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FIFTH FIVE-YEAR REVIEW REPORT FOR UTAH POWER & LIGHT-AMERICAN BARREL SUPERFUND SITE SALT LAKE COUNTY, UTAH

Prepared by

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LIST OF ABBREVIATIONS & ACRONYMS

µg/L	micrograms per liter
ABY	American Barrel Yard
ARAR	Applicable or Relevant and Appropriate Requirement
AS	Air Sparging
BGS	Below Ground Surface
BTEX	Benzene, Toluene, Ethyl Benzene, Xylene
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	Contaminants of Concern
DERR	Utah Division of Environmental Response and Remediation
DNAPL	Dense Nonaqueous Phase Liquid
EC	Environmental Covenant
EPA	United States Environmental Protection Agency
FYR	Five-Year Review
GRPCMP	Groundwater Restoration Performance and Compliance Monitoring Plan
ICs	Institutional Controls
ILCR	Increased Lifetime Cancer Risk
LNAPL	Light Non-aqueous Phase Liquid
MCLs	Maximum Contaminant Levels
mg/kg	milligram per kilogram
MNAP	Monitored Natural Attenuation Plan
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NPL	National Priorities List
NWA	Northwest Area
O&M	Operation and Maintenance
PAH	Polycyclic Aromatic Hydrocarbons
POTW	Publicly Owned Treatment Works
PRP	Potentially Responsible Party
RAG	EPA Risk Assessment Guidance
RAO	Remedial Action Objectives
RCRA	Resource Conservation and Recovery Act
RI/FS	Remedial Investigation/Feasibility Study
RL	Remediation Level
ROD	Record of Decision
RPM	Remedial Project Manager
SEA	Southeast Yard
SVE	Soil Vapor Extraction
TBC	To be considered
UDEQ	Utah Department of Environmental Quality
UU/UE	Unlimited Use/Unrestricted Exposure

I. INTRODUCTION

The purpose of a Five-Year Review (FYR) is to evaluate the implementation and performance of a remedy in order to determine if the remedy is and will continue to be protective of human health and the environment. The methods, findings, and conclusions of reviews are documented in FYR reports such as this one. In addition, FYR reports identify issues found during the review, if any, and document recommendations to address them.

The Utah Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR) is preparing this FYR pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Section 121, consistent with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (40 CFR Section 300.430(f)(4)(ii)) and considering United States Environmental Protection Agency (EPA) policy.

This is the fifth FYR for the Utah Power & Light (UP&L)-American Barrel Superfund Site (Site). The triggering action for this statutory review is September 23, 2016, the completion date of the previous FYR. These FYRs have been prepared due to the fact that hazardous substances, pollutants, or contaminants remain at the Site above levels that allow for unlimited use and unrestricted exposure (UU/UE).

The EPA has concluded in this FYR that the current protectiveness of human health and the environment cannot be determined until additional information is obtained. Specifically, the EPA and UDEQ must defer its short-term and long-term protectiveness determinations and will work with PacifiCorp to complete a vapor intrusion (VI) pathway investigation specific to the North Sixth Apartments.

An Environmental Covenant (EC) is in place for the property at the southeast corner of the Site owned by Salt Lake City that prohibits the use of groundwater, discloses the presence of potentially contaminated soil below the excavated depth, requires an assessment of the vapor intrusion pathway prior to the construction of residential buildings and prohibits land uses that would interfere with or adversely affect current/future remedial activities at the Site.

The Site FYR was led by Craig Barnitz, UDEQ/DERR Remedial Project Manager (RPM). Participants included, but were not limited to, James Hou, EPA RPM; David Allison, UDEQ/DERR Community Involvement Coordinator; and Scott Everett, UDEQ/DERR Toxicologist. The Potentially Responsible Party (PRP), PacifiCorp, represented by Jeff Tucker, Principal Engineer, was notified of the initiation of the FYR, which began on September 7, 2020.

Site Background

The Site is west of the downtown area in Salt Lake City (SLC) (Appendix B) and is approximately 13 acres in size. As part of the early Site investigations, the Site was divided into the geographic areas consisting of the American Barrel Yard (ABY), the Denver & Rio Grande property or Southeast Area (SEA), the Union Pacific property or Northwest Area (NWA), the residential area and the industrial area (Appendix D). Various operations have occurred at the Site beginning in the 1870's and ending in 1987. The operations at the Site included coal gasification, creosote pole treating operations and drum storage. Coal gasification activities were conducted within the ABY, SEA and a small portion of the NWA from 1873 to the early 1900's. By-products of the gasification process included tars, sludges, coke, toluene,

naphthalene, anthracene, phenols, ash and liquid wastes. From 1927 to 1958, creosote pole treating operations were also conducted within the ABY and SEA portions of the Site. Although specific chemical composition of the creosote used at the Site is unknown, typical creosote compounds include polynuclear aromatic hydrocarbons (PAHs) and phenolic compounds. From 1958 to 1987, the ABY was also used as a storage yard for 50,000 used and empty 55-gallon drums. Although the drums were supposed to be empty, residual contents are believed to have included solvents, resins, paints, paint removers, pesticides, gasoline, and acetone. Evidence of leakage from the drums was prevalent throughout the ABY. In 1987, the property owner, Utah Power & Light, required the drum recycling company, American Barrel, to remove the drums as part of the lease renewal.

The Site is currently bordered by North Temple overpass to the north, 500 West to the east, and 600 West to the west and is transected along the eastern and southern portions by parallel railroad tracks owned by the Union Pacific Railroad (UPRR) (western tracks) and the Utah Transit Authority (UTA) (eastern tracks) (see Figure 1 of Appendix C). The Site is sparsely vegetated and the primary surface features are the railroad tracks and overhead lines. Gravel-size ballast underlies all the railroad tracks at this Site. Historically, the location along the railroad tracks was a relatively remote industrial corner of the city. However, the recent development of residential buildings has brought people in closer proximity to the Site and created new human exposure pathways. At the northwest corner of the Site, there are several older residential single-family homes and a newer residential apartment complex. There are also indications that additional residential apartment complexes are planned in this northwest corner. SLC has worked to develop two projects that will increase recreational use at the southeast corner of the Site, the Gateway Community Gardens and the Folsom Trail project. Both projects were developed under the EC applicable to SLC-owned portions of the Site. Groundwater at the Site is generally at a depth of 10-20 feet below ground surface (bgs) with a gradient of west-southwest (Appendix C, Figure 1).

FIVE-YEAR REVIEW SUMMARY FORM

SITE IDENTIFICATION		
Site Name: Utah Power & Light – American Barrel		
EPA ID: UTD980667240		
Region: 8	**State:** UT	**City/County:** Salt Lake City/Salt Lake County

SITE STATUS	
NPL Status: Final	
Multiple OUs? No	**Has the site achieved construction completion?** Yes

REVIEW STATUS
Lead agency: State ***[If "Other Federal Agency", enter Agency name]*:**
Author name (Federal or State Project Manager): Craig Barnitz
Author affiliation: UDEQ/DERR
Review period: 9/7/2020 - 9/23/2021
Date of site inspection: 4/12/2021
Type of review: Statutory
Review number: 5
Triggering action date: 9/23/2016
Due date *(five years after triggering action date)*: 9/23/2021

II. RESPONSE ACTION SUMMARY

Basis for Taking Action

The basis for taking action at the Site includes the findings of the initial Preliminary Assessment completed in May 1986 by the then Utah Department of Health, Division of Environmental Health, now UDEQ. An EPA Field Investigation Team conducted a follow-up, two-phase Site Inspection (SI) in May 1987 and February 1988 to evaluate observed stained soils and assess the contaminants released from drums storage operations. Analytical data collected during the SI indicated soils, both on- and off-yard were contaminated with a variety of contaminants including PAHs; metals (cadmium, copper, chromium, lead, and zinc); benzene, toluene, ethylbenzene, and xylenes (BTEX) compounds; and chlorinated pesticides. On-Site groundwater was contaminated with BTEX and styrene. The primary exposure pathway was inhalation of contaminated soils by residents, employees working in the Site vicinity, transients and homeless people. An exposure scenario via ingestion of contaminated groundwater was not expected as the shallow aquifer was not a current source of drinking water. The Site was listed on the National Priorities List (NPL) on October 4, 1989.

Response Actions

Removal Actions

As part of a Removal Action to prevent unwanted exposure to the on-Site hazards, an Administrative Order on Consent (AOC) issued by the EPA was signed by the Potentially Responsible Party (PRP), Utah Power & Light (now known as PacifiCorp), in June 1988. The AOC defined tasks to be undertaken by the PRP in the Statement of Work necessary to reduce the immediate risk of exposure from Site contaminants. Utah Power & Light was directed to repair and/or replace the existing fences at the Site to determined specifications, inspect and maintain the temporary perimeter fence and gate, cut all trees and vegetation within two feet of ground level, and knock all cement structures at the Site down to ground level.

Used 55-gallon drums stored at the Site were previously identified to have contained residual solvents, resins, paints, paint removers, pesticides, gasoline, and acetone. Evidence of leakage from the drums was prevalent throughout the ABY portion of Site. Utah Power & Light reported in the AOC that the barrels were removed from the Site.

Record of Decision

The Record of Decision (ROD) for the Site was signed by the EPA on July 7, 1993, and UDEQ on July 19, 1993. The ROD stated that the response actions would permanently address all principal threats through treatment. The remedial action objective (RAO) for soils was to reduce contamination to health-based remediation levels (RLs) for all contaminants of concern (COCs). The levels were based on a worker exposure scenario and set at the more protective end of the risk range. The RAO for groundwater was to clean up contamination to Safe Drinking Water Act maximum contaminant levels (MCLs), proposed MCLs, or carcinogenic exposure limits (ELs) for future residential inhalation/ingestion exposures equivalent to risks of $1x10^{-6}$. The following are the major components of the remedy as described in the ROD:

- Excavation of soils which are principal threats based on visual observation, to the extent possible given physical limitations resulting from locations of existing railroad lines or until the concentrations of EPA target compound list PAHs are below 9,000 milligram per kilogram (mg/kg). The quantification of principal threats is based on EPA guidance "A Guide to Principal Threat and Low Level Threat Wastes," which suggests defining principal threats as having a risk of 10^{-6}.

- Excavation of soils exceeding health-based levels, based on a risk of 10^{-6} worker exposure, that have an exposure pathway. Soils up to ten feet deep were considered to have a complete exposure pathway.

- Treatment of excavated soils through off-Site recycling of soils into a cold mix asphalt product suitable for paving roads. Incorporation of contaminated soils into the asphalt product involves treatment through solidification.

- If any Resource Conservation and Recovery Act (RCRA) characteristic hazardous wastes are encountered, these wastes are to be shipped off Site for incineration and will not be utilized in the asphalt treatment process.

- Soil vapor extraction (SVE) will be used to remediate principal threat light non-aqueous phase liquid (LNAPL) contamination. Location of the SVE extraction wells will be based on a principal threat definition where benzene in soils exceeds 10^{-3} risk levels for residential exposure to groundwater. In conjunction with SVE, groundwater will be extracted from vapor extraction wells to enhance the SVE process. Off-gas from the SVE system will be treated prior to discharge to the atmosphere.

- Groundwater extracted from SVE wells, water pumped from excavations, and decontamination water will be treated to Publicly Owned Treatment Works (POTW) standards then discharged to the SLC POTW for further treatment.

- The dissolved contaminant groundwater plume was expected to naturally attenuate once the principal threat sources for groundwater contamination had been remediated. If monitoring of groundwater contamination indicated that natural attenuation was not restoring groundwater to remediation levels, additional source removal or more active groundwater remediation would be required.

Status of Implementation

Under a Consent Decree entered in April 1995, construction of the remedy was conducted by the PRP in two phases. Phase I included soil excavation, construction of the temporary groundwater treatment facility and installation of groundwater monitoring wells. Phase II included construction of the soil vapor extraction (SVE) treatment system.

The Phase I excavation activities began with the removal of surface soils in May 1995 and proceeded with excavation of principal threat wastes throughout the summer and early fall. The contaminants of concern for the soils included lead, PAHs and benzene. Lead was the contaminant of concern in contaminated surface soils in the ABY and SEA and were excavated with a remedial goal of achieving lead concentrations of 500 mg/kg. In the ABY, surface soils were excavated to a depth of 6 inches bgs and transferred for asphalt incorporation. In the SEA, areas with elevated lead concentrations were

excavated 6-12 inches bgs. The mean concentration in the SEA at the completion of the Phase I soil removal was 390 mg/kg.

Areas of the Tarry Berm, Gas-O-Meter, South Tar Wells, and Coal Stills Area (Appendix D) were excavated with target remedial levels of 9,000 mg/kg for PAH and benzene of 8 mg/kg. The remedial activities under Phase I at the Site as described in the *Phase I Construction Completion Report, American Barrel Site, Salt Lake City, Utah,* dated September 1996, indicated that soils were removed from depths beyond the 10 feet bgs described in the ROD and the excavations continued into the saturated soils. The Phase I remedial activities included the removal of 22,000 tons of soil and debris to a depth of 15 feet bgs. All soils exceeding RLs were removed in all areas of the site to the extent possible given physical limitations from locations of railroad lines.

The Phase II activities began in September 1995 with the installation of the SVE wells. Construction of the SVE treatment facility began in May 1996 and the Site achieved construction completion status with the signing of the Preliminary Close-Out Report on September 30, 1996. The SVE and depression well systems operated continuously from July 1996 to April 2007. Piping was manifolded into a treatment building where extracted vapors were treated using carbon adsorption units and groundwater extracted from the depression wells was treated in a UV-Oxidation Unit. The SVE and depression well treatment system was augmented with the operation of the air sparging (AS) system beginning in June 2002. PacifiCorp submitted the *American Barrel Superfund Site, Comprehensive Site Condition Report (Request to Proceed with Natural Attenuation)* document dated March 26, 2007. The report demonstrated that: 1) all of the necessary principal/low-level-threat wastes were addressed 2) organic vapors had reached asymptotic levels 3) best efforts had been conducted to optimize the performance of the SVE system since 1996 4) the contaminated groundwater plume was stable and not migrating off the Site and 5) there was no significant difference in the time it would take to remediate the contaminated groundwater plume between active remediation and monitored natural attenuation. The AS system was closed out alongside the SVE in 2007. With the shutdown of the SVE and AS systems, the remedy for the groundwater transitioned to monitored natural attenuation (MNA).

The current remedy in place at the Site is monitored natural attenuation for groundwater directed under the *Monitored Natural Attenuation Plan for the American Barrel Site, Salt Lake City, Utah* (MNAP), and the use of ICs. The MNAP describes the procedures to be used to conduct post-remediation groundwater restoration performance monitoring for the site. The current COCs monitored under the MNAP and the respective MCLs are benzene (5 µg/L), naphthalene (1,460 µg/L) and cyanide (200 µg/L). Groundwater monitoring is conducted semi-annually with the Semi-Annual Groundwater Monitoring Reports provided to the EPA and UDEQ in July and January. In 2018, PacifiCorp developed the *Evaluation of Natural Attenuation* report, which is further discussed in Section III, Progress Since last FYR.

Deed notices were placed on the original chains of title of the UP&L (i.e., PacifiCorp) and the Denver & Rio Grande Western properties. The notices disclose the presence of potentially contaminated soils below the excavated depth and contaminated groundwater, and they prohibit the drilling of water wells.

