Work Completed

2.1.1 Work Completed

Highlights of key activities related to the construction of the groundwater remedy completed during February 2019 include the following (in chronological order):

- 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 (USFWS), Tribes, and the Technical Review Committee (TRC). PG&E continues to send these weekly emails to date. As of February 28, 2019, a total of 32 six-week look-ahead schedule emails have been sent. **Of those, four six-week look-ahead schedule emails were sent in February 2019 (on February 3, 9, 23, and 28, 2019).**
 - On February 3, 2019, PG&E announced that the temporary shutdown has been lifted and remobilization to the project site would occur during the period of February 3 through 9, 2019.
- On August 10, 2018, PG&E issued the first Environmental Release to Construct (ERTC) to contractors. As of February 28, 2019, a total of 32 ERTCs were issued for mobilization and construction activities (see Table 2-1). **Of those, three ERTCs were issued in February 2019.**
- 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. **In February 2019, a total of 17 daily construction activities lists were published and discussed at the morning tailboards.**
- In February 2019, PG&E completed the following construction activities (see Figures 2-1 and 2-2 for locations of key areas and wells, as well as select photos in **Attachment A**):
 - Remobilized to the project site.
 - Commenced grubbing and clearing along Pipeline C alignment in the floodplain, including in BNSF and Caltrans Right-of-Way (ROWs).
 - Commenced trenching at Pipeline C Segment C5.
 - Completed site preparation activities for the upgrade of the Brine Tanks Containment at the MW-20 Bench.
 - Completed installation of water service pipes for wells in the floodplain.
 - **Pilot Boring/Well Installation Activities (Rotasonic drilling):**
 - a) Completed drilling pilot borehole at IRZ-16 to 207 feet on February 28, 2019. Backfilled with gravel.
 - b) Completed drilling one of two boreholes at MW-B to total depth of 357 feet on February 28, 2019. Reaming with 10" to 110 feet.
 - c) Completed drilling one of two boreholes at MW-N to total depth of 247 feet on February 27, 2019. Reaming with 10" to 127 feet.
 - d) Completed installation of well MW-G on February 17, 2019. Started well development.
 - e) See **Attachment B** for available information such as boring logs and water analytical results.
 - **Baseline/Opportunistic Soil Sampling Activities:**

- Pursuant to the Baseline Soil Sampling and Analysis Plan (Appendix A of the Soil Management Plan [which is Appendix L of the C/RAWP]), one soil sample was collected at approximately 1 foot below ground surface (bgs) at MW-D (sampled on February 15, 2019), and at the center of the new brine tank containment footprint (sampled on February 19, 2019).
- See **Attachment C** for information about soil sampling locations and soil analytical results that are available at this time.
- **Perimeter Air Sampling Activities:**
 - a) Dust monitoring was conducted through February 28, 2019 at the perimeter of select work areas.
 - b) Perimeter air sampling for hexavalent chromium is performed at the perimeter of the work areas (outside of the exclusion zone) that are inside Areas of Concern (AOCs) within the construction footprint where hexavalent chromium concentrations in soil have been historically reported. No perimeter air sampling was conducted in February 2019.
 - c) See **Attachment D** for information about previous air sampling locations and air analytical results.
- **Noise Monitoring Activities:**
 - a) Noise monitoring is conducted at pre-approved locations closest to the construction activities. Through February 28, 2019, noise monitoring was conducted at the following pre-approved locations:
 - Location west of the mobile home park at Moabi Regional Park,
 - Location Maze B Combined Area 1/2, and
 - Location Maze C Area 1.
 - b) See **Attachment E** for information about pre-approved noise monitoring locations and a summary of noise monitoring data available to date.

2.1.2 Work Already Underway and During Implementation

As of February 28, 2019, PG&E has started and will continue to perform the following activities:

- Continue site preparation, potholing, and vegetation clearance along Pipeline C alignment in the floodplain.
- Complete the upgrade of the Brine Tanks containment at MW-20 Bench.
- Complete drilling of pilot borehole at IRZ-17.
- Complete reaming at MW-B in the floodplain and MW-N in the upland.
- Continue development at MW-L (in the upland), MW-F (along NTH), and MW-G (along NTH).
- Continue weekly watering of the transplanted plants at the approved location off NTH (except when it rains).
- Continue to conduct noise and dust monitoring and inspection of Stormwater Pollution Prevention Plan (SWPPP) Best Management Practices (BMPs).
- Continue to track and manage waste generated.
- Continue to manage displaced soil per the approved Soil Management Plan (Appendix L of the C/RAWP).

2.1.3 Freshwater Usage, Waste Generation and Management

As of February 28, 2019, the volumes of freshwater used for remedy construction and waste streams generated from remedy construction (starting on October 2, 2018) are as follows:

- Approximately 667,500 gallons of freshwater was used, of which an approximate 2 percent was for pilot boring/well installation and general construction activities and 98 percent was for fugitive dust suppression.
- Approximately 63.2 cubic yards of drill cuttings were generated from well drilling and geotechnical investigation. Of those, approximately 1.3 cubic yards are clay from Pipeline F geotechnical investigation. Drill cuttings are typically stored in roll-off bins with closed tops. Samples are collected from the bins for characterization and analyzed in accordance with the Soil Management Plan. Based on analytical results obtained to date, soil has been classified as clean and is stockpiled at the SPY for reuse onsite.
 - Note that per DOI's direction, the clay collected from the Pipeline F geotechnical investigation is stockpiled at the SPY, separate from the other clean soil.
- Displaced soil was generated from the brine tanks containment upgrade at the MW-20 Bench. Samples were collected for characterization and analyzed in accordance with the Soil Management Plan. Analytical results are forthcoming. This soil is currently stockpiled at the SPY.
- Approximately 30,820 gallons of wastewater were generated from drilling operations. At each drilling location, the wastewater is initially stored in a 3,000-gallon holding tank in the primary work zone, and is transferred from the primary work zone, as needed, to 20,000-gallon frac tanks located at the MW-20 Bench. Each transfer load is tracked. Once a frac tank is full, its contents will be characterized and managed in accordance with the approved Waste Management Plan (Appendix R of the C/RAWP).
 - One wastewater frac tank was sampled on December 18 and 28, 2018. Analytical results indicated that the wastewater is of acceptable quality for disposal at the Compressor Station evaporation pond #4. Approximately 14,050 gallons of wastewater was discharged to pond #4 on February 15-16, 2019.
 - One wastewater frac tank was sampled on February 21, 2019. Analytical results indicated that the wastewater is of acceptable quality for disposal at the Compressor Station evaporation pond #4. Target disposal in March 2019.
- Approximately 102 cubic yards of general construction waste, 60 cubic yards of recyclables, and 163.7 tons of green waste were generated and transported to Republic Services in Lake Havasu City for disposal and management.
- Sanitary waste from construction trailers/portable toilets that is hauled offsite as needed.

2.1.4 Worker Training and Education

- PG&E continues to provide the mandatory Site Health and Safety Training for its employees and contractors on a daily basis. As of February 28, 2019, a total of 54 health and safety training sessions were held and 233 employees and contractors received the training. **Of those, in February 2019, ten sessions were conducted and 15 employees/contractors were trained.** After the training, the attendees signed the training roster.
- PG&E continues to provide the mandatory Worker Environmental Awareness Training (WEAT) to its employees and contractors that will be involved in the remedy construction project. The training is offered regularly on Mondays and Thursdays, and more frequently as needed. As of February 28, 2019, a total of 54 WEAT sessions were conducted and 267 employees and contractors received the training. **Of those, in February 2019, seven sessions were conducted and 15 employees/contractors were trained.** Educational brochures are made available to attendees of the training; they are designed to reinforce the key topics and highlight the take-aways discussed during the classroom training. After the training, the attendees signed the training roster.

- PG&E's onsite biologist also trained Field Contact Representatives (FCRs), who will be responsible for compliance with biological avoidance and mitigation measures. As of February 28, 2019, a total of 7 FCR training sessions were conducted and 33 employees and contractors received the training. **A FCR refresher session was conducted on February 19, 2019.**
- Training records are kept electronically and at the temporary construction trailers at the SPY. The records are available upon request.

2.1.5 Status of Work Variance Requests

There was no request for work variance in February 2019. See Table 2-2 for information regarding activities related to previously proposed WVRs (i.e., material deviations from the design documents, the C/RAWP, or other approved work plans), and agencies' actions on those requests.

2.1.6 Use of Future Activity Allowance

There was no proposed use of Future Activity Allowance (FAA) to date.