In March 2011, an EC with activity/use limitations was placed on the properties now currently owned by SLC. These properties are the previously mentioned properties owned by PacifiCorp and Denver & Rio Grande Western, and encompass the areas formerly known as the ABY and SEA. Generally, the EC prohibits the use of groundwater, discloses the presence of potentially contaminated soil below the excavated depth of 15 feet bgs, requires an assessment of the vapor intrusion pathway prior to the

construction of residential buildings, and prohibits land uses that would interfere with or adversely affect current/future remedial activities at the Site.

In August 2013 a Deed Restriction for the North Sixth property was filed with the SLC Recorder's office. The Deed Restriction prohibits the use of groundwater, discloses the presence of potentially contaminated soil below the excavated depth of 15 feet bgs, requires an assessment of the vapor intrusion pathway prior to the construction of residential buildings, and prohibits land uses that would interfere with or adversely affect current/future remedial activities at the Site.

IC Summary Table

Table 1: Summary of Planned and/or Implemented ICs

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soil & Groundwater	Yes	Yes	Salt Lake County Parcels: 08365010120000 & 08363550020000	a. Restricts groundwater use at the Site. b. Gives notice that contaminated soils may be found at depths of 15 feet and beyond. c. Requires excavation of soils below 15 feet depth or pumping of groundwater to be done in accordance with applicable laws. d. Prior to construction of new buildings an adequate vapor intrusion assessment must be completed. e. The property shall not be used in any manner that would impact the implementation, integrity, and protectiveness of the response actions in place.	Pursuant to Utah Code Section 57-25-101 through 57-25-114 Environmental Covenant, March 7, 2011

Media, engineered controls, and areas that do not support UU/UE based on current conditions	ICs Needed	ICs Called for in the Decision Documents	Impacted Parcel(s)	IC Objective	Title of IC Instrument Implemented and Date (or planned)
Soil & Groundwater	Yes	Yes	Salt Lake County Parcel: 08363540700000	a. Restricts groundwater use at the Site. b. Gives notice that contaminated soils may be found at depths of 15 feet and beyond. c. Prior to construction of new buildings an adequate vapor intrusion assessment must be completed. d. The property shall not be used in any manner that would impact the implementation, integrity, and protectiveness of the response actions in place.	Deed Restriction August 1, 2013
Drinking Water	Yes	Yes	Municipal Water Connections	Requires the owner or occupant of a premises to make an application for reconnecting a premises to the city water main whenever a city water main has been laid in front of premises.	Salt Lake City Ordinance #17.16.510 Code passed: December 11, 2020

Systems Operations/Operation & Maintenance

No changes to the Operation & Maintenance plan were made since the last FYR. The Semi-Annual Groundwater Reports are submitted to the EPA and UDEQ for review in accordance with the MNA Plan. The First Semi-Annual Groundwater Reports are received July 31 of each calendar year, and the Second Semi-Annual Groundwater Reports are received January 31 of the following year.

III. PROGRESS SINCE THE LAST REVIEW

The last FYR report was signed on September 23, 2016.

Table 2: Sitewide Protectiveness Determinations/Statements from the 2016 FYR

Sitewide Protectiveness Determination	Sitewide Protectiveness Statement
Protective	The remedy at the Site currently protects human health and the environment because exposure pathways that could result in unacceptable risks are being controlled in the short term. However, in order for the remedy to be protective in the long term, it must be determined if natural attenuation is actually occurring at the Site, and a vapor intrusion investigation must be conducted at the North Sixth Apartments.

Table 3: Status of Recommendations from the 2016 FYR

Issue	Recommendations	Current Status	Current Implementation Status Description	Completion Date (if applicable)
1. Not Known if MNA is occurring at the Site.	Using MNA data, evaluate the biotransformation process and determine if the site geochemistry is favorable for MNA.	Ongoing	PacifiCorp prepared the document *Evaluation of Natural Attenuation for the American Barrel Site* dated March 30, 2018. Groundwater data, at the time the report was developed, supported the effectiveness of MNA as a remedy. However, recent trends in the groundwater indicate that the EPA and UDEQ will need to re-evaluate the performance of MNA as a remedy.	
2. No Indoor Air Samples collected from the North Sixth Apartments.	Conduct a VI investigation at the North Sixth Apartments.	Ongoing	The EPA and UDEQ will work with PacifiCorp to complete the vapor intrusion investigation to evaluate the VI pathway for the North Sixth Apartments.	

<u>*Recommendation* # 1:</u> In March of 2018, PacifiCorp developed the *Evaluation of Natural Attenuation for the American Barrel Site* report. The report was completed in response to concerns identified in the 2016 Fourth FYR report. Evaluation was performed using four criteria: a historical review of iso-

concentration maps, statistical evaluation of COC concentration trends, fate and transport modeling using the BIOSCREEN model developed by the EPA, and regression analysis to determine the percentage of attenuation resulting from biodegradation. The report reviewed ten years of groundwater data to evaluate contaminant trends for evidence of natural attenuation. The report found that the iso-concentration contour maps indicate that the groundwater plume has been stable or shrinking over the ten-year period. Statistical analysis indicated decreasing trends for COCs in the majority of monitoring wells. According to the report, modeling using the BIOSCREEN analysis tool estimated that without biodegradation the plume boundaries were likely to extend 600 feet west of the source area, and data indicated the plume only extended 215 feet west, indicating biodegradation was occurring at the Site. Regression analysis using the Washington State Department of Ecology Concentration vs. Distance Method predicted biodegradation accounts for approximately 40% of decay of benzene. The calculation under the alternate Buscheck and Alcantar Method predicted that biodegradation accounts for 49% of decay of benzene across the Site.

At the time, the report provided adequate support that MNA was occurring at the Site. However, more recent groundwater data provided in the semi-annual groundwater monitoring reports show increasing benzene, naphthalene and cyanide concentrations in the monitoring wells RW-603 and RW-604 as well as long remedial time frames for benzene and cyanide. The EPA and UDEQ will continue to evaluate more recent groundwater data to evaluate the performance of MNA as a remedy. If it is determined that the groundwater plume is migrating into the off-Site wells or on-Site concentrations are not decreasing, the MNA remedy will be reevaluated, and more active remediation may be warranted. The effectiveness of MNA as a remedy will continue to be evaluated through the review of the semi-annual groundwater monitoring reports.

Recommendation # 2: In August 2018, PacifiCorp completed the *Response to Recommendation/Follow-up Action for Indoor Air Sampling and a Vapor Intrusion Investigation from the Fourth Five-Year Review, American Barrel Superfund Site*. The report documented findings and conclusions from the vapor intrusion investigations conducted during the Site Remedial Investigation/Feasibility Study in 1991 and a second VI investigation in 2011; described the Brownfields Redevelopment of the North Sixth Apartments; utilized the Johnson and Ettinger model to re-analyze the 2011 vapor intrusion investigation using current Site conditions; and provided a discussion of potential difficulties related to ambient and background sources for benzene that would bias indoor air sampling at the North Sixth Apartments. The report also included information regarding mitigation systems incorporated into the construction of the North Sixth Apartments and reported that in August 2013 a Deed Restriction for the North Sixth property was filed with the SLC Recorder's office. The Deed Restriction prohibits the use of groundwater, discloses the presence of potentially contaminated soil below the excavated depth, requires an assessment of the vapor intrusion pathway prior to the construction of residential buildings, and prohibits land uses that would interfere with or adversely affect current/future remedial activities at the Site. The Johnson and Ettinger model was used to determine if the soil vapor posed a potential risk to persons inside the North Sixth Apartments. Although residential units are not located on the first floor, to be conservative the Johnson and Ettinger model was run for a potential residential exposure. The model indicated that the concentrations detected in the soil-gas would not translate into a residential exposure above target levels. The report also identified difficulties in conducting vapor intrusion sampling due to elevated background benzene concentrations that would be present given the building's urban location and the thickness of the building foundation (3 feet thick) that would prohibit sub-slab sampling.

After reviewing the document and conclusions, the EPA and UDEQ determined that the Johnson and Ettinger modeling conducted would not be sufficient to determine risk posed by the vapor intrusion

pathway. The EPA currently evaluates vapor intrusion risk through the EPA VISL calculator. The EPA recently evaluated the vapor intrusion risk to the North Sixth Apartment complex using the VISL calculator. This modeling, conducted by the EPA, using soil-gas data from the 2011 *American Barrel Site Vapor Intrusion Pathway Investigation Report* as well as groundwater data from the recent *Second Semi-Annual 2020 Groundwater Monitoring Report, American Barrel Site, January 27, 2021,* indicated that the cancer risk to residents living in the North Sixth Apartments exceeded the 10^{-6} threshold and presents an unacceptable risk to occupants inside the building. At the time of this FYR, the EPA and UDEQ will work with PacifiCorp to develop a comprehensive VI investigation to evaluate the vapor intrusion pathway for the North Sixth Apartments.

IV. FIVE-YEAR REVIEW PROCESS

Community Notification, Involvement & Site Interviews

A public notice was made available by being published in the *Salt Lake Tribune* on Sunday, March 21, 2021, and *City Weekly* newspapers on Thursday, March 25, 2021, stating that there was an FYR and inviting the public to submit any comments to the EPA. The results of the review and the report will be made available at the Site information repository located at the UDEQ/DERR Offices in Salt Lake City, Utah, at the EPA Region 8 Offices in Denver, Colorado, and on the EPA site profile page at https://www.epa.gov/superfund/utah-power.

During the FYR process, interviews were conducted to document any perceived problems or successes with the remedy that has been implemented to date**.** The results of these interviews are summarized below.

Stakeholder interviews for the FYR consisted of several interviews with Jeff Tucker, Principal Project Engineer, PacifiCorp; Debbie Lyons, Director Sustainability Department, Salt Lake City; Autumn Hu, National Environmental Policy Act (NEPA) Project Administrator and Andrew Kitchen, Project Manager Civil Science, Utah Transit Authority; and the Executive Director for Giv Group/North Sixth Apartments. Specific interview questions and responses are provided in Appendix F. Community interviews were not conducted due to health concerns related to the on-going COVID-19 pandemic.

In summary, interviewees did not express any health concerns or environmental issues and have not had any concerns expressed to them regarding Site management over the last five years. PacifiCorp said groundwater monitoring of the Site shows the monitored natural attenuation remedy is working with contaminant reductions, and institutional controls in place remain protective of the community's health and the environment. SLC officials said the EC maintains Site protectiveness, and appropriate actions were taken for the development of a community garden on SLC property in 2018 and a planned public walking and bike trail to be built in 2021. The UTA discussed their involvement in the construction of the planned public walking and bike trail to be built in 2021.

Data Review

The data review for this FYR included a review of the Semi-Annual Groundwater Monitoring Reports from the years 2016 to 2020. The analytical data for the groundwater monitoring at the Site was collected from the following ten monitoring wells: RW-505R, RW-514, RW-600, RW-601, RW-602, RW-603, RW-604, RW-605, RW-606 and RW-607. For purposes of evaluation of the groundwater, the monitoring wells are grouped as Boundary Wells (RW-505R, RW-600, RW-601 and RW-606), On-Site

Wells (RW-514 and RW-607), and Source Wells (RW-602, RW-603, RW-604 and RW-605). Monitoring well locations can be found in Figure 1 and in Figures 33-35 in Appendix C of this report. The groundwater samples are collected to evaluate the effectiveness of past remedial activities in reducing contaminant levels at the Site. Currently, the primary contaminates of concern are benzene and naphthalene analyzed by EPA Method 8260 and cyanide analyzed by EPA Method 9012.

In addition to reporting the laboratory analytical data, the historical groundwater data is further evaluated using both the Mann Kendall and the 1st Order Decay Rate Calculations to calculate trends in each of the ten monitoring wells.

Prior to the collection of groundwater samples, field measurements for groundwater elevations and water quality parameters are collected. Groundwater elevations are measured from the ten monitoring wells and three additional wells (UG-1, UG-2R and UG-3) installed along the western (upgradient) area of the Site to aid with measuring groundwater elevations. The water quality parameters collected from the ten monitoring wells include temperature, pH, specific conductivity, turbidity and dissolved oxygen. Water quality parameters temperature, pH, and specific conductivity were generally stable over the five-year period. There were significant shifts in turbidity and dissolved oxygen. The latest groundwater elevation for the Site indicates that the direction of groundwater flow is generally to the west or west-southwest. The local hydraulic gradient was approximately 0.012 feet/foot on December 3-4, 2020. This flow pattern and hydraulic gradient are consistent with previous sampling events. The most recent groundwater analytical data and field parameters submitted as part of the *Second Semi-Annual 2020 Groundwater Monitoring Report July through December 2020, American Barrel Site, Salt Lake City, Utah,* are included in Appendix C. Groundwater plume maps for benzene, naphthalene and cyanide can be found in Figures 33-35 in Appendix C of this report.

The most recent groundwater data indicates that concentrations for benzene, naphthalene and cyanide are highest in the Source Wells RW-605 and RW-603 based on analytical data and calculated trends. The plume appears to be relatively stable within the Source and On-Site Wells, and the plume is not migrating off-Site at concentrations above the RLs. The calculated trends show an increase in benzene, naphthalene and cyanide concentrations in monitoring well RW-604 and increasing trends for benzene and naphthalene concentrations in monitoring well RW-603. Long remedial time frames calculated for benzene in well RW-605 and for cyanide in well RW-603 are also of concern.

Boundary Wells

The most recent analytical data from December 2020 for the Boundary Wells RW-505R, RW-600, RW-601 and RW-606 indicate that the Site contamination is not migrating off Site at concentrations above the RLs. The general trend throughout the five-year monitoring period is that contaminants in the boundary are either non-detect below laboratory reporting limits or detected at low concentrations. It should be noted that well RW-514, while listed as an On-Site Well, is located along the Site boundary with the Deseret Paint property. Concentrations in this well are currently slightly above RLs but have been decreasing throughout the five-year period. Further discussion of the concentration trends in well RW-514 are found under *On-Site Wells*. The general calculated trends observed in the Boundary Wells are stable or decreasing for the contaminants benzene and cyanide while the trends for naphthalene are stable or increasing. It should be noted that although an increasing trend was observed in the Boundary Wells for naphthalene, the detected concentrations were well below the RLs.

RW-505R (east boundary well): Benzene was detected in the well consistently between June 2017 through December 2019. Concentrations in the well during this period ranged from 0.3 micrograms per

liter (µg/L) to 1.91 µg/L but below the RL for benzene of 5 µg/L. Benzene was not detected during the 2020 sampling season. The calculated trend for benzene is stable or decreasing. Naphthalene was detected in the well between June 2017 and December 2019 at concentrations ranging between 0.44 µg/L to 2.11 µg/L, well below the RL of 1,460 µg/L. The calculated trends for naphthalene are stable or increasing. However, naphthalene was also non-detect during the 2020 sampling season. Cyanide was detected at concentrations below the RL of 200 µg/L and ranged from 4.2 µg/L to 14 µg/L. Cyanide was last detected at 4.6 µg/L in December 2017. The calculated trends for cyanide are stable or decreasing.

RW-600 (southeast boundary well): There were four detections for benzene during the five-year period with concentrations ranging from 0.3 µg/L to 1.8 µg/L, concentrations below the RL of 5 µg/L. Benzene was not detected during the 2020 sampling season. The calculated trends for benzene are stable or decreasing. Naphthalene was detected three times during the five-year period at concentrations ranging from 0.42 µg/L to 0.63 µg/L, well below the RL of 1,460 µg/L. The calculated trends for naphthalene in the well are stable or increasing. However, naphthalene has not been detected in the well since December 2018. Cyanide has been detected regularly in the well during the five-year period with concentrations ranging from 5.3 µg/L to 24 µg/L, concentrations below the RL of 200 µg/L. Cyanide was last detected in December 2020 at a concentration of 16.3 µg/L. Historically, cyanide was detected at concentrations above the RL during a period between June 2009 through August 2011, but concentrations have been declining since. The calculated trend for cyanide is decreasing.

RW-601 (northeast boundary well): Benzene has been detected regularly in the well during the five-year period with concentrations ranging from 0.82 µg/L to 2.56 µg/L, concentrations below the RL of 5 µg/L. Benzene was last detected in December 2020 at 2.56 µg/L. The calculated trends for benzene are stable or increasing. Naphthalene was detected in the well fairly regularly from June 2017 to May 2019 with concentrations ranging from 0.39 µg/L to 1.8 µg/L. The calculated trends in the well are stable or increasing. However, naphthalene has not been detected in the well since December 2019. There was only one detection for cyanide during the five-year period from June 2017 at a concentration of 5.2 µg/L, well below the RL of 200 µg/L.

RW-606 (southern boundary well): Benzene was not detected in the well during the five-year period. Naphthalene was detected only one time during the five-year period in June 2018 at concentrations of 0.37 µg/L, well below the RL of 1,460 µg/L. The calculated trends for naphthalene in the well are stable or increasing. However, this increasing trend for naphthalene may result from the limited number of detections. Cyanide was detected in the well fairly regularly during the five-year period with concentrations ranging from 7.2 µg/L to 22.5 µg/L. The most recent sample collected in December 2020 detected cyanide at a concentration of 19.8 µg/L. Although there is a calculated increasing trend for cyanide along the southern boundary, the detected concentrations remain well below the RL of 200 µg/L.

On-Site Wells

The most recent analytical data from December 2020 for the On-Site Wells RW-514 and RW-607 (see Figure 1 of Appendix C) indicate that contamination continues to persist in on-Site areas. Benzene concentrations have generally remained at levels above the RL in both On-Site Wells during the five-year period. The latest detected benzene concentrations during the December 2020 sampling activity were 8.81 µg/L (RW-514) and 10 µg/L (RW-607). Naphthalene and cyanide were regularly detected in both On-Site Wells during the five-year period, however, at concentrations well below RLs. Trends in the two On-Site Wells are decreasing for benzene and naphthalene and either stable or decreasing for cyanide.

RW-514 (southeast on-site well): Benzene was regularly detected at concentrations above the RL throughout the five-year period. Concentrations for benzene ranged from 8.81 µg/L to 22.6 µg/L. Historically, the data presented in the semi-annual groundwater reports shows concentrations decreasing from 33 µg/L in May 2013 to the most recent measurement of 8.81 µg/L, a concentration just above the RL of 5 µg/L. The calculated remedial time to achieve RL for benzene in the well is 11.9 years. Naphthalene was regularly detected in this well throughout the five-year period. Concentrations for naphthalene ranged from 4.2 µg/L to 18 µg/L, well below the RL of 1,460 µg/L. The most recent analytical data from December 2020 was 5.78 µg/L, and the calculated trend in the well is decreasing. Cyanide was detected regularly in the well throughout the five-year period. Concentrations for cyanide ranged from 7.58 µg/L to 22 µg/L, well below the RL of 200 µg/L. The most recent analytical data from December 2020 was 14.6 µg/L, and the general trend in the well is stable or decreasing.

RW-607 (on-site well at North Sixth Apartments): Benzene was regularly detected at concentrations above the RL of 5 µg/L throughout the five-year period. Concentrations for benzene decreased from 200 µg/L to 10 µg/L. The most recent analytical data from December 2020 was 10 µg/L, and the calculated trend for benzene in the well is decreasing. The calculated remedial time to achieve RL for benzene is 5.7 years. Naphthalene was regularly detected in this well throughout the five-year period at concentrations well below the RL of 1,460 µg/L. Concentrations for naphthalene ranged from 0.94 µg/L to 18 µg/L. The most recent analytical data from December 2020 was 2.58 µg/L, and the calculated trend for naphthalene in the well is decreasing. Cyanide was detected regularly in the well throughout the five-year period at concentrations below the RL of 200 µg/L. Concentrations for cyanide ranged from 14 µg/L to 110 µg/L, well below the RL. The most recent analytical data from December 2020 was 26.2 µg/L, and the calculated trend for cyanide in the well is decreasing.

Source Wells

The most recent analytical data from December 2020 for the Source Wells RW-602, RW-603, RW-604, and RW-605 indicate that concentrations for benzene and cyanide continue to persist at concentrations above the respective RLs. There does not appear to be a consistent trend observed across all the Source Wells. The calculated trends show an increase in benzene, naphthalene and cyanide concentrations in monitoring well RW-604 and increasing trends for benzene and naphthalene concentrations in monitoring well RW-603. These increases warrant closer scrutiny as they may indicate movement of the plume mass. The calculated remedial time frames to meet RLs, primarily for cyanide in well RW-603 (105.7 years) and benzene in well RW-605 (238.7 years) are strikingly long. Although there is no complete exposure pathway for the groundwater, these trends and remedial timeframes are of concern.

RW-602 (northeast source well): Benzene was regularly detected at concentrations above the RL of 5 µg/L throughout the five-year period. Concentrations for benzene decreased from 1,200 µg/L in June 2016 to 453 µg/L in December 2020. The calculated remedial time to achieve RL for benzene is 32.7 years. This remedial time frame has not changed from the remedial time frame reported in the 2016 First Semi-Annual Groundwater Monitoring Report of 32 years for the well RW-602. Naphthalene was regularly detected in this well throughout the five-year period. Concentrations for naphthalene ranged from 20 µg/L to 36 µg/L, well below the RL of 1,460 µg/L. The most recent analytical data from December 2020 was 28.2 µg/L, and the calculated trend in the well is a decreasing trend. Cyanide was detected regularly in the well throughout the five-year period. Concentrations for cyanide have been decreasing from above the RL of 200 µg/L, 230 µg/L in June 2016, to a low of 75.7 µg/L in June 2020. The most recent analytical data from December 2020 detected cyanide at 96.2 µg/L. The calculated trend for cyanide in the well is decreasing.

RW-603 (northern source well): Benzene was regularly detected at concentrations above the RL of 5 µg/L throughout the five-year period. Concentrations for benzene ranged from 1,600 µg/L to 4,600 µg/L. The most recent analytical data from December 2020 detected benzene at 3,300 µg/L, and the calculated trends are stable or increasing. A remedial time to achieve RL was not calculated as the concentration trend is increasing. Naphthalene was regularly detected in this well throughout the five-year period. Concentrations for naphthalene ranged from 22.8 µg/L to 88 µg/L, well below the RL of 1,460 µg/L. The most recent analytical data from December 2020 was 36.7 µg/L, and the calculated trends in the well are stable or increasing. The highest concentrations for cyanide at the Site are observed in well RW-603. Cyanide was detected regularly at concentrations above the RL of 200 µg/L in the well throughout the five-year period. Concentrations for cyanide ranged from 1,100 µg/L to 1,560 µg/L. The most recent analytical data from December 2020 detected cyanide at 1,250 µg/L, and the calculated trends are stable or decreasing. The calculated remedial time to achieve the RL for cyanide is 105.9 years. The calculated remedial timeframe for cyanide has increased steadily over the five-year period from 58.2 years in the 2016 First Semi-Annual Groundwater Monitoring Report to the current calculated of 105.9 years in the 2020 Second Semi-Annual Groundwater Monitoring Report.

RW-604 (western-central source well): Benzene was regularly detected at concentrations above the RL of 5 µg/L throughout the five-year period. Concentrations observed in the well have increased steadily from 210 µg/L in June 2016 to 2,470 µg/L in December 2020. Naphthalene was regularly detected in this well throughout the five-year period at concentrations below the RL of 1,460 µg/L. Concentrations for naphthalene initially decreased from June 2016 (36 µg/L) to June 2017 (11 µg/L); however, they have been steadily increasing through December 2020 (223 µg/L). The calculated trend in the well is a stable or increasing trend. Cyanide was initially detected in the well at concentrations below the RL of 200 µg/L but increased steadily during the five-year period from 140 µg/L in June 2016 to a high of 454 µg/L in June 2020. The most recent analytical data from December 2020 detected cyanide at 222 µg/L; however, the calculated trend for cyanide in the well is increasing.

RW-605 (southeastern source well): The highest concentrations at the Site for benzene and naphthalene at the Site are observed in well RW-605. Concentrations for cyanide in well RW-605 are also well above the RL. Benzene was regularly detected at concentrations well above the RL of 5 µg/L throughout the five-year period. Concentrations observed in the well have ranged from 3,900 µg/L to 6,080 µg/L. The most recent analytical data from December 2020 detected benzene at 6,080 µg/L. Although, concentrations in the well have recently appeared to have stabilized, the calculated trend is stable or decreasing. The current calculated remedial time to achieve RL for benzene is 238.7 years. Although the calculated remedial timeframe for benzene has decreased slightly over the five-year period from 277.5 years in the 2016 First Semi-Annual Groundwater Monitoring Report to the current calculated of 238.7 years in the 2020 Second Semi-Annual Groundwater Monitoring Report, the time frame continues to extend far into the future. Naphthalene was regularly detected at concentrations well above the RL of 1,460 µg/L throughout the five-year period. Concentrations for naphthalene in the well ranged from 2,720 µg/L to 4,800 µg/L. The most recent analytical data from December 2020 detected naphthalene at 3,570 µg/L. The calculated trend is inconclusive as the two analytical models predicted both decreasing or increasing trends. Cyanide was regularly detected at concentrations well above the RL of 200 µg/L throughout the five-year period. Concentrations observed in the well have ranged from 460 µg/L to 1,050 µg/L. The most recent analytical data from December 2020 detected cyanide at 764 µg/L. Although, concentrations in the well have recently appeared to have stabilized, the calculated trend is decreasing. The calculated remedial time to achieve RL for cyanide is 27.4 years.

Site Inspection

The inspection of the Site was conducted on April 12, 2021. The weather was light clouds, sunny and 54°F. In attendance were Craig Barnitz, UDEQ/DERR Remedial Project Manager; David Allison, UDEQ/DERR Community Involvement Coordinator; Jeff Tucker, PacifiCorp Principal Engineer; and Scott Wetzel, PacifiCorp Engineer. The purpose of the inspection was to assess the protectiveness of the remedy. Due to continuing COVID-19 concerns, the site inspection participants adhered to precautions including mask wearing and maintaining six feet distance when practicable. Interviews were conducted by phone to minimize risks due to COVID-19. Jeff Tucker was able to provide information regarding ongoing operations and historical actions taken at the Site throughout the inspection.

Jeff Tucker stated that PacifiCorp conducts all field activities at the Site. Dennis Van Der Beek, a PacifiCorp employee, is responsible for the purging of monitoring wells, collection of field water measurements and samples, collection of purge water, as well as maintaining field documentation and Health and Safety Plans. Barr Engineering is the contractor responsible for compiling the field and laboratory analytical data into the Semi-Annual Groundwater Monitoring Reports.

The inspection found that the ground floor of the North Sixth Apartments houses a parking garage in the rear (east) and office spaces street side (west). Offices include spaces for the development company Giv Holdings, North Sixth Apartment management, and charitable organization TechCharities.

The inspection found that all monitoring wells were accessible and in good condition. All flush-mounted manhole covers were properly bolted and secured, and all well risers were in good condition with locks properly secured.

The inspection found that the northwest portion of the Site is accessible near the North Temple overpass. However, there are no parts of the remedy located in this area, and no evidence of trespass was observed. Several UTA signs are also present in this area warning against dumping and trespass.

The Site is covered predominately with gravel and areas of low vegetation or weeds. The Site appeared to be in good condition. Jeff Tucker stated that there were no observed issues with run-off or drainage from the Site. Monitoring wells, including Source Wells RW-602, RW-603, RW-604 and RW-605, and one of the On-Site Wells, RW-514, are located near the center of the Site and accessed through a fence near the UPRR tracks, which was locked and in good condition. Graffiti observed along the wall behind monitoring wells RW-514, RW-602 and RW-604 indicated this portion of the Site sees some level of trespass.

The inspection observed on-Site areas of new development including the UTA/SLC Folsom Trail project and the Gateway Community Gardens. No activity was observed in the Folsom Trail project area, and a recent email from Autumn Hu, UTA NEPA Project Administrator, indicated the project work would begin in late July 2021. The Gateway Community Garden is fenced and locked. Gardens are in elevated planter boxes. Jeff Tucker stated that the surface soil is covered with liners inside the garden. Ground surface is covered with a mixture of gravel and mulch and appeared to be in good condition.

The Jeff Tucker stated that the Site does not have routine security but that UPRR and UTA occasionally patrol the area.

Site Inspection photos are included in Appendix E.

V. TECHNICAL ASSESSMENT

QUESTION A: Is the remedy functioning as intended by the decision documents?

Question A Summary:

The original remedial actions taken at the Site included the excavation of contaminated soils to the extent possible, given the limitations of existing rail lines, and addressing the groundwater contamination with the operation of a SVE system augmented with groundwater depression/extraction system. The soil excavation and off-Site treatment and disposal of soils and the operation of the SVE were completed in 1995 and 2007, respectively. The current remedies in place at the Site include MNA of the groundwater plume and ECs in place to restrict access to deep subsurface soils that were not excavated due to physical limitations; restrict the use of groundwater; protect the remedy; and properly assess the vapor intrusion pathway prior to residential construction.

The ECs in place at the Site are functioning appropriately. However, the EPA and UDEQ will continue to analyze more recent groundwater data in the semi-annual groundwater monitoring reports to evaluate the performance of MNA as a remedy. If it is determined that the groundwater plume is migrating into the off-Site wells or that on-Site concentrations are not decreasing, the MNA remedy will be reevaluated, and more active remediation may be warranted.

Remedial Action Performance: The AS, SVE and depression well systems have been dismantled/removed and the remedy has transitioned from active remediation to MNA. The monitoring program for natural attenuation is in place and appears to be adequate at this time. Current information indicates that natural attenuation is working; however, the calculated remedial timeframes for the Source Wells do not project groundwater near the source to achieve RLs until well into the future. The long remedial time frames combined with recent groundwater data showing increasing benzene, naphthalene and cyanide concentrations in the monitoring wells RW-603 and RW-604, indicates that the effectiveness of MNA as a remedy warrants closer evaluation from the EPA and UDEQ

System Operations/Operations and Maintenance (O&M)/Monitoring: Monitoring wells installed at the Site are accessible and sampled semi-annually. Groundwater monitoring is consistent with the MNAP. The Semi-Annual Groundwater Reports are submitted to the EPA and UDEQ for review in accordance with the MNAP. The First Semi-Annual Groundwater Reports are received July 31 of the calendar year, and the Second Semi-Annual Groundwater Reports are received January 31 of the following year.

Implementation of Institutional Controls and Other Measures: ICs called for in the 1993 ROD have been implemented. The ICs remain in place under an EC with SLC, the current owner of the properties described in the ROD. A Deed Restriction for the North Sixth property was filed with the SLC Recorder's office in 2013.

QUESTION B: Are the exposure assumptions, toxicity data, cleanup levels and remedial action objectives (RAOs) used at the time of the remedy selection still valid?

Question B Summary:

The exposure assumptions, toxicity data, cleanup levels and remedial action objectives used at the time of the remedy selection are still valid. The RLs for benzene and cyanide remain consistent with MCLs. The RL for naphthalene remains consistent with current risk assessments.