2.1.7 Issues Encountered and Actions Taken to Rectify Issues/Problems

- As reported in the January 2019 monthly progress report, pursuant to the General Management Measure # 16 of the Programmatic Biological Agreement (PBA) (CH2M, 2014), PG&E has sought approvals from BLM, USFWS, and CDFW for work outside of the designated work area (i.e., the designated maximum construction footprint) in nine locations where space within the current maximum construction footprint is not adequate for construction activities. These locations include Pipeline C along segments C1-C3 and just south of the BNSF railroad bridge, Pipeline C jack-and-bore pit locations on the east and west side of National Trails Highway (NTH), an area east of MW-G, the transition between Bat Cave Wash and the access road up to MW-M, and the area just south of the rip-rap inside the jurisdictional wash. Note that all construction work is still being conducted inside the Area of Potential Effects (APE) and the SEIR Project Area.
 - PG&E received approvals for seven of the nine locations. However, two pipeline C jack-and-bore pit locations on the east and west side of NTH were not approved. DOI requested that PG&E evaluated options to avoid or minimize impacts to a large palo verde and three mature mesquite plants west of NTH. On February 28, 2019, PG&E proposed to move the two jack-and-bore pit locations further east. This relocation would avoid impact to the large palo verde tree and minimize impacts to the mature mesquite plants. A more detailed installation plan for the jack-and-bore is being developed.
- On February 26-27, 2019, the planned development at three of the four wells at MW-L was temporarily halted because the 10-foot development bailer could not be advanced to each well bottom. A downhole video survey was conducted on March 1, 2019. The downhole video survey did not find any evidence with the PVC casings from the heat of hydration from the cement grout in the unsaturated zone at MW-L (i.e., no evidence of bulging or ruptured casing or casing collapse and the fact that the camera could be advanced to each well bottom). PG&E believes that the reason the 10-foot development bailer could not be used for development was the casings may have flexed during installation and were therefore not straight enough to insert the bailer down the wells at MW-L. Therefore, a shorter bailer was used to complete the development at MW-L.
- On February 27, 2019, a hydraulic hose located on a PIVOX-operated skid steer (in the floodplain) ruptured resulting in approximately 6-7 ounces of oil contacting the sand. The operator stopped the activity and called his supervisor. The affected soil/sand was cleaned up and placed into a 5-gallon bucket. The affected soil/sand will be disposed off-site.
- On February 27, 2019, as the driller was standing on the deck of the rig, he noticed the soil was saturated near the mud tub. As he approached the saturated soil, he noticed that the drilling return came up around the surface casing onto the ground. The release material was a mixture of freshwater and aquifer water. Approximately two 5-gallons buckets of wet soil were removed. The wet soil will be put into the soil bin along with the rest of the drill cuttings.

- **Root cause** – Drilling activity causing the ground to cave in slightly as drilling activity settled on the soil that was loosened during site preparation. The shifting ground weakened the seal around the mud tub, causing the seal to leak and release water onto the ground.
- **Corrective action to prevent reoccurrence** – Seal will be more carefully inspected during each day and upon setup. Site preparation activities should include soil compaction prior to drill rig set up.

2.1.8 Key Personnel Changes

There was no change to key PG&E project personnel in February 2019.

2.2 Communication with the Public

PG&E does not have any key communications with the public that occurred in February 2019.

2.3 Planned Activities for Next Six Weeks

The planned activities for next six weeks (March 10 through April 20, 2019) include the following:

- Well installation activities:
 - Complete installation of wells MW-N, MW-B, MW-M, MW-W, MW-X, and MW-11D.
 - Complete drilling pilot borehole at IRZ-17, IRZ-27, and IRZ-33.
 - Complete well installation at IRZ-20, IRZ-21, and IRZ-25.
- Non-well construction activities:
 - Conduct pre-characterization of soil along planned pipeline alignment and in infrastructure location within AOCs.
 - Complete grubbing and clearing along Pipeline C alignment.
 - Continue to install Pipeline C electrical conduits and liquid conveyance pipelines in the floodplain.
 - Additional plant transplantation.
 - Complete the upgrade of Brine Tanks containment at the MW-20 Bench.
 - Continue to conduct noise and dust monitoring and inspection of SWPPP BMPs.
 - Continue to log and manage waste generated.
 - Continue to manage displaced soil per the approved Soil Management Plan.

Attachment F 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 end 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).

2.4 Construction Schedule Review

Phase 1 of the groundwater remedy construction started on October 2, 2018. The project was temporarily shut down from January 16 through February 3, 2019 due to PG&E's bankruptcy filing. Table 2-3 presents a summary of the percent completeness for key construction activities as of February 28, 2019. PG&E is currently evaluating impacts, if any, from the shutdown on the overall construction schedule and will report the evaluation results in the next monthly progress report.

2.5 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 validated data in each monthly progress report starting with the November 2018 report (see **Attachment G**).

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). 2013. *Community Outreach Plan, Pacific Gas and Electric Company's Topock Compressor Station, Needles, California*. http://dtsc-topock.com/sites/default/files/2013-01-11_FinalCOP_Web.pdf. January.

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.

California Department of Toxic Substances Control (DTSC). 2018b. *Final Subsequent Environmental Impact Report for the Pacific Gas and Electric Company Topock Compressor Station Final Groundwater Remediation Project*. April 24.

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

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.

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Tables

Table 2-1 Summary of Environmental Release-To-Constructions (ERTCs) Issued to Contractors*February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup**PG&E Topock Compressor Station, Needles, California*

ERTC No.	Brief Description of Covered Areas and Scope of Authorized Activities	Issue Date
Non-Well ERTCs		
1	Initial mobilization activities at the Construction Headquarters (CHQ), Soil Processing Yard (SPY), and three staging areas (#9 Parking area off I-40, #18 MW-20 Bench, and #23 Transwestern Bench). Scope included installation of temporary construction trailers, portable generators, SWPPP BMPs, construction signages, and temporary construction fencing, as well as equipment staging and truck inspections.	August 10, 2018
Addendum 1 to ERTC #1	Scope included setup of wastewater and freshwater storage tanks at MW-20 Bench, improvement of the access road at the CHQ, installation of perimeter fence at the SPY, and grading at SPY.	September 21, 2018
Addendum 2 to ERTC #1	Scope included grading for drill rig setup at IRZ-20.	October 4, 2018
Addendum 3 to ERTC #1	Scope included geotechnical investigation in the footprint of the future Carbon Amendment building at the MW-20 Bench.	October 9, 2018
Addendum 4 to ERTC #1	Scope included the installation of a temporary handrail along the walkway from the MW-20 Bench to the floodplain.	December 28, 2018
2	Scope included the installation of the temporary construction water system and construction water tanks at Area #25 Route 66 Welcome Sign.	September 28, 2018
3	Scope included the installation of the Public Information Trailer, a fugitive dust sign, an information kiosk, and a construction delivery sign at the northwest corner of Park Moabi Road and National Trails Highway (NTH).	September 4, 2018
4	Scope included the installation of a truck containment pad at the TCS evaporation ponds and maintenance of the access road to the ponds.	September 24, 2018
6	Scope included the geotechnical investigation along Pipeline F alignment (on the Compressor Station entrance road).	October 3, 2018
7	Scope included the installation of traffic control along the southern end of NTH per the Traffic Control Plan.	September 17, 2018
9	Scope included the transplantation and planting of sensitive plants.	November 9, 2018
11	Scope included preparation of temporary staging areas, vegetation clearance, placement of stabilization mats, potholing in select locations, and installation of Pipeline C segments C1 through C6 in the floodplain.	January 3, 2019
11a	Scope included preparation of temporary staging areas, vegetation clearance, placement of stabilization mats, potholing in select locations, and installation of Pipeline C segments C7-C10, and C17 in the floodplain	February 11, 2019
12	Scope included non-intrusive site preparation work for the brine tanks containment upgrade on the MW-20 Bench (per Work Variance Request #1, see Table 2-2). A forthcoming addendum to this ERTC will be issued to include the actual upgrade activities.	January 10, 2019
12a	Scope included the actual brine tanks containment upgrade activities which include intrusive work on the MW-20 Bench (per Work Variance Request #1, see Table 2-2).	February 6, 2019
Well ERTCs		
5a	Scope included the site setup, drilling, testing, and demobilization at MW-L.	September 27, 2018
5b	Scope included the placement of soil stabilization mats in the floodplain, setup of a temporary staging area near the north end of the access route in the floodplain, rig setup, installation of snow fence to protect plants, drilling, testing, and demobilization at IRZ-15.	October 12, 2018
5c	Scope included the site setup, drilling, testing, and demobilization at IRZ-20 on the MW-20 Bench.	October 15, 2018
5d	Scope included the site setup, drilling, testing, and demobilization at MW-E on the MW-20 Bench.	October 29, 2018
5e	Scope included the site setup, drilling, testing, and demobilization at MW-N in the upland.	November 15, 2018
5f	Scope included the site setup, drilling, testing, and demobilization at IRZ-13 in the floodplain.	November 7, 2018

Table 2-1 Summary of Environmental Release-To-Constructions (ERTCs) Issued to Contractors

February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California

ERTC No.	Brief Description of Covered Areas and Scope of Authorized Activities	Issue Date
5g	Scope included the site setup, drilling, testing, and demobilization at IRZ-23 on the MW-20 Bench.	November 8, 2018
5h	Scope included the site setup, drilling, testing, and demobilization at MW-M in the upland.	January 15, 2019
5i	Scope included the site setup, drilling, testing, and demobilization at IRZ-9 in the floodplain.	November 28, 2018
5j	Scope included the site setup, drilling, testing, and demobilization at IRZ-25 on the MW-20 Bench.	December 3, 2018
5k	Scope included the site setup, drilling, testing, and demobilization at IRZ-21 on the MW-20 Bench.	December 9, 2018
5l	Scope included the site setup, drilling, testing, and demobilization at MW-B in the floodplain.	December 10, 2018
Addendum to ERTC #5l	Scope included the setup of an additional temporary equipment and material staging area in the floodplain.	December 13, 2018
5m	Scope included the site setup, drilling, testing, and demobilization at MW-F along NTH.	December 17, 2018
5n	Scope included the site setup, drilling, testing, and demobilization at IRZ-11 in the floodplain.	December 17, 2018
5p	Scope included the site setup, drilling, testing, and demobilization at MW-G along NTH.	January 14, 2019
5q	Scope included the site setup, drilling, testing, and demobilization at IRZ-16 and IRZ-17 in the floodplain.	February 14, 2019

Note:

ERTC 8 (Wastewater Management), ERTC 10 (Potholing to pre-characterize soil along select pipelines), and ERTC 5o (Installation of MW-X/Y') are under development.