The development of the Folsom Trail through the Site will bring recreationists, pedestrians and cyclists within the Site boundaries. However, the development of a Soil Management Procedure prior to the construction activity, as well as actions taken to appropriately address contaminated soils and conduct the work within the scope of the EC at the Site, are effective in preventing unacceptable exposures.

The exposure pathway for vapor intrusion continues to be evaluated in regard to the risks posed to the North Sixth Apartments. The location of the North Sixth Apartments in relation to the Site contamination can be observed in Figures 33-35 in Appendix C of this report. There remains a data gap with regards to the lack of data from indoor air sampling within the building that is complicated by the presence of potential background sources from a ground level parking garage. Further evaluation of plume boundaries, groundwater concentration levels, and mitigation systems within the building are currently being evaluated by the EPA and UDEQ to determine the sampling necessary to complete the vapor intrusion investigation.

Changes in Standards: No newly promulgated or modified Applicable or Relevant and Appropriate Requirements that would significantly change the protectiveness of the remedies implemented at the Site were found.

Changes in Toxicity and Other Contaminant Characteristics: The RLs for the three groundwater COCs monitored for in the semi-annual groundwater sampling were originally developed in the 1993 ROD using toxicity information that was relevant at that time. The MCLs used for benzene and cyanide have not changed since 1993. The toxicity information (i.e., the Oral Reference Dose) has changed for naphthalene. The use of the different toxicity information for naphthalene will not affect the remedy at the Site due to the fact that concentrations do not make naphthalene a risk driver at the Site.

Lead in soils was found in the ABY and SEA and was excavated with a remedial goal of achieving lead concentrations of 500 mg/kg. For lead in soil, the EPA's Office of Solid Waste and Emergency Response Directives 9355.4-12 (EPA, 1994) and 9200.4-27P (EPA, 1998), were identified as federal chemical-specific To-Be-Considered guidance documents. However, since 1994 and 1998, when those documents were issued, increasing evidence has shown that blood lead levels below 10 µg/dL may also have negative health impacts. Because of this, the agencies will look at the cleanup levels used at this site and determine if any additional work needs to be done.

Changes in Risk Assessment Methodologies: The groundwater cleanup levels selected in the 1993 ROD for this Site were based on the estimated risks defined in the EPA's Risk Assessment Guidance for Superfund (RAGS, Part A). There have been changes to the risk assessment methodologies since the risk assessment and ROD were finalized. Because these documents were developed prior to RAGS Part F (2009), the exposure assumptions for the inhalation exposure pathway were different. The exposure metric that was used in the risk assessment and ROD used an inhalation concentration that was based on ingestion rate and body weight milligrams per kilogram per day (mg/kg-day). The updated methodology

uses the concentration of chemicals in the air, with the exposure metric of µg/m3. Revising the inhalation calculations to be consistent with the most recent EPA guidance does not change the current groundwater cleanup levels.

Changes in Exposure Pathways: Two changes in land use within the Site boundaries occurred during the FYR period. During the second half of 2018, the Gateway Community Garden was developed on the southeastern portion of the Site at 46 North 500 West. The garden was created in a partnership between SLC and Wasatch Community Gardens and in collaboration with PacifiCorp. The community garden has installed raised garden beds above a protective liner to offer gardening opportunities for people in the community. The raised beds and liner were incorporated in response to the development of the gardens at the Site. In 2019, in compliance with the EC in place for the properties owned by SLC, UTA initiated sampling for the proposed Folsom Trail project. The Folsom Trail is a pedestrian/bicycle trail that bisects the Site along the south side of the railroad tracks. Sampling for the trail project was completed on July 19, 2019 and consisted of the collection of three soil samples from shallow soils defined as 0-1 feet bgs. Analytical data for the three soil samples detected PAH compounds above residential Regional Screening Levels (RSL) in all three samples. One sample detected benzo(a)pyrene above the industrial RSL. In response to the sampling data, UTA developed a *Soil Management Procedure* to limit exposure to the soils during construction activities.

In the previous FYR, a vapor intrusion investigation was requested by the EPA for the North Sixth Apartment complex, located along the western boundary of the Site. In response to this issue raised in the FYR, PacifiCorp prepared the *Response to Recommendation/Follow-Up Action for Indoor Air Sampling and a Vapor Intrusion Investigation from the Fourth Five Year Review, America Barrel Superfund Site dated August 27, 2018.* The report conducted a reevaluation of the 2011 soil-gas data and provided information regarding the mitigation systems incorporated into the construction of the North Sixth Apartments. The Johnson Ettinger model was again used to determine if the soil vapor posed a potential risk to persons inside the North Sixth Apartments. Although residential units are not located on the first floor, to be conservative, the Johnson Ettinger model was run for a potential residential exposure. The model indicated that the soil-gas data did not translate to a residential exposure above target risk levels. After reviewing the document and conclusions, the EPA and UDEQ determined that the Johnson and Ettinger modeling conducted would not be sufficient to determine risk posed by the vapor intrusion pathway. The EPA does not use modeled air concentrations to determine exposure/risk for indoor air concentrations; they are screening, predictive tools. The report did not provide updated soil-gas data or collect air samples from within the building. The risks posed by the vapor intrusion is currently unknown. The EPA and UDEQ will work with PacifiCorp to complete the vapor intrusion investigation for the North Sixth Apartments.

No new contaminants or sources were identified. There is no indication that hydrologic or hydrogeologic conditions are not adequately characterized. Present contaminant levels in groundwater are consistent with expectations at the time of the ROD.

QUESTION C: Has any **other** information come to light that could call into question the protectiveness of the remedy?

No additional information has been identified. According to the Utah Geologic Survey, the Site does lie in an area of known earthquake risk with high liquefaction potential. A Magnitude 5.7 Earthquake struck the Salt Lake area on March 18, 2020, with no damage to the Site or the remedial components reported.

VI. ISSUES/RECOMMENDATIONS

Issues and Recommendations Identified in the Five-Year Review:

OU(s): OU1	Issue Category: Other Incomplete data for evaluating the vapor intrusion pathway			
	Issue: No vapor intrusion data for the North Sixth Apartments			
	Recommendation: The EPA and UDEQ will work with PacifiCorp to complete the vapor intrusion investigation including indoor air sampling and the collection of other lines of evidence to evaluate the vapor intrusion pathway for the North Sixth Apartments.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
Yes	Yes	PRP	EPA/State	12/31/2022

OU(s): OU1	Issue Category: Remedy Performance Evaluation of MNA as a remedy			
	Issue: Increasing benzene and cyanide concentrations observed in the monitoring wells RW-604 and RW-603 and predicted long remedial time frames in wells RW-605 and RW-603.			
	Recommendation: The EPA and UDEQ will continue to evaluate more recent groundwater data to evaluate the performance of MNA as a remedy and determine if remedial alternatives may be needed.			
Affect Current Protectiveness	**Affect Future Protectiveness**	**Party Responsible**	**Oversight Party**	**Milestone Date**
No	No	PRP	EPA/State	10/1/2022

OTHER FINDINGS

In addition, the following are recommendations that were identified during the FYR and may improve performance of the remedy and improve management of O&M, but do not affect current and/or future protectiveness:

- According to the MNAP, samples are collected with the use of dedicated pumps, bladder pumps, or bailers. Sampling techniques that disturb or agitate the sample may result in volatilization and loss of the volatile organic compounds. Also, water quality parameters over the five-year period indicate multiple wells with high fluctuations with regard to turbidity. Variances in turbidity may affect the comparability of the collected samples. Alternative sampling techniques, such as low-flow sampling should be considered to limit the impacts of turbidity in the wells.

- The calculated remedial time frames to meet RLs, primarily for cyanide in well RW-603 (105.7 years) and benzene in well RW-605 (238.7 years), are quite long. While the calculated remedial time frame for benzene has declined since 2016, the calculated remedial time frame for cyanide has increased since 2016. Also, concentrations for benzene in Source Well RW-604 have also been increasing steadily over the five-year period from 210 µg/L in June 2016 to 2,470 µg/L in December 2020. Although these issues do not affect the current or future protectiveness of the remedy, they are of concern. Specifically, ICs are in place to ensure protectiveness of the remedy, but future protectiveness may be impacted dependent upon the evaluation of the MNA remedy. These timeframes and concentrations in the Source Wells should be monitored closely during the next five-year period to see if concentrations move downward and a shortening of these calculated remedial time frame occurs.

VII. PROTECTIVENESS STATEMENT

Sitewide Protectiveness Statement	
Protectiveness Determination: Protectiveness Deferred	*Planned Addendum Completion Date:* 3/31/2023
Protectiveness Statement: The available data is insufficient to determine whether there is a potential or actual VI exposure pathway. Long and short-term protectiveness determinations cannot be made until additional data to characterize the risks posed by the VI pathway is obtained.	

VIII. NEXT REVIEW

The next FYR report for the Site is required five years from the completion date of this review.

APPENDIX A – REFERENCE LIST

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PacifiCorp, 2017b. Semi-Annual Groundwater Monitoring Report January through June 2017, American Barrel Site, Salt Lake City, Utah; July 25, 2017.

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PacifiCorp, 2018c. First Semi-Annual Groundwater Monitoring Report January through June 2018, American Barrel Site, Salt Lake City, Utah; July 17, 2018.

PacifiCorp, 2018d. Response to Recommendation/Follow-Up Action for Indoor Air Sampling and a Vapor Intrusion Investigation from the Fourth Five Year Review, America Barrel Superfund Site; August 27, 2018.

PacifiCorp, 2019a. Second Semi-Annual Groundwater Monitoring Report July through December 2018, American Barrel Site, Salt Lake City, Utah; January 30, 2019.

PacifiCorp, 2019b. First Semi-Annual Groundwater Monitoring Report January through June 2019, American Barrel Site, Salt Lake City, Utah; July 26, 2019.

PacifiCorp, 2020a. Second Semi-Annual Groundwater Monitoring Report July through December 2019, American Barrel Site, Salt Lake City, Utah; January 29, 2020.

PacifiCorp, 2020b. First Semi-Annual 2020 Groundwater Monitoring Report January through June 2020, American Barrel Site, Salt Lake City, Utah; July 27, 2020.

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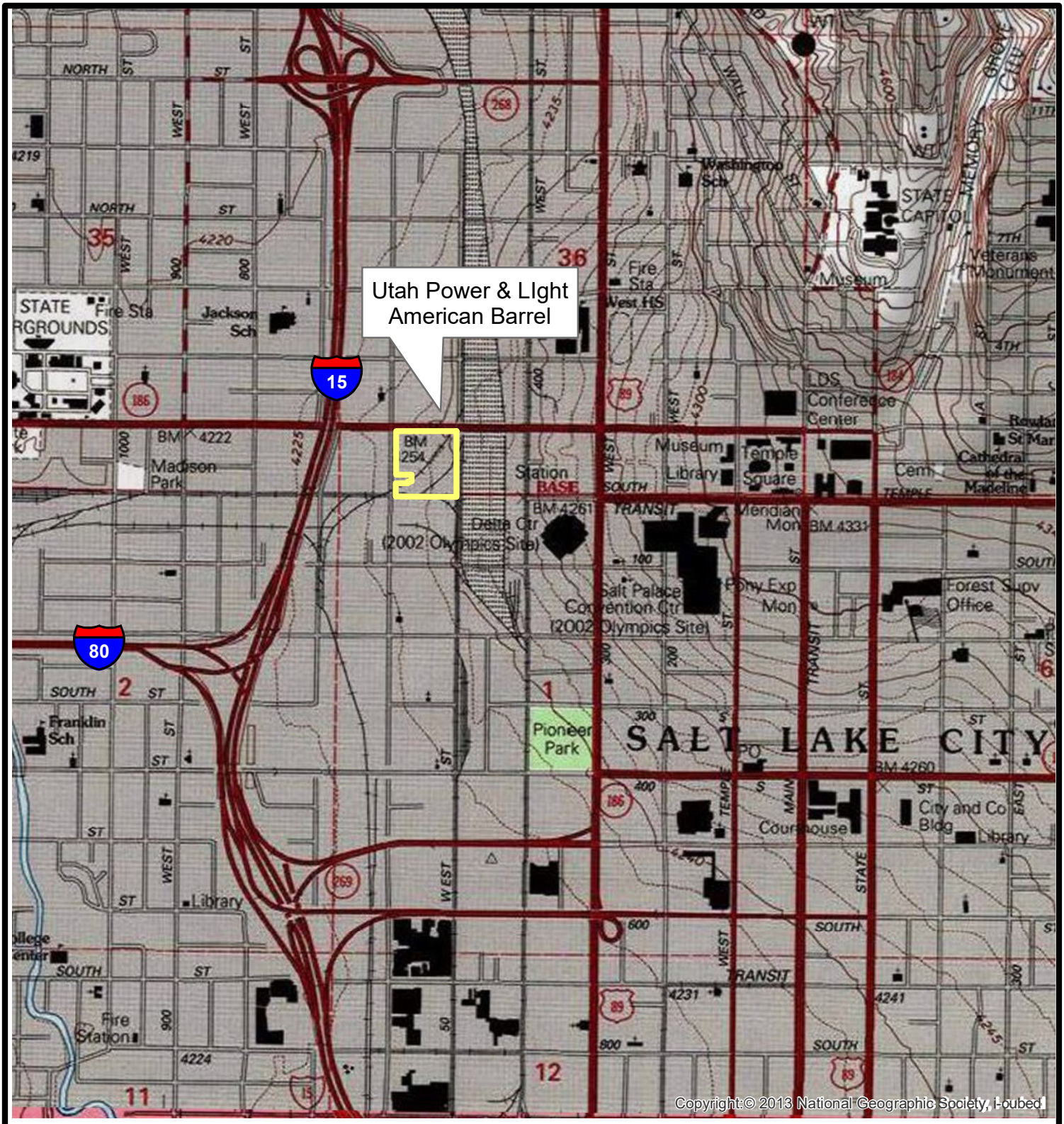
Sage Environmental, 2008. *Spring 2012 Cyanide Investigation, American Barrel Site, Salt Lake City, Utah*; July 13, 2012.

Salt Lake City, 2020. *City Code of Salt Lake City*, Title 17 Public Services, Division I Water Systems, Culinary Water, Code #17.16.510 – Connection to City Water Main Required, Code current through: Ord. 49-20, passed December 11, 2020.