Table 2-2 Summary of Work Variance Requests (WVRs)

February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California

WVR No.	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 UV 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 (see 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</p> <p>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 Station'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 high-density polyethylene (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 SoCal 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 below:</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>

Note:

* 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.

Table 2-3 Summary of Percent Completeness of Key Construction Activities

*February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California*

Activity	% Complete	Current Status of Construction Activities (as of February 28, 2019)
Project signage & Public Information Office	100%	Complete.
Staging Area 9 setup	100%	Complete.
Staging Area 23 setup	100%	Complete.
Staging Area 18 setup	100%	Complete.
Temporary construction offices at Soil Processing Yard	100%	Complete.
Soil Processing Yard setup for construction staging	100%	Complete.
National Trails Highway lane closure and traffic control installation	100%	Complete.
Temporary construction water line	100%	Complete.
TCS Ponds concrete containment pad	100%	Complete.
Construction Headquarters access road	85%	Site prep, excavation, conduit installation, subgrade backfill, and concrete placement complete. Available for use in January after concrete cure period
Pipeline C Segments C1 through C10	2%	Segment C5 electrical conduit underway. Segment C3 to start in March. Floodplain vegetation clearing continued in February, complete in March.
Brine Tanks containment upgrade	Not Available	Completed excavation, backfill and compaction.
MW-B	Not Available	Drilling in progress.
MW-E	100%	Complete.
MW-F	95%	Well construction complete. Develop in March.
MW-G	95%	Well construction and development complete. Well head completion in March.
MW-L	95%	Well construction complete. Develop in March.
MW-N	Not Available	Drilling in progress.
IRZ-9 pilot boring	100%	Complete.
IRZ-15 pilot boring	100%	Complete.
IRZ-13 pilot boring	100%	Complete.
IRZ-16 pilot boring	95%	Gravel backfill on March 1.
IRZ-17 pilot boring	5%	Site preparation complete, drilling in March.
IRZ-20 pilot boring	100%	Complete.
IRZ-21 pilot boring	100%	Complete.
IRZ-23 pilot boring	100%	Complete.
IRZ-25 pilot boring	100%	Complete.

Figures

Attachment A

Photographs

PL01 Photo Log

Project	Topock General Photos
ID	39808
Survey Date	02/28/2019
User	Christina Hong
ERTC	Various
Photo(s)	



vegetation removal in BNSF ROW



development at MW-F



Pipeline C5 trenching/installation



Vegetation removal along Pipeline C



brine tanks containment upgrade

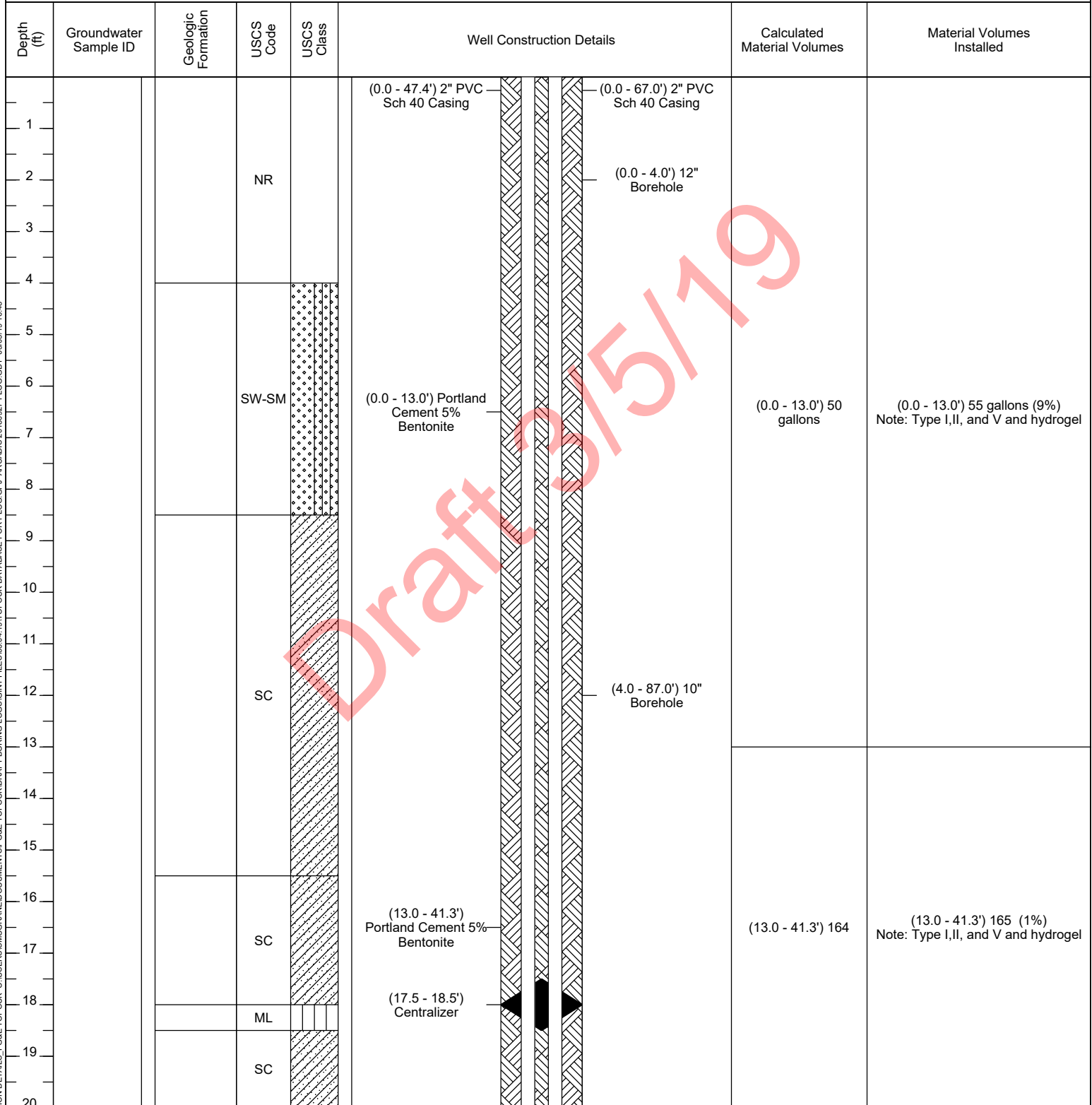


Brine tanks containment upgrade

Photo Name	Site photos collected in February 2019
Photo Type	Other
Lat/Long of Photo	
Description of Photo Point	Photos in feb 2019

Attachment B
Available Boring Logs and Groundwater
Sample Results from Well Drilling

Date Started: 02/13/2019	Surface Elevation: N/A	Well ID: MW-G-57, MW-G-82
Date Completed: 02/18/2019	Northing (NAD83): N/A	
Drilling Co.: Cascade	Easting (NAD83): N/A	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 87 ft bgs	Location: Groundwater Remedy Phase I
Driller Name: Steve Vasquez	Borehole Diameter: 6 in	Needles, California
Drilling Asst: L. Amaya/ O. Flores	Water Level Start: 50 ft bgs	
Logger: Sean McGrane	Water Level Finish: N/A	Project Number: Topock
Editor: Sean McGrane	Development Date: N/A	
Weather: Sunny, rain, warm to cool	Well Completion: <input type="checkbox"/> Flush <input type="checkbox"/> Stick-up	



Remarks: USCS = Unified Soil Classification System, ppb = Parts per Billion.

Date Started: 02/13/2019	Surface Elevation: N/A	Well ID: MW-G-57, MW-G-82
Date Completed: 02/18/2019	Northing (NAD83): N/A	
Drilling Co.: Cascade	Easting (NAD83): N/A	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 87 ft bgs	Location: Groundwater Remedy Phase I
Driller Name: Steve Vasquez	Borehole Diameter: 6 in	Needles, California
Drilling Asst: L. Amaya/ O. Flores	Water Level Start: 50 ft bgs	
Logger: Sean McGrane	Water Level Finish: N/A	Project Number: Topock
Editor: Sean McGrane	Development Date: N/A	
Weather: Sunny, rain, warm to cool	Well Completion: <input type="checkbox"/> Flush <input type="checkbox"/> Stick-up	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction Details	Calculated Material Volumes	Material Volumes Installed
21					(0.0 - 47.4') 2" PVC Sch 40 Casing		
22			SC				
23							
24							
25			SM				
26							
27			SM				
28							
29							
30					(13.0 - 41.3') Portland Cement 5% Bentonite		
31						(13.0 - 41.3') 164	(13.0 - 41.3') 165 (1%) Note: Type I,II, and V and hydrogel
32			SM				
33							
34							
35							
36			SM				
37							
38							
39			SM				
40							

Remarks: USCS = Unified Soil Classification System, ppb = Parts per Billion.

Date Started:	02/13/2019	Surface Elevation:	N/A	Well ID: MW-G-57, MW-G-82
Date Completed:	02/18/2019	Northing (NAD83):	N/A	
Drilling Co.:	Cascade	Easting (NAD83):	N/A	Client: PG&E
Drilling Method:	Sonic Drilling	Total Depth:	87 ft bgs	Location: Groundwater Remedy Phase I
Driller Name:	Steve Vasquez	Borehole Diameter:	6 in	Needles, California
Drilling Asst:	L. Amaya/ O. Flores	Water Level Start:	50 ft bgs	
Logger:	Sean McGrane	Water Level Finish:	N/A	Project Number: Topock
Editor:	Sean McGrane	Development Date:	N/A	
Weather:	Sunny, rain, warm to cool	Well Completion:	<input type="checkbox"/> Flush <input type="checkbox"/> Stick-up	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction Details	Calculated Material Volumes	Material Volumes Installed
41			SM		(13 - 41.3') Portland Cement 5% Bentonite	(13.0 - 41.3') 164	(13.0 - 41.3') 165 (1%) Note: Type I,II, and V and hydrogel
42					(0.0 - 47.4') 2" PVC Sch 40 Casing		
43					(41.3 - 45.0') Bentonite seal chips	(41.3 - 45.0') 2.79 bags	(41.3 - 45.0') 3 bags (7%) Note: Puregold medium chips
44							
45			SM				
46							
47							
48					(47.4 - 57.4') 2" Sch 40 PVC (20-slot) Screen		
49							
50					(4.0 - 87.0') 10" Borehole		
51			SM				
52							
53	MW-G-VAS-52.0-57.0 (680 ppb)				(45.0 - 61.0') Monterey #3 (52.5 - 53.5') Centralizer	(45.0 - 61.0') 15.05 bags	(45.0 - 61.0') 18 bags (16%) Note: Cemex, clean, graded, kiln dried. Extra volume was due to widening of borehole during flushing of fines.
54							
55							
56			SM				
57							
58			ML				
59							
60			ML				

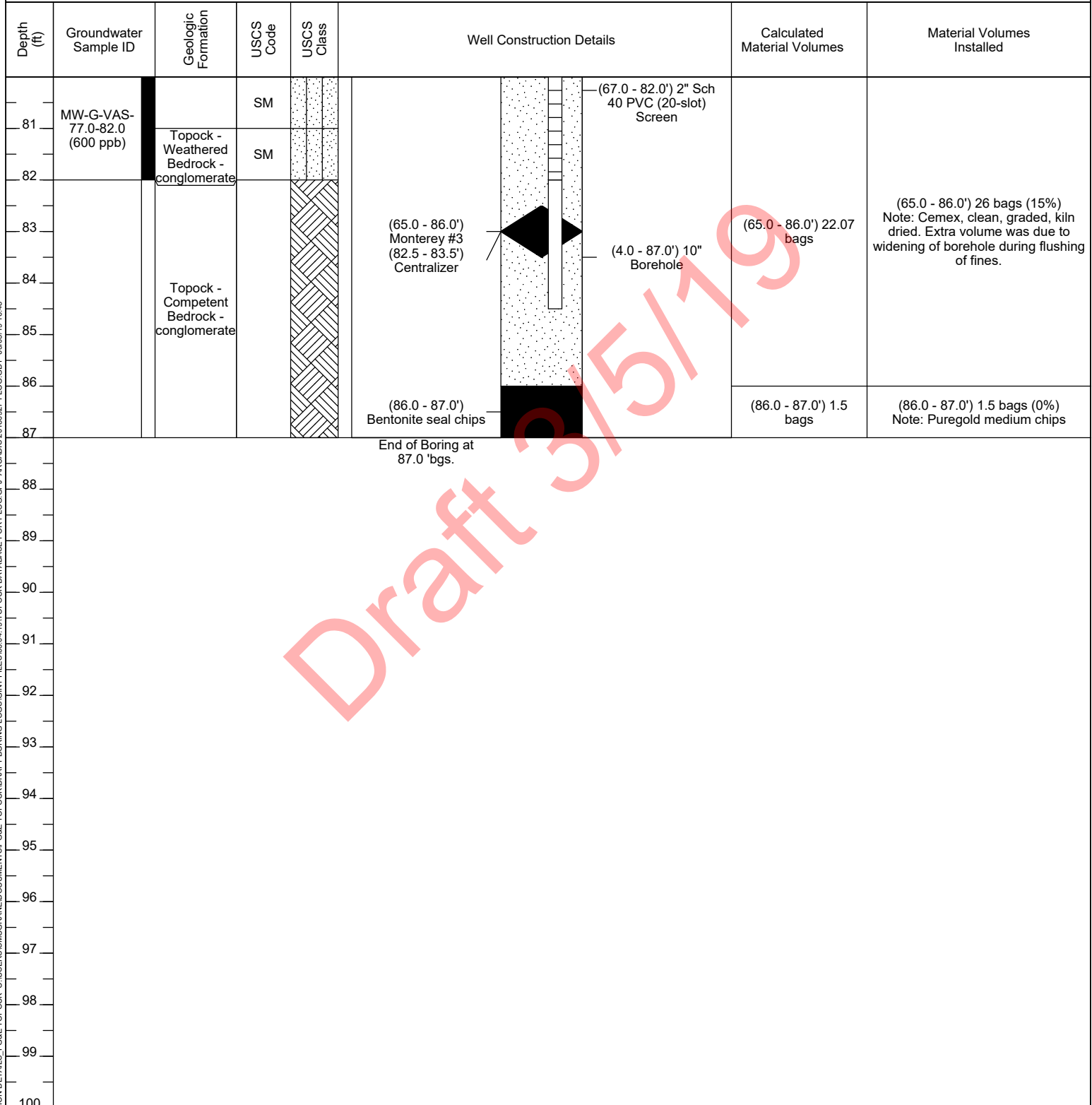
Remarks: USCS = Unified Soil Classification System, ppb = Parts per Billion.

Date Started:	02/13/2019	Surface Elevation:	N/A	Well ID: MW-G-57, MW-G-82
Date Completed:	02/18/2019	Northing (NAD83):	N/A	
Drilling Co.:	Cascade	Easting (NAD83):	N/A	Client: PG&E
Drilling Method:	Sonic Drilling	Total Depth:	87 ft bgs	Location: Groundwater Remedy Phase I
Driller Name:	Steve Vasquez	Borehole Diameter:	6 in	Needles, California
Drilling Asst:	L. Amaya/ O. Flores	Water Level Start:	50 ft bgs	
Logger:	Sean McGrane	Water Level Finish:	N/A	Project Number: Topock
Editor:	Sean McGrane	Development Date:	N/A	
Weather:	Sunny, rain, warm to cool	Well Completion:	<input type="checkbox"/> Flush <input type="checkbox"/> Stick-up	

Depth (ft)	Groundwater Sample ID	Geologic Formation	USCS Code	USCS Class	Well Construction Details	Calculated Material Volumes	Material Volumes Installed
61			ML		(45.0 - 61.0') Monterey #3	(45.0 - 61.0') 15.05 bags	
62							
63			ML		(61.0 - 65.0') Bentonite seal pellets	(61.0 - 65.0') 3.81 buckets	(61.0 - 65.0') 4 buckets (5%) Note: Pel-Plug 3/8" TR30
64							
65			CL				
66							
67			ML				
68			SM		(67.0 - 82.0') 2" Sch 40 PVC (20-slot) Screen		
69	MW-G-VAS-67.0-72.0 (920 ppb)						
70					(4.0 - 87.0') 10" Borehole		
71							
72			ML		(65.0 - 86.0') Monterey #3	(65.0 - 86.0') 22.07 bags	(65.0 - 86.0') 26 bags (15%) Note: Cemex, clean, graded, kiln dried. Extra volume was due to widening of borehole during flushing of fines.
73							
74							
75							
76							
77			SM				
78	MW-G-VAS-77.0-82.0 (600 ppb)		SM				
79							
80			SM				

Remarks: USCS = Unified Soil Classification System, ppb = Parts per Billion.

Date Started: 02/13/2019	Surface Elevation: N/A	Well ID: MW-G-57, MW-G-82
Date Completed: 02/18/2019	Northing (NAD83): N/A	
Drilling Co.: Cascade	Easting (NAD83): N/A	Client: PG&E
Drilling Method: Sonic Drilling	Total Depth: 87 ft bgs	Location: Groundwater Remedy Phase I
Driller Name: Steve Vasquez	Borehole Diameter: 6 in	Needles, California
Drilling Asst: L. Amaya/ O. Flores	Water Level Start: 50 ft bgs	
Logger: Sean McGrane	Water Level Finish: N/A	Project Number: Topock
Editor: Sean McGrane	Development Date: N/A	
Weather: Sunny, rain, warm to cool	Well Completion: <input type="checkbox"/> Flush <input type="checkbox"/> Stick-up	



Remarks: USCS = Unified Soil Classification System, ppb = Parts per Billion.