APPENDIX B

Site Location Map



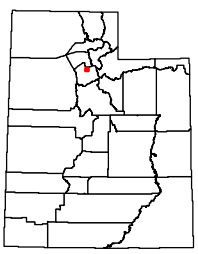
0 400 800 1,600 2,400 3,200

Feet

N

W E

S



UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

ENVIRONMENTAL RESPONSE & REMEDIATION

APPENDIX B

SITE LOCATION MAP

Utah Power & Light - American Barrel

Salt Lake County, Utah

by: crb

date: 5/3/2021

APPENDIX C

2020 Second Semi-Annual Groundwater Monitoring Report Data

Table 1:	Groundwater Elevations
Table 2:	Groundwater Field Parameters and Analytical Results (December 10-11, 2020)
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Figure 1:	Groundwater Potentiometric Surface Contour Map
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Table 1. Groundwater Elevations; 2nd Semi-Annual 2020 Event (December 3-4, 2020)

Well ID	Casing Collar Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft-AMSL)	Total Well Depth (ft)
RW-505R	4231.91	12/4/2020	10.42	4221.49	19.89
RW-514	4239.03	12/3/2020	16.95	4222.08	26.30
RW-600	4232.34	12/4/2020	11.03	4221.31	19.39
RW-601	4232.33	12/4/2020	9.91	4222.42	19.57
RW-602	4238.70	12/3/2020	15.59	4223.11	28.05
RW-603	4242.23	12/3/2020	17.53	4224.70	27.13
RW-604	4238.89	12/3/2020	16.37	4222.52	28.25
RW-605	4239.02	12/3/2020	15.48	4223.54	27.45
RW-606	4244.90	12/3/2020	18.95	4225.95	23.17
RW-607	4231.77	12/4/2020	9.00	4222.77	18.90
UG-1	4242.47	12/3/2020	15.34	4227.13	19.82
UG-2R*	4243.49	12/3/2020	14.05	4229.44	19.70
UG-3	4245.31	12/3/2020	15.22	4230.09	19.27

ft = Feet

ft-AMSL = Feet above mean sea level

NA = Not Applicable

* = Well UG-2 was destoyed and was replaced by well UG-2R on January 20, 2014

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Table 2. Groundwater Field Parameters and Analytical Results; 2nd Semi-Annual 2020 Event (December 3-4, 2020)

Well / Sample Identification:	RW-505R	RW-514	RW-600	RW-601	RW-602	RW-603	RW-604	RW-605	RW-606	RW-607	Duplicate "RW-777" (from RW-602)	Trip Blank	Field Blank
Field Parameters													
Groundwater elevation (ft-AMSL)	**4221.49**	**4222.08**	**4221.31**	**4222.42**	**4223.11**	**4224.70**	**4222.52**	**4223.54**	**4225.95**	**4222.77**	NA	NA	NA
Temperature (°C)	**17.21**	**15.02**	**17.11**	**13.89**	**15.47**	**13.68**	**14.14**	**14.16**	**14.86**	**16.66**	NA	NA	NA
pH (standard units)	**7.12**	**7.19**	**7.06**	**7.08**	**7.14**	**6.82**	**7.16**	**7.09**	**6.92**	**7.11**	NA	NA	NA
Specific Conductance (mS/cm)	**1.43**	**1.04**	**1.95**	**1.88**	**1.27**	**1.92**	**1.66**	**2.27**	**3.83**	**1.19**	NA	NA	NA
Turbidity (NTU)	**198**	**7.1**	**727**	**150**	**252**	**42.7**	**28.3**	**118**	**>1000**	**260**	NA	NA	NA
Dissolved Oxygen (mg/L)	**1.66**	**2.54**	**2.39**	**2.66**	**3.33**	**3.68**	**4.84**	**2.81**	**7.09**	**1.70**	NA	NA	NA
Volatile Organic Compounds (µg/L) EPA 8260C													
Benzene	<1.00	**8.81**	<1.00	**2.56**	**451**	**3,300 ~**	**2,470**	**6,080**	<1.00	**10.0**	**453**	<1.00	<1.00
Naphthalene	<2.00	**5.78**	<2.00	<2.00	**31.2**	**36.7**	**223**	**3,570**	<2.00	**2.58**	**28.2**	<2.00	<2.00
Cyanide (µg/L) EPA 9012A													
Cyanide	<5.00	**14.6 J**	**16.3 J**	<5.00	**75.7 J**	**1250 J**	**222 [1] J**	**764 J**	**19.8 J**	**26.2 J**	**96.2 J**	NA	<5.00

NA = Not analyzed

ft-AMSL = Feet above mean sea level

< = Not Detected above the RL

Bold = Compound detected above the MDL

[1] = Matrix Spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

[2] = Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

[#] = High RPD due to low analyte concentration. In this range, high RPDs are expected.

[~] = The reporting limits were raised due to high analyte concentrations.

J = Indicates that the value is qualified as "estimated" and potentially biased high based on the data validation report (included as Appendix B)

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American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
RW-505R	3/20/2008	4221.85	13.9	6.98	1.87	186	2.34	0.15 J	NT	34
Duplicate (from RW-505R)	3/20/2008	NA	NA	NA	NA	NA	NA	0.17 J	NT	32
RW-505R	6/26/2008	4221.32	14.7	7.44	1.66	>999	0.72	ND	NT	31
Duplicate (from RW-505R)	6/26/2008	NA	NA	NA	NA	NA	NA	ND	NT	ND
RW-505R	9/3/2008	4220.95	15.2	7.76	1.51	190	1.07	ND	NT	23
RW-505R	11/19/2008	4221.60	15.0	7.34	1.82	351	0.78	<1	NT	30
RW-505R	3/5/2009	4222.04	13.7	7.62	1.70	84	0.61	<1	NT	24
RW-505R	6/9/2009	4222.02	14.2	7.34	1.74	284	0.40	0.47 J	<1.0	15 J
RW-505R	8/13/2009	4221.41	15.2	7.18	1.85	516	0.95	<1.0	NA	8.5 J
RW-505R	12/1/2009	4221.24	14.7	7.12	1.88	504	0.76	<1.0	NA	6.9 J
RW-505R	3/9/2010	4221.76	13.6	6.80	1.99	421	5.37	<1.0	NA	8.8 J
RW-505R	6/8/2010	4222.67	15.1	7.13	1.86	108	4.07	<1.0	<1.0	17
RW-505R	8/24/2010	4222.48	14.5	6.88	1.95	290	4.05	<1.0	NA	45
RW-505R	12/2/2010	4223.04	14.3	7.02	1.82	94	5.78	<1.0	NA	30
RW-505R	3/2/2011	4223.13	13.4	7.07	2.13	109	6.41	<1.0	NA	<10
RW-505R	5/31/2011	4223.40	13.92	7.06	1.89	124	4.02	<1.0	<1.0	<10
RW-505R	8/23/2011	4222.98	14.7	7.17	1.61	47	3.33	<1.0	NA	<10
RW-505R	12/7/2011	4223.05	14.0	7.39	1.22	73	3.91	<1.0	NA	<10
RW-505R	3/5/2012	4223.21	14.2	7.38	1.21	178	3.63	<1.0	NA	<10
RW-505R	6/6/2012	4223.40	13.14	7.35	1.37	61.9	2.59	<1.0	<1.0	<10
RW-505R	8/20/2012	4222.61	15.05	7.25	1.26	51	4.13	0.5 J	NA	<10
RW-505R	12/4/2012	4222.61	14.89	6.90	1.27	143	3.01	<1.0	NA	<10
RW-505R	3/12/2013	4223.12	13.63	7.25	1.36	39.3	2.77	<1.0	NA	<10
RW-505R	5/15/2013	4223.24	14.65	7.42	1.48	457	3.39	<1.0	<1.0	3.5 J
RW-505R	12/11/2013	4222.16	15.60	7.45	1.43	460	4.25	<1.0	<1.0	<10 HT
RW-505R	1/9/2014	4222.12	16.29	7.42	1.34	86.0	8.64	NS	NS	5.5 J
RW-505R	6/3/2014	4222.96	14.58	7.42	1.35	823	4.12	<1.0	<1.0	14
RW-505R	12/5/2014	4222.46	15.64	7.32	1.39	136	2.90	<1.0	<1.0	<10 J
RW-505R	5/20/2015	4231.91	16.12	7.27	1.46	231	1.93	<1.0	<1.0	<10
RW-505R	12/4/2015	4222.89	17.46	7.17	1.46	562	4.11	<1.0	<1.0	<10
RW-505R	6/9/2016	4223.16	16.92	7.14	1.59	256	3.79	<1.0	<1.0	14
RW-505R	12/9/2016	4222.84	17.52	7.06	1.44	512	3.98	<1.0	<1.0	<10
RW-505R	6/1/2017	4223.34	17.01	7.09	1.58	324	6.82	0.35 J	0.59 J	4.2 J
RW-505R	12/8/2017	4222.64	17.16	7.01	1.26	306	1.59	0.55 J	0.97 J	4.6 JJ
RW-505R	6/11/2018	4222.85	17.79	7.00	1.32	849	2.07	0.54 J	0.67 J	<10
RW-505R	12/11/2018	4222.69	17.74	7.00	1.36	160	1.90	0.3 J	0.45 J	<10
RW-505R	5/24/2019	4223.53	16.70	7.22	1.59	35.2	1.84	0.55 J	0.44 J	<10
RW-505R	12/11/2019	4222.39	17.99	6.88	1.44	28.7	2.64	1.91	2.11	<5.00
Duplicate "RW-777" (from RW-505R)	12/11/2019	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
RW-505R	6/4/2020	4222.62	18.11	6.95	1.63	210	2.06	<1.00	<2.00	<5.00
RW-505R	12/4/2020	4221.49	17.21	7.12	1.43	198	1.66	<1.00	<2.00	<5.00
RW-514	5/14/2013	4223.56	16.27	7.31	1.02	27.0	7.30	31	110	11
Duplicate "RW-777" (from RW-514)	5/14/2013	NA	NA	NA	NA	NA	NA	33	120	13
RW-514	12/11/2013	4222.57	16.22	7.44	1.04	63	4.68	38	110	12 HT
RW-514	1/8/2014	4222.53	16.21	7.37	1.00	109	4.73	NA	NA	17
RW-514	6/3/2014	4223.21	16.97	7.10	0.990	153	2.40	25	75	27
RW-514	12/4/2014	4222.85	16.27	7.21	1.02	128	2.66	24	64	13 J
RW-514	5/20/2015	4239.03	15.68	7.24	0.984	70.9	2.20	22	48	14
RW-514	12/3/2015	4223.09	15.58	7.17	1.02	6.1	2.73	26	76	14
RW-514	6/8/2016	4223.36	15.94	7.19	0.996	67.0	2.10	15	17	17
Duplicate "RW-777" (from RW-514)	6/8/2016	NA	NA	NA	NA	NA	NA	16	18	22
RW-514	12/8/2016	4223.06	15.49	7.03	1.02	226	1.69	19	15	20
RW-514	6/1/2017	4223.52	15.69	7.12	1.03	51.8	9.40	12	8.5	21
RW-514	12/8/2017	4222.76	15.24	6.92	1.07	2.8	2.91	14	9.4	20 J
Duplicate "RW-777" (from RW-514)	12/8/2017	NA	NA	NA	NA	NA	NA	15	9.8	15 J
RW-514	6/11/2018	4223.03	16.06	6.99	1.09	30.0	2.62	14	4.2	17
RW-514	12/10/2018	4222.89	15.40	7.20	1.12	37.7	2.39	13	5.5	18
RW-514	5/23/2019	4223.84	14.47	7.34	1.06	5.1	4.65	12	7.0	14
Duplicate "RW-777" (from RW-514)	5/23/2019	NA	NA	NA	NA	NA	NA	13	7.2	14
RW-514	12/10/2019	4222.76	15.78	7.31	1.08	16.4	3.72	22.6	13.6	7.58 1#
RW-514	6/3/2020	4222.78	15.21	6.79	1.13	1.90	1.77	8.89	5.57	18.0
RW-514	12/3/2020	4222.08	15.02	7.19	1.04	7.1	2.54	8.81	5.78	14.6 J

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American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
RW-600	3/20/2008	4222.22	13.5	7.04	2.00	133	0.97	0.56 J	NT	66
RW-600	6/26/2008	4221.59	16.2	7.47	1.48	173	2.28	ND	NT	140
RW-600	9/3/2008	4221.00	16.6	7.52	1.36	356	0.94	ND	NT	110
RW-600	11/19/2008	4221.88	17.0	7.20	1.59	135	1.37	<1	NT	130
RW-600	3/5/2009	4222.21	14.0	7.39	1.66	330	0.76	<1	NT	150
RW-600	6/9/2009	4222.19	14.1	7.11	1.79	92	0.65	<1.0	<1.0	360 J
RW-600	8/13/2009	4221.44	15.7	7.07	1.87	74	0.56	0.13 J	NA	410 J
RW-600	12/1/2009	4221.21	16.1	6.95	1.79	287	0.62	<1.0	NA	330
RW-600	3/9/2010	4221.77	13.7	6.58	2.15	739	2.94	<1.0	NA	450
RW-600	6/8/2010	4222.83	15.8	7.00	2.08	201	4.76	<1.0	<1.0	620
Duplicate "RW-777" (from RW-600)	6/8/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	680
RW-600	8/24/2010	4222.78	16.3	6.84	2.11	169	2.81	<1.0	NA	750
RW-600	12/2/2010	4222.86	15.4	6.87	2.10	514	4.03	<1.0	NA	750
RW-600	3/2/2011	4223.10	13.1	6.98	2.03	356	3.88	<1.0	NA	420
RW-600	6/1/2011	4224.07	14.08	6.92	1.92	307	9.34	<1.0	<1.0	440
Duplicate "RW-777" (from RW-600)	6/1/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	420
RW-600	8/23/2011	4222.99	15.9	6.91	2.11	405	3.66	<1.0	NA	340
RW-600	12/7/2011	4222.95	15.1	7.22	2.00	339	4.23	<1.0	NA	<10
RW-600	3/5/2012	4223.09	14.4	6.90	1.84	236	6.14	<1.0	NA	99
RW-600	6/6/2012	4223.45	14.23	7.11	1.80	254	3.13	<1.0	<1.0	67
Duplicate "RW-777" (from RW-600)	6/6/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	63
RW-600	8/21/2012	4222.39	16.35	7.64	1.71	>800	3.18	<1.0	NA	68
RW-600	12/4/2012	4222.53	16.31	6.87	1.79	>800	2.39	<1.0	NA	31
RW-600	3/12/2013	4223.08	14.05	7.05	1.75	277	2.89	<1.0	NA	61
RW-600	5/15/2013	4223.16	14.56	7.16	1.71	257	4.03	<1.0	<1.0	79
RW-600	12/11/2013	4222.14	15.87	7.27	1.76	>1000	4.45	<1.0	<1.0	31 HT
RW-600	1/9/2014	4222.06	16.16	7.28	1.67	648	4.86	NA	NA	55
RW-600	6/3/2014	4222.87	14.56	6.97	1.65	>1000	3.64	<1.0	<1.0	55
RW-600	12/5/2014	4222.44	16.86	7.13	1.58	867	1.81	<1.0	<1.0	36 J
RW-600	5/21/2015	4232.34	14.73	7.23	1.34	319	3.17	<1.0	<1.0	35
RW-600	12/4/2015	4222.64	17.74	6.99	1.83	>1000	6.94	<1.0	<1.0	23
RW-600	6/9/2016	4222.88	15.39	7.14	2.19	479	3.37	<1.0	<1.0	24
RW-600	12/9/2016	4222.62	17.08	7.02	1.73	436	2.37	<1.0	<1.0	8.1 J
RW-600	6/2/2017	4223.04	15.01	7.04	2.08	351	3.20	<1.0	<1.0	13
RW-600	12/8/2017	4222.34	17.33	6.94	1.96	401	1.16	0.46 J	0.63 J	5.3 JJ
RW-600	6/11/2018	4222.51	15.87	7.12	1.98	164	2.78	0.32 J	0.51 J	<10
RW-600	12/10/2018	4222.39	17.32	6.89	1.87	428	2.39	<1.0	0.42 J	8.9 J
RW-600	5/24/2019	4223.28	14.03	7.28	2.10	297	3.38	0.3 J	<1.0	20
RW-600	12/11/2019	4222.26	16.33	6.91	1.88	286	2.64	1.80	<2.00	11.0
RW-600	6/4/2020	4222.38	14.97	6.91	2.24	616	2.45	<1.00	<2.00	16.0
RW-600	12/4/2020	4221.31	17.11	7.06	1.95	727	2.39	<1.00	<2.00	16.3 J

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1.460****	**200***
RW-601	3/20/2008	4221.96	13.7	7.22	1.94	153	1.10	0.31 J	NT	ND
RW-601	6/26/2008	4222.19	18.7	7.50	1.74	171	1.82	0.17 J	NT	ND
RW-601	9/3/2008	4222.13	17.1	7.20	1.86	129	2.02	ND	NT	ND
RW-601	11/19/2008	4222.25	17.1	7.34	1.77	152	1.04	1.7	NT	<10
RW-601	3/6/2009	4222.68	11.4	7.19	2.08	105	1.57	3.1	NT	<10 U
RW-601	6/9/2009	4222.72	14.1	7.36	1.70	281	2.16	0.47 J	<1.0	<10 J
Duplicate "RW-777" (from RW-601)	6/9/2009	NA	NA	NA	NA	NA	NA	0.52 J	0.82 J	<10 J
RW-601	8/13/2009	4222.44	17.9	7.14	1.86	51	1.75	0.28 J	NA	<10
RW-601	12/1/2009	4222.15	15.0	7.32	1.60	173	2.47	0.28 J	NA	<10
RW-601	3/9/2010	4222.74	11.1	7.16	1.82	305	3.89	0.24 J	NA	<10
RW-601	6/8/2010	4223.25	16.2	7.15	1.65	149	3.61	<1.0	<1.0	<10
RW-601	8/24/2010	4222.57	17.5	7.08	1.52	632	5.33	<1.0	NA	<10
RW-601	12/2/2010	4224.29	15.3	7.18	1.43	130	5.63	0.7 J	NA	<10
RW-601	3/2/2011	4223.81	11.2	6.94	1.43	245	5.19	<1.0	NA	<10
RW-601	6/1/2011	4225.06	14.16	7.21	1.31	315	4.88	0.35 J	<1.0	<10
RW-601	8/23/2011	4223.72	17.7	6.89	1.46	304	3.89	<1.0	NA	<10
RW-601	12/7/2011	4223.78	13.2	7.10	1.46	17	3.95	<1.0	NA	<10
RW-601	3/5/2012	4223.98	12.1	7.09	1.40	91	4.30	<1.0	NA	<10
RW-601	6/5/2012	4223.77	12.48	7.14	1.36	168	3.83	<1.0	<1.0	<10
RW-601	8/21/2012	4223.08	18.61	6.99	1.29	220	4.52	<1.0	NA	<10
RW-601	12/4/2012	4222.90	15.02	7.15	1.28	302	3.30	<1.0	NA	4.6 J
RW-601	3/12/2013	4223.50	10.79	7.17	1.42	99.3	4.45	<1.0	NA	<10
RW-601	5/15/2013	4223.77	14.62	7.36	1.40	251	10.84	<1.0	<1.0	<10
RW-601	12/11/2013	4222.79	16.39	7.43	1.32	931	4.52	<1.0	<1.0	<10 HT
RW-601	1/9/2014	4222.78	15.67	7.39	1.26	270	5.18	NA	NA	6.1 J
RW-601	6/3/2014	4223.62	15.28	7.09	1.34	742	4.35	<1.0	<1.0	12
RW-601	12/5/2014	4223.01	15.82	7.32	1.34	389	5.25	<1.0	<1.0	<10 J
RW-601	5/21/2015	4232.33	15.04	7.57	1.24	285	3.47	<1.0	<1.0	<10
RW-601	12/4/2015	4223.58	16.59	7.28	1.30	399	8.04	<1.0	<1.0	<10
RW-601	6/9/2016	4223.87	15.72	7.19	1.23	439	5.27	<1.0	<1.0	<10
RW-601	12/9/2016	4223.53	14.90	7.40	1.27	331	5.59	<1.0	<1.0	<10
RW-601	6/2/2017	4224.18	14.82	7.34	1.15	416	4.35	<1.0	0.39 J	5.2 J
RW-601	12/8/2017	4223.48	14.77	7.11	1.25	965	3.49	2.5	1.8	<10 J
RW-601	6/11/2018	4223.78	15.12	7.29	1.18	46.6	4.21	0.99 J	0.78 J	<10
RW-601	12/10/2018	4223.38	13.56	6.99	1.31	252	3.00	0.85 J	1.1	<10
RW-601	5/24/2019	4224.08	12.97	7.27	1.24	142	3.48	0.82 J	0.48 J	<10
RW-601	12/11/2019	4222.93	13.89	7.07	1.26	240	4.04	1.58	<2.00	<5.00
RW-601	6/4/2020	4223.73	15.65	7.16	1.38	103	2.76	<1.00	<2.00	<5.00
RW-601	12/4/2020	4222.42	13.89	7.08	1.88	150	2.66	2.56	<2.00	<5.00

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
RW-602	9/3/2008	4222.99	17.9	7.90	1.52	85	2.89	5,000	NT	890
RW-602	11/19/2008	4223.13	15.5	7.37	1.81	436	1.39	5,200	NT	790
Duplicate "RW-777" (from RW-602)	11/19/2008	NA	NA	NA	NA	NA	NA	4,800	NT	760
RW-602	3/5/2009	4223.47	13.4	7.42	1.73	120	0.94	5,200	NT	710
RW-602	6/9/2009	4223.59	14.9	7.29	1.77	413	1.23	5,300	560 J	740 J
RW-602	8/13/2009	4223.25	15.2	7.07	1.79	173	2.21	5,600	690	750 J
Duplicate "RW-777" (from RW-602)	8/13/2009	NA	NA	NA	NA	NA	NA	5,200	910	750 J
RW-602	12/1/2009	4222.99	13.9	7.17	1.74	251	1.05	5,200	980 J	460
Duplicate "RW-777" (from RW-602)	12/1/2009	NA	NA	NA	NA	NA	NA	4,500	1,100 J	580
RW-602	3/9/2010	4223.32	12.9	7.15	1.80	342	3.73	5,100	810	750
Duplicate "RW-777" (from RW-602)	3/9/2010	NA	NA	NA	NA	NA	NA	5,000	900	770
RW-602	6/8/2010	4224.03	17.2	7.20	1.75	227	4.72	4,700	1,200	750
RW-602	8/24/2010	4223.99	17.3	7.19	1.72	149	6.37	5,200	1,100	680
Duplicate "RW-777" (from RW-602)	8/24/2010	NA	NA	NA	NA	NA	NA	5,400	1,200	680
RW-602	12/2/2010	4224.43	12.2	7.15	1.65	>800	5.87	5,200	1,800	680
Duplicate "RW-777" (from RW-602)	12/2/2010	NA	NA	NA	NA	NA	NA	5,000	1,900	670
RW-602	3/2/2011	4224.36	13.7	7.09	1.63	595	5.93	4,300	2,100	620
Duplicate "RW-777" (from RW-602)	3/2/2011	NA	NA	NA	NA	NA	NA	4,300	2,000	600
RW-602	6/1/2011	4225.79	14.67	7.27	1.57	727	6.26	3,500	2,000	610
RW-602	8/23/2011	4224.25	16.5	7.19	1.59	244	3.49	3,800	1,800	580
Duplicate "RW-777" (from RW-602)	8/23/2011	NA	NA	NA	NA	NA	NA	4,000	2,100	590
RW-602	12/7/2011	4224.27	13.4	7.26	1.66	205	5.62	3,700	2,000	560
Duplicate "RW-777" (from RW-602)	12/7/2011	NA	NA	NA	NA	NA	NA	3,400	800	570
RW-602	3/5/2012	4224.42	14.5	7.19	1.58	324	7.92	2,900	1,700 J	560
Duplicate "RW-777" (from RW-602)	3/5/2012	NA	NA	NA	NA	NA	NA	3,400	1,600 J	460
RW-602	6/5/2012	4224.26	12.58	7.13	1.60	165	4.13	2,700	1,900	480
RW-602	8/20/2012	4223.75	18.17	6.94	1.53	210	7.33	2,800	1,800	490
Duplicate "RW-777" (from RW-602)	8/20/2012	NA	NA	NA	NA	NA	NA	2,700	1,600	520
RW-602	12/3/2012	4223.69	14.28	7.04	1.60	749	4.84	3,600	2,300	460
Duplicate "RW-777" (from RW-602)	12/3/2012	NA	NA	NA	NA	NA	NA	3,500	2,300	450
RW-602	3/11/2013	4224.23	14.45	7.17	1.60	348	6.24	3,100 J	1,700 J	470 J
Duplicate "RW-777" (from RW-602)	3/11/2013	NA	NA	NA	NA	NA	NA	3,100 J	1,900 J	460 J
RW-602	5/14/2013	4224.39	16.44	7.26	1.54	54.4	10.58	2,400	1,500	390
RW-602	12/10/2013	4223.59	14.54	7.38	1.60	319	5.56	2,500	1,000	250 HT
RW-602	1/8/2014	4223.57	14.48	7.30	1.54	216	6.28	NA	NA	380
RW-602	6/3/2014	4224.12	18.27	7.36	1.43	137	4.87	1,800	720	270 J
Duplicate "RW-777" (from RW-602)	6/3/2014	NA	NA	NA	NA	NA	NA	1,900	660	270 J
RW-602	12/4/2014	4223.79	16.32	7.21	1.48	214	4.16	1,300	400	260 J
RW-602	5/20/2015	4224.28	16.04	7.09	1.39	103	3.89	1,200	170 J	250
Duplicate "RW-777" (from RW-602)	5/20/2015	NA	NA	NA	NA	NA	NA	1,200	240	250
RW-602	12/3/2015	4224.07	15.32	7.08	1.46	54.9	5.98	1,400	74	260
RW-602	6/8/2016	4224.35	15.51	7.22	1.36	158	5.62	1,200	36	230
RW-602	12/8/2016	4224.04	14.78	7.08	1.37	139	6.50	1,200	35	210
RW-602	6/1/2017	4224.63	16.00	7.41	1.33	285	3.03	1,000	28	190
RW-602	12/7/2017	4223.97	15.58	7.20	1.32	279	2.35	1,100	36	180 J
RW-602	6/11/2018	4224.21	16.42	7.10	1.26	3.22	2.42	740	22	160
Duplicate "RW-777" (from RW-602)	6/11/2018	NA	NA	NA	NA	NA	NA	810	20	160
RW-602	12/10/2018	4223.98	14.60	7.13	1.33	85.9	3.24	880	32	140
RW-602	5/23/2019	4224.69	13.02	7.45	1.30	401	5.27	730	32	140
RW-602	12/10/2019	4223.72	15.18	7.01	1.30	113	7.35	674 ~	30.8	116
RW-602	6/3/2020	4223.96	17.13	6.84	1.33	1.54	4.97	477 ~	25.2	107
RW-602	12/3/2020	4223.11	15.47	7.14	1.27	252	3.33	451	31.2	75.7 J
Duplicate "RW-777" (from RW-602)	12/3/2020	NA	NA	NA	NA	NA	NA	453	28.2	96.2 J

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
RW-603	9/3/2008	4225.09	17.8	7.78	1.93	869	1.06	2,700	NT	2,100
RW-603	11/19/2008	4224.97	17.0	6.94	2.19	209	1.71	3,200	NT	1,900
RW-603	3/5/2009	4225.28	13.3	7.06	2.09	66	1.95	3,300	NT	1,800 J
RW-603	6/9/2009	4225.42	15.5	7.04	2.16	387	1.48	2,000	53 J	1,500 J
RW-603	8/13/2009	4225.09	15.9	6.92	2.19	386	3.14	3,000	55	1,700 J
RW-603	12/1/2009	4224.70	14.5	6.90	2.13	196	2.93	4,500	120 J	1,400
RW-603	3/9/2010	4224.88	13.3	6.86	2.04	103	4.02	2,400	37	1,500
RW-603	6/8/2010	4226.25	16.2	7.00	2.09	212	5.85	1,300	27	1,800
RW-603	8/24/2010	4227.01	18.1	7	2.04	>800	8.02	1,100	15	1,500
RW-603	12/2/2010	4225.91	12.4	7.09	1.92	711	4.65	1,400	19	1,400
RW-603	3/2/2011	4225.80	13.4	6.96	1.94	792	8.09	1,800	33	1,000
RW-603	6/1/2011	4227.73	14.47	7.00	2.05	381	6.13	820	16	1,300
RW-603	8/23/2011	4225.85	16.1	7.02	1.97	61	5.31	1,700	29	1,500
RW-603	12/7/2011	4225.75	13.6	6.99	1.96	199	6.20	2,000	19	1,300
RW-603	3/5/2012	4225.84	13.9	6.70	1.96	386	7.18	2,900	22 J	1,600
RW-603	6/5/2012	4225.71	12.92	6.93	1.99	193	6.84	2,500	52	1,700
RW-603	8/20/2012	4225.40	17.77	6.83	1.95	213	10.20	3,200	37	1,700
RW-603	12/3/2012	4225.36	14.37	6.95	2.13	150	5.46	3,100	36	1,200
RW-603	3/11/2013	4225.98	14.31	7.01	2.03	677	6.47	2,300 J	32 J	1,300 J
RW-603	5/14/2013	4225.89	17.19	7.06	2.06	76.9	12.24	2,200	48	1,200
RW-603	12/10/2013	4225.27	15.01	7.12	2.06	112	7.15	3,300	25	830 HT
RW-603	1/8/2014	4225.26	14.91	7.08	1.95	262	6.49	NA	NA	1,400
RW-603	6/3/2014	4225.65	18.19	6.92	1.90	150	6.52	2,600	34	1,400 J
RW-603	12/4/2014	4225.40	16.72	7.01	1.98	19.7	6.23	3,300	71	1,400 J
RW-603	5/20/2015	4225.94	15.98	7.02	1.87	109	4.51	3,200	50	1,300
RW-603	12/3/2015	4225.42	15.26	6.86	2.01	110	8.37	5,100	61	1,100
RW-603	6/8/2016	4225.67	17.05	6.88	1.88	74.5	5.02	3,700	38	1,500
RW-603	12/8/2016	4225.38	15.49	6.93	1.91	178	6.21	4,600	54	1,300
RW-603	6/1/2017	4226.01	17.41	7.29	1.93	140	5.98	2,300	35	1,200
RW-603	12/7/2017	4225.36	15.83	6.87	1.93	36.2	3.39	4,000	88	1400 J
RW-603	6/11/2018	4225.60	17.48	6.74	1.85	67.3	8.66	2,100	25	1,200
RW-603	12/10/2018	4225.31	14.92	7.04	1.97	126	4.16	1,600	47	1,300
RW-603	5/23/2019	4226.24	13.33	7.24	1.93	240	5.14	1,700	27	1,100
RW-603	12/10/2019	4225.27	15.09	6.88	1.96	49.7	5.83	2,630 ~	49.2	1,420 [2] J
RW-603	6/3/2020	4225.40	16.32	6.82	2.00	115	3.38	1,800	22.8	1,560
RW-603	12/3/2020	4224.70	13.68	6.82	1.92	42.7	3.68	3,300 ~	36.7	1250 J