Table B-1. Groundwater Sampling Results for February 2019

February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
 PG&E Topock Compressor Station, Needles, California

Location	Sample ID	Sample Date	Depth Interval (ft bgs)	Total Dissolved Chromium (µg/L)	Hexavalent Chromium (µg/L)
MW-B	MW-B-VAS-27-32	01/06/19	27 - 32	5.9 J	7.7J
MW-B	MW-B-VAS-47-52	01/09/19	47 - 52	< 0.13 U	< 0.17 U
MW-B	MW-B-VAS-67-72	01/09/19	67 - 72	< 0.13 U	< 0.17 U
MW-B	MW-B-VAS-102-107	01/10/19	102 - 107	< 0.13 U	< 0.17 U
MW-B	MW-B-VAS-142-147	01/15/19	142 - 147	< 0.13 U	< 0.17 U
MW-B	MW-B-VAS-182-187	02/13/19	182 - 187	Data not yet available	< 0.17 U
MW-B	MW-B-VAS-207-212	02/14/19	207 - 212	Data not yet available	< 0.17 U
MW-B	MW-B-VAS-247-252	02/17/19	247 - 252	Data not yet available	< 0.83 U
MW-B	MW-B-VAS-264-269	02/18/19	264 - 269	Data not yet available	< 0.33 U
MW-B	MW-B-VAS-287-292	02/20/19	287 - 292	Data not yet available	< 0.17 U
MW-B	MW-B-VAS-317-322	02/21/19	317 - 322	Data not yet available	< 0.17 U
MW-B	MW-B-VAS-339-344	02/27/19	339 - 344	Data not yet available	< 0.33 U
MW-B	MW-B-VAS-352-357	02/28/19	352 - 357	Data not yet available	< 0.33 U
MW-E	MW-E-VAS-52-57	11/05/18	52 - 57	7800	7000
MW-E	MW-E-VAS-82-87	11/06/18	82 - 87	190	200
MW-E	MW-E-VAS-112-117	11/06/18	112 - 117	3000	3100
MW-E	MW-E-VAS-137-142	11/07/18	137 - 142	7900	7300
MW-E	MW-E-70-121418	12/14/18	70 (WD)	Data not yet available	3000
MW-E	MW-E-142-121418	12/14/18	142 (WD)	4500	4200
MW-F	MW-F-VAS-52-57	01/06/19	52 - 57	2700	2500
MW-F	MW-F-VAS-82-87	01/07/19	82 - 87	120	110
MW-F	MW-F-VAS-97-102	01/07/19	97 - 102	1900	1800
MW-F	MW-F-VAS-112-117	01/08/19	112 - 117	790	740
MW-G	MW-G-VAS-52-57	02/13/19	52 - 57	790	680
MW-G	MW-G-VAS-67-72	02/14/19	67 - 72	Data not yet available	920
MW-G	MW-G-VAS-77-82	02/15/19	77 - 82	Data not yet available	600
MW-L	MW-L-VAS-76-81	10/06/18	76 - 81	34	31
MW-L	MW-L-VAS-106-111	10/09/18	106 - 111	0.697 J	0.84
MW-L	MW-L-VAS-141-146	10/10/18	141 - 146	< 0.13 U	< 0.033 U
MW-L	MW-L-VAS-181-186	10/20/18	181 - 186	3.8	3.3
MW-L	MW-L-VAS-218-223	10/21/18	218 - 223	68	66
MW-L	MW-L-VAS-261-266	10/22/18	261 - 266	0.284 J	< 0.17 U
MW-N	MW-N-VAS-121-126	02/14/19	121 - 126	Data not yet available	0.51
MW-N	MW-N-VAS-142-147	02/16/19	142 - 147	Data not yet available	< 0.033 U
MW-N	MW-N-VAS-173-178	02/18/19	173 - 178	Data not yet available	< 0.033 U
MW-N	MW-N-VAS-210-215	02/21/19	210 - 215	Data not yet available	290
MW-N	MW-N-VAS-228-233	02/26/19	228 - 233	Data not yet available	< 0.17 U
IRZ-9	IRZ-9-VAS-27-32	12/03/18	27 - 32	120	120

Table B-1. Groundwater Sampling Results for February 2019

February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
 PG&E Topock Compressor Station, Needles, California

Location	Sample ID	Sample Date	Depth Interval (ft bgs)	Total Dissolved Chromium (µg/L)	Hexavalent Chromium (µg/L)
IRZ-9	IRZ-9-VAS-47-52	12/04/18	47 -52	< 0.13 U	< 0.033 U
IRZ-9	IRZ-9-VAS-62-67	12/04/18	62 -67	< 0.13 U	< 0.033 U
IRZ-9	IRZ-9-VAS-182-187	12/11/18	182 -187	< 0.13 U	< 0.17 U
IRZ-9	IRZ-9-VAS-207-212	12/13/18	207 -212	< 0.13 U	< 0.17 U
IRZ-9	IRZ-9-VAS-232-237	12/13/18	232 -237	0.811 J	< 0.17 U
IRZ-9	IRZ-9-VAS-264-269	12/15/18	264 -269	< 0.13 U	< 0.17 U
IRZ-9	IRZ-9-VAS-276-281	12/16/18	276 -281	< 0.13 U	< 0.17 U
IRZ-9	IRZ-9-VAS-292-297	12/18/18	292 -297	< 0.13 U	< 0.17 U
IRZ-13	IRZ-13-VAS-32-37	11/17/18	32 - 37	170	220
IRZ-13	IRZ-13-VAS-57-62	11/18/18	57 - 62	< 0.13 U	< 0.17 U
IRZ-13	IRZ-13-VAS-102-107	11/19/18	102 - 107	< 0.13 U	< 0.17 U
IRZ-13	IRZ-13-VAS-142-147	11/19/18	142 - 147	< 0.13 U	< 0.17 U
IRZ-13	IRZ-13-VAS-180-185	11/27/18	180 - 185	230	190
IRZ-13	IRZ-13-VAS-197-202	11/28/18	197 - 202	< 0.13	< 0.83
IRZ-13	IRZ-13-VAS-224-229	11/28/18	224 - 229	< 0.13	< 0.83
IRZ-13	IRZ-13-VAS-237-242	11/29/18	237 - 242	< 0.13 U	< 0.17 U
IRZ-15	IRZ-15-VAS-32-37	11/01/18	32 - 37	13	13
IRZ-15	IRZ-15-VAS-62-67	11/02/18	62 - 67	< 0.65 U	0.459 J
IRZ-15	IRZ-15-VAS-102-107	11/03/18	102 - 107	< 0.65 U	< 0.17 U
IRZ-15	IRZ-15-VAS-132-137	11/04/18	132 - 137	0.228 J	< 0.17 U
IRZ-15	IRZ-15-VAS-162-167	11/05/18	162 - 167	3400	3200
IRZ-15	IRZ-15-VAS-182-187	11/06/18	182 - 187	130	140
IRZ-15	IRZ-15-VAS-222-227	11/07/18	222 - 227	< 0.13 U	< 0.17 U
IRZ-16	IRZ-16-VAS-27-32	02/20/19	27 - 32	Data not yet available	480
IRZ-16	IRZ-16-VAS-57-62	02/20/19	57 - 62	Data not yet available	< 0.33 U
IRZ-16	IRZ-16-VAS-102-107	02/21/19	102 - 107	Data not yet available	< 0.33 U
IRZ-16	IRZ-16-VAS-132-137	02/26/19	132 - 137	Data not yet available	< 0.17 U
IRZ-16	IRZ-16-VAS-147-152	02/27/19	147 - 152	Data not yet available	< 0.17 U
IRZ-16	IRZ-16-VAS-172-177	02/27/19	172 - 177	Data not yet available	110
IRZ-16	IRZ-16-VAS-192-197	02/28/19	192 - 197	Data not yet available	< 0.17 U
IRZ-20	IRZ-20-VAS-51-56	10/20/18	51 - 56	130	150
IRZ-20	IRZ-20-VAS-82-87	10/21/18	82 - 87	< 0.13 U	< 0.033 U
IRZ-20	IRZ-20-VAS-112-117	10/22/18	112 - 117	< 0.13 U	< 0.17 U
IRZ-20	IRZ-20-VAS-131-136	10/23/18	131 - 136	< 0.13 U	< 0.17 U
IRZ-20	IRZ-20-VAS-173-178	10/24/18	173 - 178	< 0.13 U	< 0.83 U
IRZ-21	IRZ-21-VAS-52-57	12/15/18	52 - 57	100	97
IRZ-21	IRZ-21-VAS-77-82	12/16/18	77 - 82	1.3	1.1
IRZ-21	IRZ-21-VAS-112-117	12/16/18	112 - 117	< 0.13 U	< 0.17 U

Table B-1. Groundwater Sampling Results for February 2019

*February 2019 Monthly Progress Report for the Final Groundwater Remedy Construction and Startup
PG&E Topock Compressor Station, Needles, California*

Location	Sample ID	Sample Date	Depth Interval (ft bgs)	Total Dissolved Chromium (µg/L)	Hexavalent Chromium (µg/L)
IRZ-21	IRZ-21-VAS-132-137	12/17/18	132 - 137	< 0.13 U	< 0.17 U
IRZ-21	IRZ-21-VAS-147-152	12/18/18	147 - 152	4000	3600
IRZ-23	IRZ-23-VAS-67-72	12/01/18	67 - 72	86	85
IRZ-23	IRZ-23-VAS-92-97	12/01/18	92 - 97	0.453 J	< 0.033 U
IRZ-23	IRZ-23-VAS-122-127	12/02/18	122 - 127	2100	2000
IRZ-23	IRZ-23-VAS-139-144	12/02/18	139 - 144	3400	3000
IRZ-25	IRZ-25-VAS-52-57	12/05/18	52 - 57	4300	3500
IRZ-25	IRZ-25-VAS-67-72	12/05/18	67 - 72	750	620
IRZ-25	IRZ-25-VAS-92-97	12/06/18	92 - 97	140	130
IRZ-25	IRZ-25-VAS-112-117	12/11/18	112 - 117	< 0.13 U	< 0.17 U
IRZ-25	IRZ-25-VAS-147-152	12/11/18	147 - 152	3800	3600
IRZ-25	IRZ-25-VAS-162-167	12/13/18	162 - 167	3000	3000