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	5*	1,460**	200*
RW-604	9/3/2008	4222.94	14.8	7.65	1.12	803	2.82	78	NT	32
Duplicate "RW-777" (from RW-604)	9/3/2008	NA	NA	NA	NA	NA	NA	82	NT	36
RW-604	11/19/2008	4222.77	14.4	7.50	1.37	369	4.26	68	NT	29
RW-604	3/5/2009	4223.05	13.1	7.52	1.29	>999	1.31	64	NT	24
Duplicate "RW-777" (from RW-604)	3/5/2009	NA	NA	NA	NA	NA	NA	65	NT	25
RW-604	6/9/2009	4223.09	14.0	7.36	1.29	142	3.01	54	6.6 J	27 J
RW-604	8/13/2009	4222.48	16.4	6.86	1.28	113	0.87	68	8.8	25 J
RW-604	12/1/2009	4222.51	13.6	7.26	1.29	260	0.90	68	9.5 J	24
RW-604	3/9/2010	4222.78	13.9	7.26	1.43	138	2.80	80	8.0	39
RW-604	6/8/2010	4223.57	14.8	7.21	1.41	307	2.98	90	8.8	48
RW-604	8/24/2010	4223.68	15.1	7.16	1.47	798	3.64	110	9	43
RW-604	12/2/2010	4223.78	13.3	7.00	1.45	41	5.43	95	11	52
RW-604	3/2/2011	4223.85	13.6	7.11	1.51	145	8.14	80	9.6	48
RW-604	6/1/2011	4225.18	15.39	7.19	1.51	245	3.80	67	5.5	57
RW-604	8/23/2011	4223.78	16.0	7.11	1.53	35	3.32	150	8.1	60
RW-604	12/7/2011	4223.78	14.0	7.13	1.67	21	4.84	250	7.8	90
RW-604	3/6/2012	4223.94	13.5	7.19	1.67	27	7.00	610	5.3 J	140
RW-604	6/5/2012	4223.86	13.28	7.16	1.62	28.1	4.39	1,200	9.8	190
RW-604	8/20/2012	4223.26	17.08	7.12	1.53	23	6.28	1,600	10	220 J
RW-604	12/3/2012	4223.30	13.34	7.21	1.49	11.4	6.12	2,600	34	240
RW-604	3/12/2013	4223.80	14.42	7.40	1.44	31.7	4.13	2,800	120	260
RW-604	5/14/2013	4223.93	15.44	7.30	1.51	93.7	6.93	2,800	110	260
RW-604	12/11/2013	4223.01	14.50	7.39	1.84	159	3.28	1,400	340	140 HT
Duplicate "RW-777" (from RW-604)	12/11/2013	NA	NA	NA	NA	NA	NA	1,700	370	130 HT
RW-604	1/8/2014	4223.00	14.39	7.30	1.78	897	6.72	NA	NA	170
Duplicate "RW-777" (from RW-604)	1/8/2014	NA	NA	NA	NA	NA	NA	NA	NA	160
RW-604	6/3/2014	4223.64	15.78	7.38	1.85	415	3.85	600	630	120
RW-604	12/4/2014	4223.29	15.61	7.21	1.98	46.5	5.93	420	1,000	150 J
Duplicate "RW-777" (from RW-604)	12/4/2014	NA	NA	NA	NA	NA	NA	400	990	140 J
RW-604	5/20/2015	4223.87	14.99	7.23	1.90	45.7	5.07	340	610	120
RW-604	12/3/2015	4223.53	14.66	7.10	2.03	805	4.89	260	130	160
Duplicate "RW-777" (from RW-604)	12/3/2015	NA	NA	NA	NA	NA	NA	260	140	150
RW-604	6/8/2016	4223.80	15.58	7.25	1.94	57.8	3.24	210	36	140
RW-604	12/8/2016	4223.49	14.78	7.06	2.03	52.3	3.00	200	20	150
Duplicate "RW-777" (from RW-604)	12/8/2016	NA	NA	NA	NA	NA	NA	210	25	150
RW-604	6/1/2017	4224.01	15.36	7.27	2.05	64.1	3.39	410	11	200
RW-604	12/7/2017	4223.34	14.48	6.81	2.09	70.0	3.26	700	15	210 J
RW-604	6/11/2018	4223.58	16.00	7.03	1.95	55.9	3.58	1,100	32	250
RW-604	12/10/2018	4223.43	14.82	7.24	1.82	77.9	2.92	2,400	18	290
Duplicate "RW-777" (from RW-604)	12/10/2018	NA	NA	NA	NA	NA	NA	2,400	18	300
RW-604	5/23/2019	4224.20	14.06	7.34	1.62	170	3.21	2,700	21	290
RW-604	12/10/2019	4223.21	15.07	7.04	1.63	80.1	9.16	2,970 ~	93.6	411
RW-604	6/3/2020	4223.31	16.61	6.46	1.73	208	4.08	2,460	92.6	454 [1] J
Duplicate "RW-777" (from RW-604)	6/3/2020	NA	NA	NA	NA	NA	NA	2,570 ~	106	452
RW-604	12/3/2020	4222.52	14.14	7.16	1.66	28.3	4.84	2,470	223	222 [1] J

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
RW-605	9/3/2008	4223.62	17.8	7.98	2.55	249	1.13	7,800	NT	1,400
RW-605	11/19/2008	4223.70	16.0	7.51	2.59	683	2.41	6,800	NT	1,400
RW-605	3/6/2009	4223.90	13.1	7.29	2.53	350	1.51	6,500	NT	1,400
RW-605	6/9/2009	4224.00	15.8	7.35	2.53	334	1.64	6,400	3,300 J	1,300 J
RW-605	8/13/2009	4223.76	17.6	7.08	2.53	35	1.08	7,200	2,700	1,400 J
RW-605	12/1/2009	4223.46	14.3	7.16	2.52	64	1.31	6,000	3,400 J	1,300
RW-605	3/9/2010	4223.68	12.9	7.21	2.64	221	3.77	7,900	3,600	1,500
RW-605	6/8/2010	4224.46	16.3	7.28	2.46	109	4.25	6,000	3,800	1,500
RW-605	8/24/2010	4224.64	16.2	7.2	2.62	191	5.35	5,900	2,900	1,500
RW-605	12/2/2010	4224.50	14.0	7.02	2.51	236	4.87	5,500	3,700	1,400
RW-605	3/2/2011	4224.61	13.2	7.20	2.55	238	6.70	6,600	3,400	1,400
RW-605	6/1/2011	4226.15	15.64	7.27	2.53	144	5.87	7,000	3,500	1,700
RW-605	8/23/2011	4224.56	16.0	7.23	2.53	36	3.71	9,000	4,900	1,500
RW-605	12/7/2011	4224.5	13.1	7.24	2.50	124	5.43	6,500	2,900	1,400
RW-605	3/5/2012	4224.61	13.8	7.24	2.39	342	8.75	7,100	2,900 J	1,400
RW-605	6/5/2012	4224.50	13.38	7.23	2.40	193	5.27	8,500	4,700	1,300
RW-605	8/20/2012	4224.14	17.90	7.12	2.29	204	8.66	7,100	3,600	1,200
RW-605	12/3/2012	4224.05	14.21	7.34	2.42	118	5.23	8,400	5,100	1,100
RW-605	3/11/2013	4224.56	14.20	7.32	2.40	77	5.99	8,300 J	5,000 J	1100 J
RW-605	5/14/2013	4224.62	16.18	7.30	2.34	27.2	10.94	8,400	5,100	1,100
RW-605	12/10/2013	4223.93	13.82	7.36	2.51	181	6.41	7,800	4,200	560 HT
RW-605	1/8/2014	4223.92	14.99	7.32	2.42	119	5.46	NA	NA	1,100
RW-605	6/3/2014	4224.41	17.62	7.12	2.28	87.5	13.54	6,100	4,000	940
RW-605	12/4/2014	4224.15	16.08	7.23	2.36	104	4.72	5,000	5,200	920 J
RW-605	5/20/2015	4224.64	16.01	7.28	2.21	139	3.81	5,000	5,800	760
RW-605	12/3/2015	4224.27	15.82	7.31	2.29	99.2	6.99	5,300	4,800	830
RW-605	6/9/2016	4224.54	16.50	7.25	2.14	84.3	6.16	4,900	3,700	810
RW-605	12/8/2016	4224.24	15.69	7.10	2.16	157	3.32	5,900	4,600	460
RW-605	6/1/2017	4224.77	16.06	7.18	2.16	187	3.20	4,900	4,200	690
RW-605	12/7/2017	4224.14	16.12	7.08	2.13	23.0	2.21	5,300	4,800	690 J
RW-605	6/11/2018	4224.43	17.68	7.09	2.09	17.7	3.65	3,900	2,900	660
RW-605	12/10/2018	4224.18	14.96	7.18	2.21	18.3	2.23	5,600	4,800	720
RW-605	5/23/2019	4224.96	13.85	7.47	2.13	184	5.62	5,100	3,800	760
RW-605	12/10/2019	4224.05	15.90	7.13	2.21	17.9	4.89	5,760	4,200	884
RW-605	6/3/2020	4224.20	16.56	7.06	2.30	20.5	2.75	5,170 [1] J	2,720 [1] J	1,050
RW-605	12/3/2020	4223.54	14.16	7.09	2.27	118	2.81	6,080	3,570	764 J
RW-606	12/4/2015	4227.57	17.09	7.16	1.48	22.6	4.54	<1.0	<1.0	<10
RW-606	6/8/2016	4228.49	17.46	7.22	1.89	175	6.72	<1.0	<1.0	<10
RW-606	12/9/2016	4226.79	16.11	7.17	2.71	58.5	6.08	<1.0	<1.0	8.6 J
RW-606	6/2/2017	4229.36	15.72	7.08	2.17	>1000	9.97	<1.0	<1.0	7.2 J
RW-606	12/7/2017	4226.12	14.62	7.09	3.27	795	10.06	<1.0	<1.0	9.1 JJ
RW-606	6/11/2018	4228.22	21.21	7.04	2.44	285	6.22	<1.0	0.37 J	<10
RW-606	12/10/2018	4226.12	13.82	6.76	3.38	761	2.92	<1.0	<1.0	<10
RW-606	5/23/2019	4229.15	13.92	6.84	2.84	893	7.04	<1.0	<1.0	<10
RW-606	12/10/2019	4226.60	14.13	7.34	3.91	>1000	8.30	<1.00	<2.00	18.3 [1] J
RW-606	6/3/2020	4227.11	22.52	7.15	3.81	327	9.19	<1.00	<2.00	22.5
RW-606	12/3/2020	4225.95	14.86	6.92	3.83	>1000	7.09	<1.00	<2.00	19.8 J
RW-607	12/4/2015	4223.94	17.89	7.16	1.45	806	3.29	310	37	50
RW-607	6/9/2016	4224.24	18.84	7.22	1.34	681	5.60	200	18	59
RW-607	12/9/2016	4224.27	16.34	7.31	1.18	650	3.94	100	5.7	21
RW-607	6/2/2017	4224.70	18.14	7.37	0.53	864	8.65	<1.0	0.94 J	24
RW-607	12/8/2017	4223.82	17.24	7.06	1.12	212	1.69	66	3.1	20 J
RW-607	6/11/2018	4224.05	16.50	7.24	1.91	131	2.76	39	2.2	71
RW-607	12/11/2018	4223.72	17.05	7.20	5.21	118	3.61	21	2.8	33
RW-607	5/24/2019	4223.49	13.41	7.80	1.56	119	4.16	10	1.4	110
RW-607	12/11/2019	4223.41	15.45	6.99	1.43	61.8	2.79	17.9	4.50	18.5
RW-607	6/4/2020	4223.83	15.99	7.42	0.787	227.0	5.84	<1.00	<2.00	14.0
RW-607	12/4/2020	4222.77	16.66	7.11	1.19	260	1.70	10.0	2.58	26.2 J

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American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1,460****	**200***
Trip Blank	**3/20/2008**	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	**6/26/2008**	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	**9/3/2008**	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	**11/19/2008**	NA	NA	NA	NA	NA	NA	<1	NT	NA
Trip Blank	**3/5/2009**	NA	NA	NA	NA	NA	NA	<1	NT	NA
Trip Blank	**6/9/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**8/13/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/1/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**3/9/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**6/8/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**8/24/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/2/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**3/2/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank [1]	**6/1/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank [2]	**6/9/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**8/23/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/7/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**3/5/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0 J	NA
Trip Blank	**8/21/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/3/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**3/11/2013**	NA	NA	NA	NA	NA	NA	<1.0 J	<1.0 J	NA
Trip Blank	**5/14/2013**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/10/2013**	NA	NA	NA	NA	NA	NA	0	<1.0	0
Trip Blank	**6/3/2014**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/4/2014**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**5/21/2015**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/4/2015**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**6/9/2016**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/8/2016**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**6/2/2017**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/8/2017**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**6/11/2018**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/11/2018**	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	**5/23/2019**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	**12/11/2019**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA
Trip Blank	**6/4/2020**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA
Trip Blank	**12/4/2020**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA

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American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	**5***	**1.460****	**200***
Field Blank	**3/20/2008**	NA	NA	NA	NA	NA	NA	ND	NT	ND
Field Blank	**6/26/2008**	NA	NA	NA	NA	NA	NA	ND	NT	**28**
Field Blank	**9/3/2008**	NA	NA	NA	NA	NA	NA	ND	NT	ND
Field Blank	**11/19/2008**	NA	NA	NA	NA	NA	NA	<!	NT	<10
Field Blank	**3/5/2009**	NA	NA	NA	NA	NA	NA	<1	NT	<10
Field Blank	**6/9/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Field Blank	**8/13/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/1/2009**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**3/9/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**6/8/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**8/24/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/2/2010**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**3/2/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**6/1/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**8/23/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/7/2011**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**3/5/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0 J	<10
Field Blank	**6/5/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**8/20/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/3/2012**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**3/11/2013**	NA	NA	NA	NA	NA	NA	<1.0 J	<1.0 J	<10 J
Field Blank	**5/14/2013**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/11/2013**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10 HT
Field Blank	**1/9/2014**	NA	NA	NA	NA	NA	NA	NA	NA	<10
Field Blank	**6/3/2014**	NA	NA	NA	NA	NA	NA	NA	NA	**9.6 J**
Field Blank	**12/4/2014**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**5/20/2015**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/4/2015**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**6/9/2016**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/9/2016**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**6/1/2017**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/8/2017**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10 J
Field Blank	**6/11/2018**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/11/2018**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**5/24/2019**	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	**12/11/2019**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
Field Blank	**6/4/2020**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
Field Blank	**12/3/2020**	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00

Key:

ft-AMSL = Feet above mean sea level

NM = Not measured

NA = Not analyzed or Not applicable

ND = Not detected

NT = Not detected, and not tabulated for the respective quarter's dataset

* = Maximum Contaminant Level (MCL)

** = Exposure Level (EL), as calculated in the initial risk assesment for the site

[1] = Matrix Spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

[2] = Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

[#] = High RPD due to low analyte concentration. In this range, high RPDs are expected.

[~] = The reporting limits were raised due to high analyte concentrations.