Notes:

µg/L = micrograms per liter

ft bgs = feet below ground surface

J = The analyte was positively identified; however, the associated numerical value is an estimated concentration only

U = The analyte was analyzed for but not detected at the analyte method detection limit indicated

VAS = vertical aquifer sampling

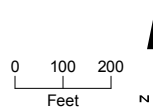
WD = sample from well development, depth noted is from bottom of screen

Attachment C
Soil Sampling Locations and Available Soil
Analytical Results
(Soil Data Presented in Excel File)



LEGEND

- Soil Sample Location



Baseline and Opportunistic Soil Sampling Locations

February 2019 Monthly Progress Report
Groundwater Remedy Phase 1 Construction
PG&E Topock Compressor Station, Needles, California

JACOBS

Attachment D
Perimeter Air Sampling Analytical Results

Attachment D. Perimeter Air Sampling Analytical Results

In conformance with the approved *Construction/Remedial Action Work Plan for the Final Groundwater Remedy, PG&E Topock Compressor Station, Needles, California* (CH2M, 2015), air monitoring has been conducted during construction to evaluate the ongoing effectiveness of the dust control program, to guide modifications to field activities and engineering control measures, if necessary, and to document that construction activities do not result in the migration of soil contaminants beyond the work area boundaries.

Perimeter air monitoring has been performed if construction activities have the potential to generate visible dust. The air monitoring program consists of both real-time fugitive dust monitoring and perimeter air sampling for select soil contaminants. Locations to be monitored and sampled are as follows:

- Real-time fugitive dust monitoring is performed at the perimeter of the work areas (outside of the exclusion zone) that have the potential to generate visible dust, including the Construction Headquarters (CHQ) and the Soil Processing Yard (SPY).
- Perimeter air sampling for hexavalent chromium is performed at the perimeter of the work areas (outside of the exclusion zone) that are inside Areas of Concern (AOCs) within the construction footprint where hexavalent chromium concentrations in soil have been historically reported. Air sampling for hexavalent chromium in the SPY will be performed when soil from AOCs with reported concentrations of hexavalent chromium is actively being processed. Air sampling may also be performed at other work areas at the site based on hexavalent chromium concentrations reported from new soil data or based on field observations during construction activities.
- Air sampling for asbestos will be limited to work areas where Asbestos Containing Material (ACM) has been observed in prior field investigations, including two areas in AOC 12 and one area in AOC 4. Perimeter air monitoring may also be performed at other work areas at the site if ACM is discovered during construction activities.

Project-specific levels of concern (LOC) and action levels were developed as an indicator to determine whether additional dust control measures, as presented in the project's Dust Control Plan required by the Mojave Desert Air Quality Management District (MDAQMD), are necessary.

- The LOCs, which represent conservative concentrations of compounds that receptors outside the work area could be safely exposed to during construction, have been evaluated for all compounds that have been detected in soil samples collected at the site in the prior investigations. The LOCs were developed using standard U.S. Environmental Protection Agency (USEPA) and California Environmental Protection Agency risk assessment methodology, toxicology data, and exposure assumptions (USEPA, 2009, 2017; California Department of Toxic Substances Control [DTSC], 2018). Both cancer and noncancer health effects were considered. For each type of health effect, the LOC was back-calculated from an established target or from acceptable cancer risk or noncancer hazard where USEPA or DTSC toxicity values are available. The LOCs for cancer effects are based on a target excess cancer risk of one in a million (1×10^{-6}). The LOCs for noncancer effects are based on a target hazard quotient of 1. The LOCs were developed using these assumptions:
 - Receptors are present outside the perimeter of the work areas
 - Exposure via inhalation is 10 hours per day for a 10 days on /4 days off schedule
 - Duration of Phase 1 of the final groundwater remedy construction is 20 months
- The action level for fugitive dust monitoring is 100 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) for a net (downwind minus upwind) dust concentration. This action level is based on MDAQMD Rule 403, Part C. A 10-hour time-weighted average of readings collected throughout the work day will be used to document compliance with MDAQMD Rule 403.
- For analytes detected in soil, the following equation was used to calculate maximum allowable airborne particulate concentrations for receptor exposure outside the work area (based on the approach presented by Marlowe (1999):

$$AL = \frac{LOC \times 1,000,000 \text{ mg/kg}}{CS}$$

Where:

AL = action level for airborne particulates ($\mu\text{g}/\text{m}^3$)

LOC = Project specific risk-based level of concern ($\mu\text{g}/\text{m}^3$)

CS = maximum detected concentration of compound in site soil (milligrams per kilogram [mg/kg])

Action levels were determined as follows:

- Soil data from prior investigations were gathered for the entire site.
- Sample locations within the maximum construction footprint were evaluated. Some sample locations were removed from evaluation as they were within the compressor station in locations where no construction activities will actually occur.
- The maximum reported soil concentration for each compound was determined and then used to calculate an airborne particulate action level.
- All compounds had allowable airborne particulate action levels greater than $100 \mu\text{g}/\text{m}^3$ except for hexavalent chromium at a few locations.
- Lead does not have USEPA or DTSC toxicity values; however, an action level was calculated using the DTSC (2011) LeadSpread 8 model. This is based on the maximum reported soil concentration for lead of 1,400 mg/kg from samples collected within the construction footprint and a blood level of concern through inhalation of 1 microgram per deciliter. The resulting action level for lead is $548 \mu\text{g}/\text{m}^3$.
- Therefore, keeping fugitive dust below the action level $100 \mu\text{g}/\text{m}^3$ will result in airborne particulate concentrations of contaminants (other than hexavalent chromium) remaining below their respective LOCs.
- Fugitive dust monitoring will be used to evaluate airborne contaminants in dust for all compounds except for hexavalent chromium.

In February 2019, 24 real time dust monitoring events were conducted at the perimeter of the work areas (outside of the exclusion zone). There was no temporary exceedance of the action level for fugitive dust monitoring ($100 \mu\text{g}/\text{m}^3$).

No perimeter air sampling for hexavalent chromium was conducted in February 2019.

References Cited:

California Department of Toxic Substances Control (DTSC). 2011. LeadSpread 8.
<https://www.dtsc.ca.gov/AssessingRisk/LeadSpread8.cfm>.

California Department of Toxic Substances Control (DTSC). 2018. Human Health Risk Assessment Note 3 – DTSC-Modified Screening Levels (DTSC-SLs), California Department of Toxic Substances Control, Human and Ecological Risk Office (HERO). January.

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

Marlowe, C. 1999. *Safety Now! Controlling Chemical Exposures at Hazardous Waste Sites with Real-Time Measurements*. Fairfax, Va.: American Industrial Hygiene Association Press.

U.S. Environmental Protection Agency (USEPA). 2009. *Risk Assessment Guidance for Superfund Volume I: Human Health Evaluation Manual (Part F, Supplemental Guidance for Inhalation Risk Assessment)*. Final. OSWER 9285.7-82. January.

U.S. Environmental Protection Agency (USEPA). 2017. Regional Screening Levels (RSLs)—Generic Tables. November.

Attachment E
Noise Monitoring Results
(SEIR NOISE-2 Requirement)

Attachment E. Noise Monitoring Results

In conformance with the SEIR Mitigation Measure NOISE-2, noise monitoring has been conducted with ANSI S1.4 Type 1, precision sound level meters when construction activities are within the specified distance (e.g., 1,850 feet from sensitive receptors in California) at approved monitoring locations previously determined in coordination with the Tribes and land owners/managers (refer to Figures 1, 2 and 3). The goal of the noise monitoring is to identify if noise levels from project construction activities exceed applicable standards of the San Bernardino and Mohave County codes. Exceedance of standards would require coordination with the Tribes and land owners/managers to evaluate the potential constraints and locations for temporary engineered acoustical barriers. Consistent with the request of the Tribes, monitoring equipment is not left at the approved monitoring locations, rather it is mounted on a tripod for attended representative measurements and removed when the monitoring event is complete.

When a new construction activity is conducted or a previously monitored construction activity is conducted closer to a noise-sensitive area, monitoring is conducted at more frequent intervals to evaluate the potential need for an acoustical barrier. As the activities continue in the same location and multiple attended measurements indicate that the applicable standard has not been exceeded by the construction activity, periodic attending monitoring events are conducted to confirm continued compliance.

The attended monitoring events document the A-weighted L_{eq} sound level at periodic intervals (e.g., 5, 10, 15, 20, 30, 40, 50 and 60 minutes). The trend of the data at these intervals is evaluated in the field to assess the stability in the sound level to determine the duration of the monitoring event. When this interval data is relatively stable or clearly below the standard, the attended monitoring event will typically be 15 to 30 minutes in duration. As the applicable standards are in terms of the 24-hour average L_{dn} which is based on the L_{eq} metric, the measured L_{eq} is compared to the applicable L_{dn} standard for mobile noise sources (i.e., 60 A-weighted decibels [dBA] for Park Moabi, 65 dBA at all other locations). This results in a reasonable and conservative assessment given construction activities are not emitting noise continuously over a 24-hour period, nor are they occurring during the nighttime hours (10 p.m. to 7 a.m.).

In February 2019, over 20 monitoring events have been conducted at the Park Moabi monitoring location (Figure 1). The sound level typically varied between 41 and 56 dBA.

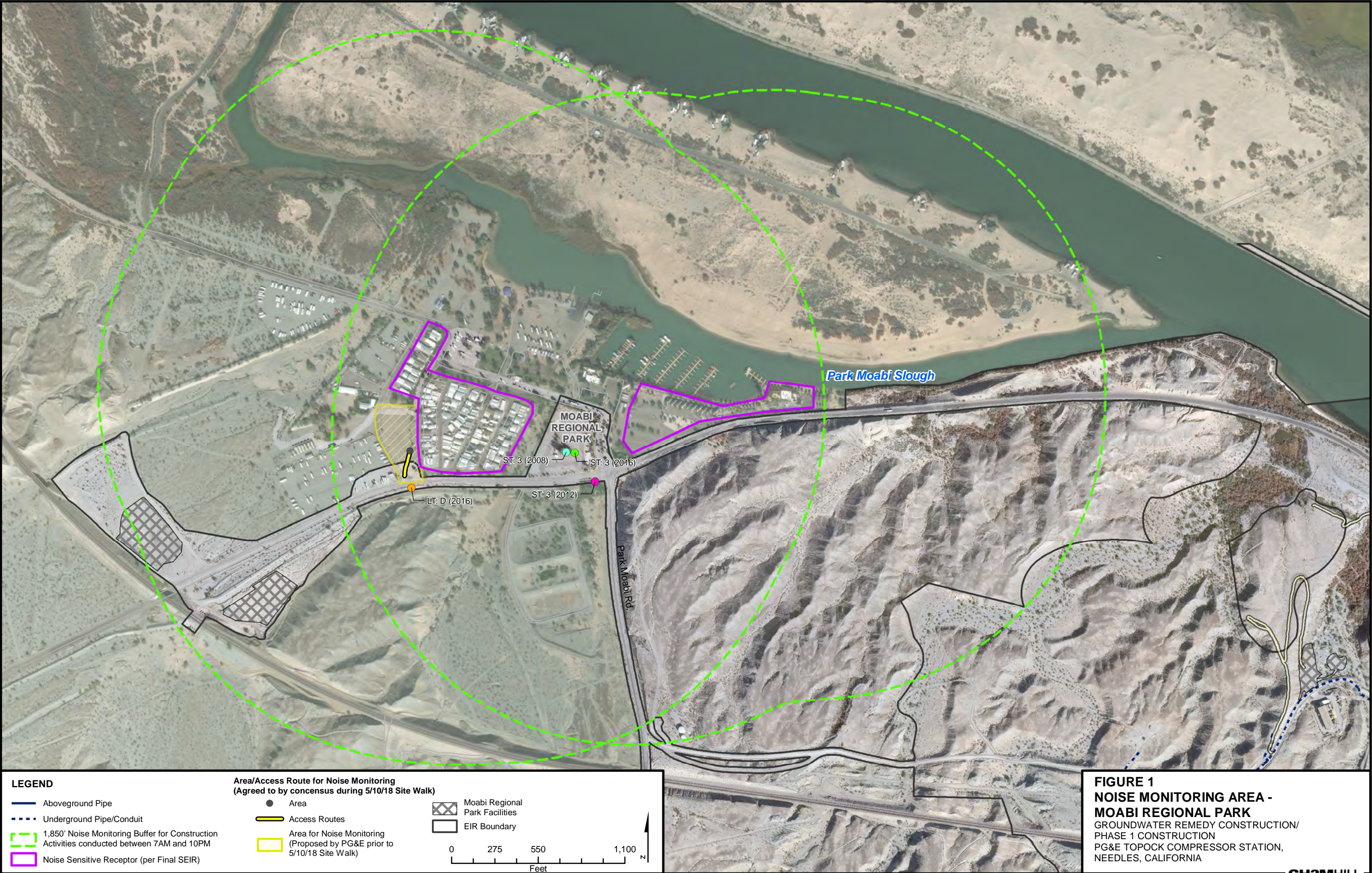
In February 2019, over 15 monitoring events have been conducted at Maze B-Combined Area 1/2 (Figure 2). Construction activities closest to this monitoring location include drilling activities at MW-N in the upland, drilling at MW-G along NTH, drilling at IRZ-16 and vegetation clearance in the floodplain, as well as activities on the MW-20 Bench. On two days (February 15 and 27), measurements at this location indicated sound levels up to 70 dBA. Sound barrier was installed in January around the MW-N drilling activities (see photograph at the end of this section). Outside of these two days, sound levels varied between 46 and 65 dBA.

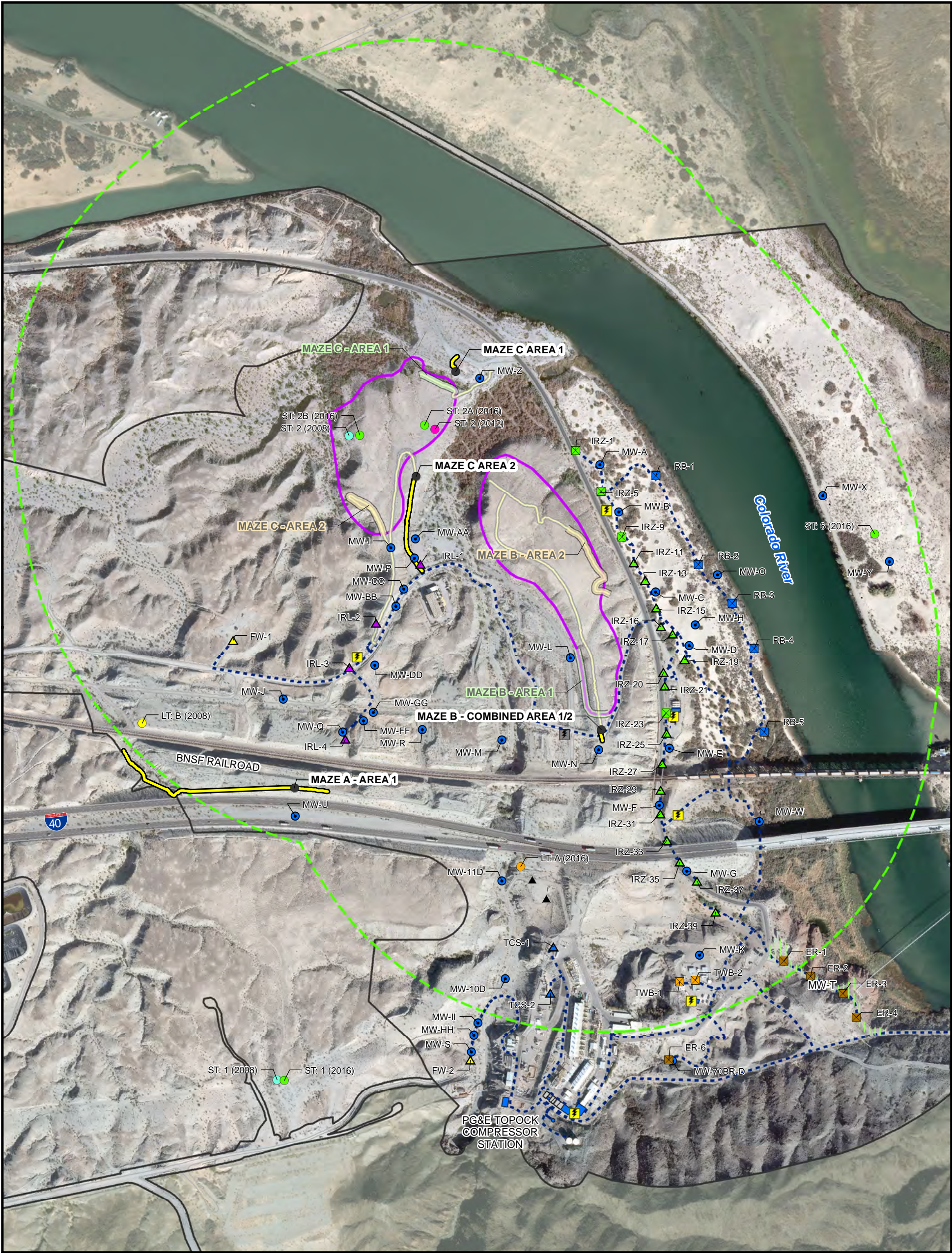
In February 2019, over 10 monitoring events have been conducted at Maze C-Area 1 (Figure 2). Construction activities closest to this monitoring location include drilling activities at MW-B, vegetation clearance, as well as other activities in the northern end of the floodplain. The sound level typically varied between 42 and 52 dBA.

There have been no complaints resulting from project construction-related noise. Temporary acoustical barriers have been installed consistent with SEIR mitigation measure NOISE-2. Monitoring will continue as work progresses and moves into new areas to identify when an acoustical barrier needs to be considered.



Sound curtain at MW-N well drilling location





LEGEND

Planned Wells:

- Extraction, East Ravine
- Extraction, NTH IRZ
- Extraction, Riverbank
- Extraction, Transwestern Bench
- Injection, Freshwater
- Injection, Inner Recirculation Loop
- Injection, NTH IRZ
- Injection, Topock Compressor Station
- Remedy Monitoring Well
- Recirculation Well
- Area for Monitoring Well MW-T

Pipeline Corridor for Remedy

- Underground Pipe/Conduit

Remedy Facilities

- Planned Transformer
- Future Provisional Transformer
- Proposed Remedy Structure
- Contingent Freshwater Pre-injection Treatment System
- 1,850' Noise Monitoring Buffer for Construction Activities conducted between 7AM and 10PM
- Noise Sensitive Receptor (per Final SEIR)
- EIR Boundary

Areas/Access Routes for Noise Monitoring (Agreed to by consensus during 5/10/18 Site Walk)

- Area
- Access Route

Areas for Noise Monitoring (Proposed by PG&E Prior to 5/10/18 Site Walk)

- Area 1
- Area 2
- Access Route

N

0

275

550

1,100

Feet

FIGURE 2

NOISE MONITORING AREAS-

NORTH OF I-40

GROUNDWATER REMEDY CONSTRUCTION/
PHASE 1 CONSTRUCTION
PG&E TOPOCK COMPRESSOR STATION,
NEEDLES, CALIFORNIA

CH2MHILL

\\brookside\files\GIS_SHARE\ENBG\00_Proj\PI\PG&E\Toopock\MapFiles\2018\NoiseMonitoring\Fig2_Noise_Monitoring_N_of_I-40.mxd

Attachment F
Six-Week Look-Ahead Schedule
(March 10 through April 20, 2019)

PG&E Topock Final Groundwater Remedy	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Primary Planned Activities	3/10/2019	3/11/2019	3/12/2019	3/13/2019	3/14/2019	3/15/2019	3/16/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Potholing and Precharacterization Sampling , NTH and MW-20 Bench F5			Air vac potholing for Frontier Comms line - NTH	Air vac potholing for Frontier Comms line - NTH	Air vac potholing for Frontier Comms line - NTH TENTATIVE: MW-20 Bench Precharacterization Potholing and Sampling (if Frontier/NTH complete)	Air vac potholing for Frontier Comms line - NTH TENTATIVE: MW-20 Bench Precharacterization Potholing and Sampling (if Frontier/NTH complete)	
Pipeline C Installation F5		Pipeline installation prep @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	
Well Installation & Development	--	--	MW-N (F5), MW-M site prep (F5), IRZ-17 pilot (F5), IRZ-27 site prep (F5), MW-B (E5)	MW-N (F5), MW-M site prep (F5), IRZ-27 pilot (tentative, Frontier Comms line) (F5), MW-B (E5)	MW-M (F5), MW-M site prep (F5), IRZ-29 site prep (F5), IRZ-27 pilot (tentative, Frontier Comms line) (F5), MW-B (E5), MW-X Site Prep (E6)	MW-M (F5), IRZ-29 site prep (F5), IRZ-27 pilot (tentative, Frontier Comms line) (F5), MW-B (E5), MW-X Site Prep (E6)	MW-M (F5), IRZ-27 pilot (tentative, Frontier Comms line) (F5), MW-B (E5), MW-X Site Prep (E6)
IM3 Brine Tank Upgrade (E5)	Rebar and concrete forms					'Rebar and concrete forms	'Rebar and concrete forms
Primary Planned Activities	3/17/2019	3/18/2019	3/19/2019	3/20/2019	3/21/2019	3/22/2019	3/23/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Pipeline C Installation F5		Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	
Well Installation & Development	MW-M (F5), IRZ-29 pilot (F5), MW-B (E5), MW-X Site Prep (E6)	MW-M (F5), IRZ-29 pilot (F5), MW-B (E5), MW-X Site Prep (E6)	MW-M (F5), IRZ-29 pilot(F5), MW-B (E5), IRZ-33 Site Prep (F5), MW-X Site Prep (E6)	MW-M (F5), IRZ-29 pilot (F5), IRZ-33 Site Prep (F5), MW-X (E6)	MW-M (F5), IRZ-29 pilot(F5), IRZ-33 pilot (F5), IRZ-39 Site Prep (F5), MW-X (E6)	--	--
IM3 Brine Tank Upgrade (E5)	'Rebar and concrete forms				Potential concrete pour date - specific day TBD		'Continued brine tank upgrades - tasks TBD
Primary Planned Activities	3/24/2019	3/25/2019	3/26/2019	3/27/2019	3/28/2019	3/29/2019	3/30/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Pipeline C Installation F5		Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	Pipeline installation @ C5	
Well Installation	--	--	MW-M (F5), IRZ-33 pilot (F5), IRZ-39 Site Prep (F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-33 pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-33 pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-33 pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-33pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), MW-11D Site Prep (F5), IRZ-20 DR (E5)
IM3 Brine Tank Upgrade (E5)	'Continued brine tank upgrades - tasks TBD					Continued brine tank upgrades - tasks TBD	Continued brine tank upgrades - tasks TBD
Primary Planned Activities	3/31/2019	4/1/2019	4/2/2019	4/3/2019	4/4/2019	4/5/2019	4/6/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Pipeline C Installation E5		Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	
Well Installation	MW-M (F5), IRZ-37 Site Prep (F5), IRZ-39 pilot(F5), MW-X (E6), MW-Y' Site Prep (E6), MW-11D Site Prep (F5), IRZ-20 DR (E5)	MW-M (F5), IRZ-37 Site Prep (F5), IRZ-39pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), MW-11D Site Prep (F5), IRZ-20 DR (E5)	MW-M (F5), IRZ-37pilot (F5), IRZ-39pilot (F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-37 pilot(F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	MW-M (F5), IRZ-37 pilot(F5), MW-X (E6), MW-Y' Site Prep (E6), IRZ-20 DR (E5)	--	--
IM3 Brine Tank Upgrade (E5)	Continued brine tank upgrades - tasks TBD					Continued brine tank upgrades - tasks TBD	Continued brine tank upgrades - tasks TBD
Primary Planned Activities	4/7/2019	4/8/2019	4/9/2019	4/10/2019	4/11/2019	4/12/2019	4/13/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Pipeline C Installation E5		Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	Pipeline installation @ C4	
Well Installation	--	--	MW-M (F5), IRZ-37 pilot (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-20 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)
IM3 Brine Tank Upgrade (E5)	Continued brine tank upgrades - tasks TBD					Continued brine tank upgrades - tasks TBD	Continued brine tank upgrades - tasks TBD
Primary Planned Activities	4/14/2019	4/15/2019	4/16/2019	4/17/2019	4/18/2019	4/19/2019	4/20/2019
Start Time (PST)	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM	7:00 AM
Pipeline C Installation E5		Pipeline installation @ C4	Pipeline installation @ C3	Pipeline installation @ C3	Pipeline installation @ C3	Pipeline installation @ C3	
Well Installation	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	MW-M (F5), MW-11D (F5), MW-X (E6), MW-R Site Prep (F5), IRZ-21 DR (E5)	--	--
IM3 Brine Tank Upgrade (E5)	Continued brine tank upgrades - tasks TBD					Continued brine tank upgrades - tasks TBD	Continued brine tank upgrades - tasks TBD


NOTES

** - Dual rotary drilling start date pending rig availability. Currently shown start date is based on the latest information provided by contractors.
Tasks shown pending contracting or pending ERTC may be rescheduled, PG&E to notify of changes as soon as additional information is available.
The timing of field activities are estimated and may change day-to-day based on site conditions, field progress, or other factors.
When planning to visit the site to observe a specific activity or area, please contact Curt Russell (760-791-5884) for the latest schedule information.

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

Attachment G. Available Groundwater Monitoring Data

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 initially 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 since included validated data in each monthly progress report starting with the November 2018 report. The following pages contain the validated data for groundwater samples collected from December 4 to 13, 2018.

<div><div><div>Design & Consultancy for natural and built assets</div></div><div>PMP 2019-01 Sampling</div></div>					Filtered:	F	N	N	N	N	N	N	N	F	F	F	F	F	F
					Lab:	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET	ASSET
					Description:	Hexavalent Chromium	Alkalinity, Total as CaCO3	Chloride	pH	Specific Conductance	Sulfate	Dissolved Solids	Nitrate/Nitrite as Nitrogen	Calcium, Dissolved	Total Dissolved Chromium	Iron, Dissolved	Magnesium, Dissolved	Manganese, Dissolved	Sodium, Dissolved
					Method:	EPA 218.6	SM 2320 B	EPA 300.0	SM4500-HB	EPA 120.1	EPA 300.0	SM 2540 C	SM 4500-NO3 F	EPA 200.7	EPA 200.8	EPA 200.7	EPA 200.7	EPA 200.8	EPA 200.7
					Units:	ug/L	mg/L	mg/L	PHUNITS	uS/cm	mg/L	mg/L	mg/L	mg/L	ug/L	ug/L	mg/L	ug/L	mg/L
Location ID		Sample Type	Sample ID	Matrix	Date Collected														
PE-01		N	PE-01-0119	GW	1/3/2019	ND (0.2)	220	450	7.4	2,200	250	1,300	ND (0.05)	160	ND (1.0)	ND (20)	38	630	480
TW-03D		N	TW-03D-0119	GW	1/3/2019	500	160	2,200	7.1	7,800	500	4,200	2.7	220	480	ND (20)	29	16	1,600