< = Not Detected above the PQL(for Benzene, Naphthalene, and Cyanide)

BOLD = Contaminant detected above Remediation Level (RL)

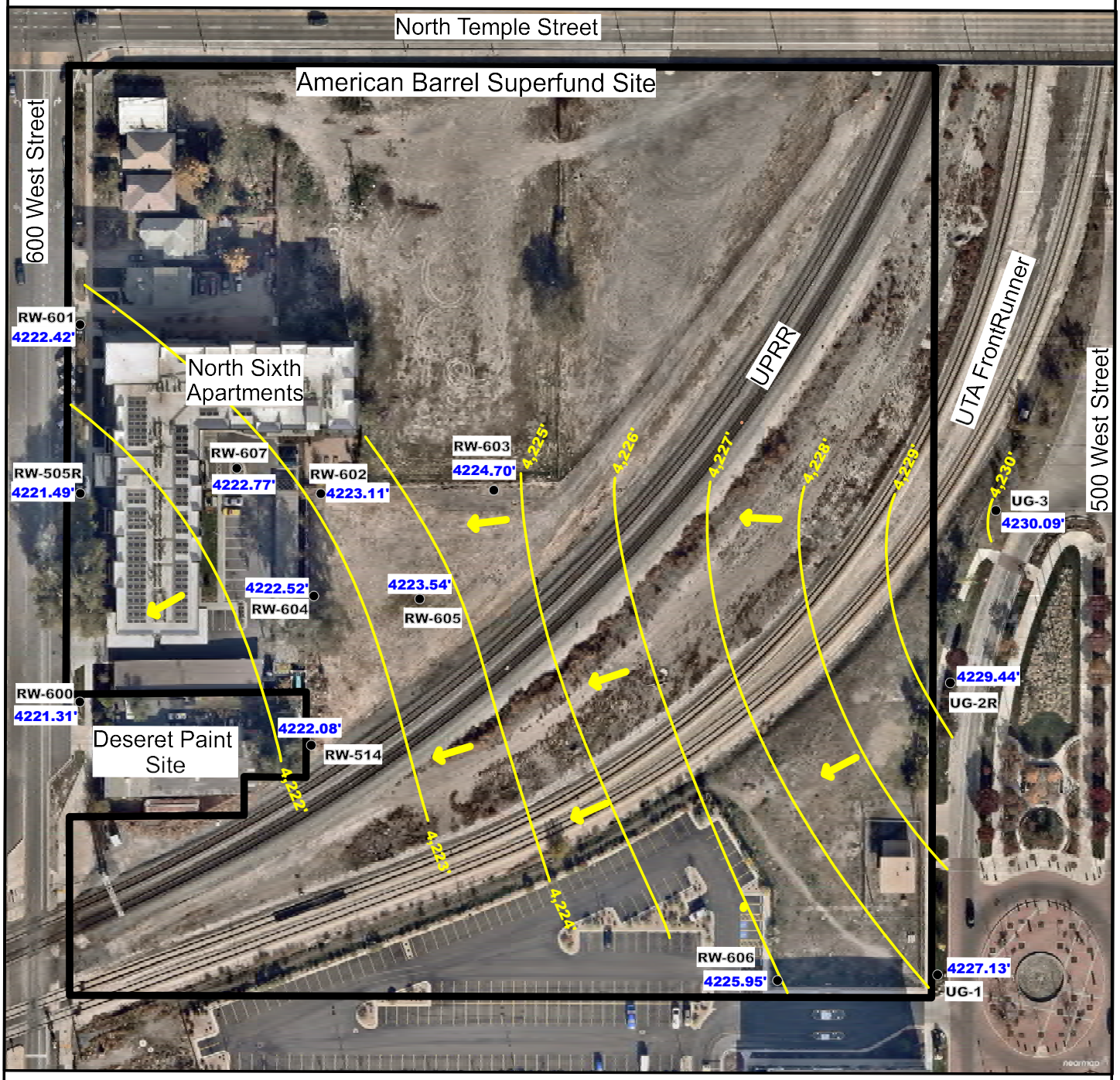
BOLD = Compound detected above analytical reporting limit

HT = Run out of Holding Time, Resampled January 2014

J = Please refer to respective dataset for flag definitions

J = Please refer to respective data vaildation report for flag definitions

Figures

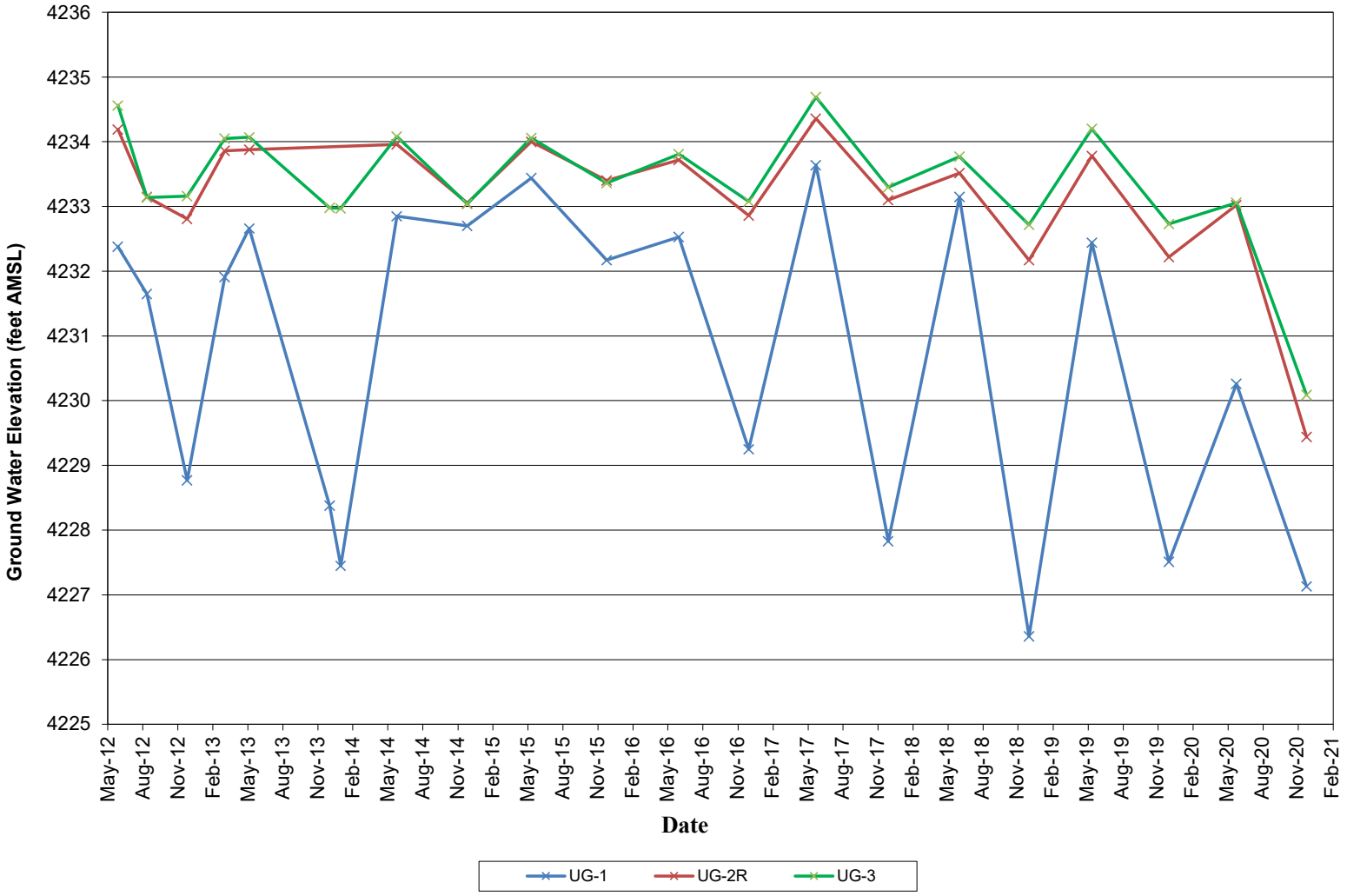


BARR

PacifiCorp
American Barrel Site
2nd Semi-Annual 2020
Groundwater Monitoring Report

Figure 1
Groundwater Potentiometric Surface Contour Map
Measured on December 3-4, 2020

Figure 2: Hydrographs for Upgradient Wells UG-1, UG-2R, and UG-3



Note that UG-2 was discovered damaged on December 10, 2013; As a result water levels were not collected from this well in December 2013 and January 2014.
Well UG-2 was replaced on 1/20/14 with Well UG-2R. For graphing purposes well UG-2 data has been included with well UG-2R

Figure 3: Boundary Well RW-505R
Benzene in Groundwater Trends 2008-Present

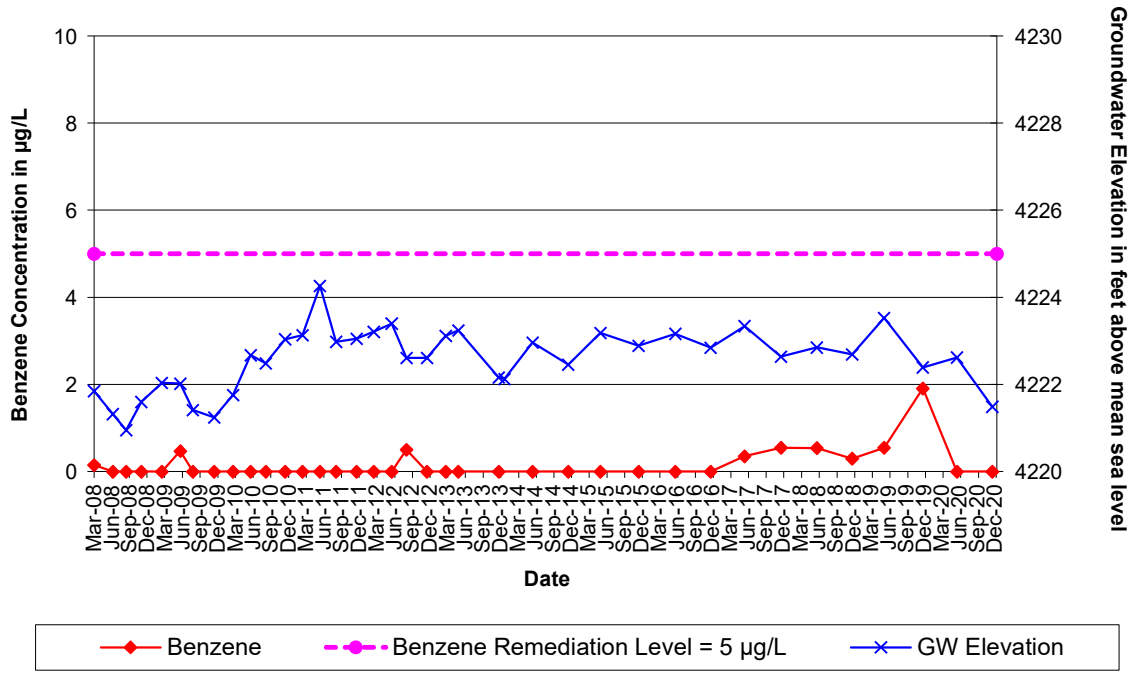


Figure 4: Boundary Well RW-505R
Naphthalene in Groundwater Trends 2009-Present

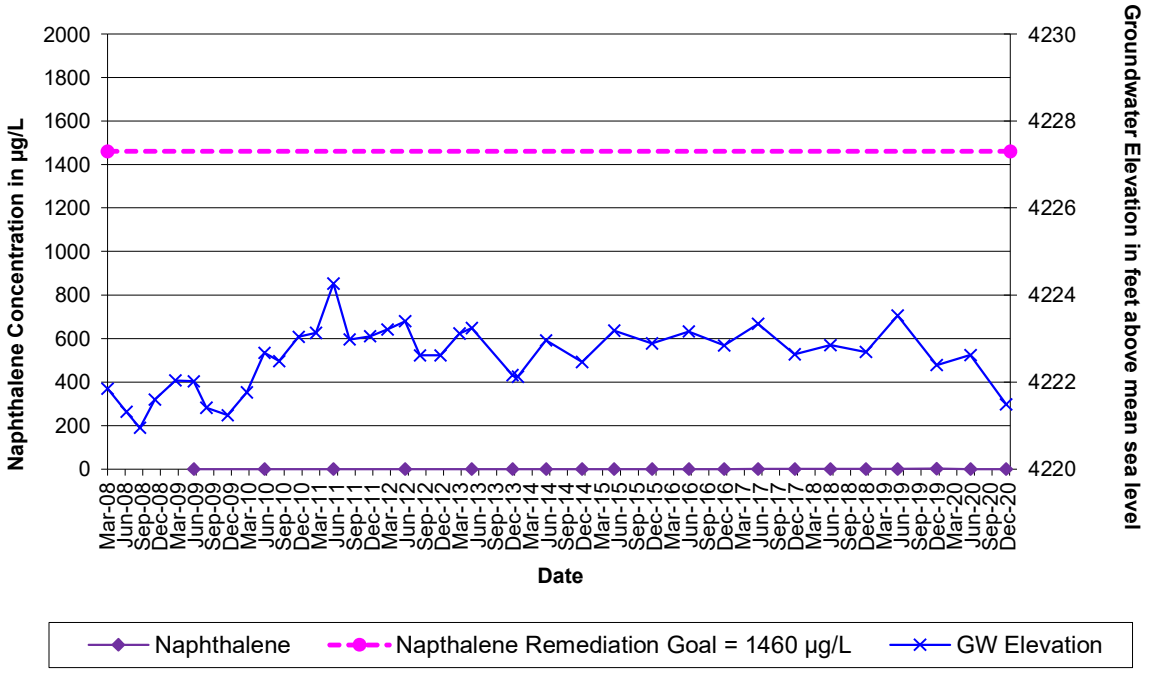


Figure 5: Boundary Well RW-505R
Cyanide in Groundwater Trends 2008-Present

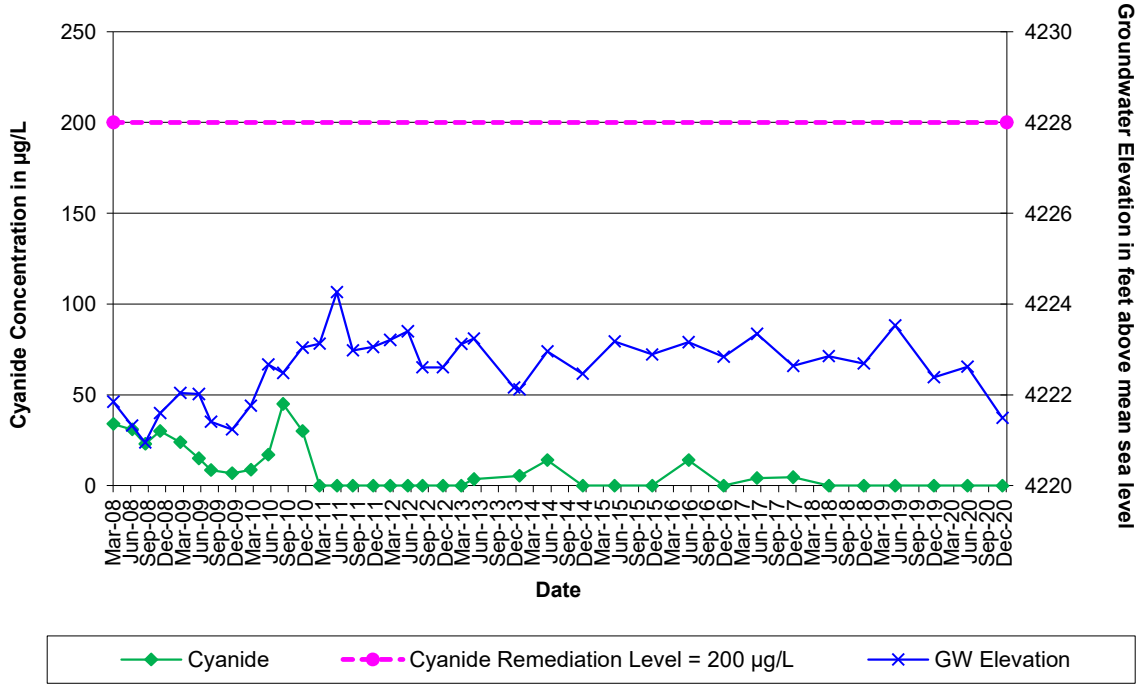


Figure 6: Boundary Well RW-600
Benzene in Groundwater Trends 2008-Present

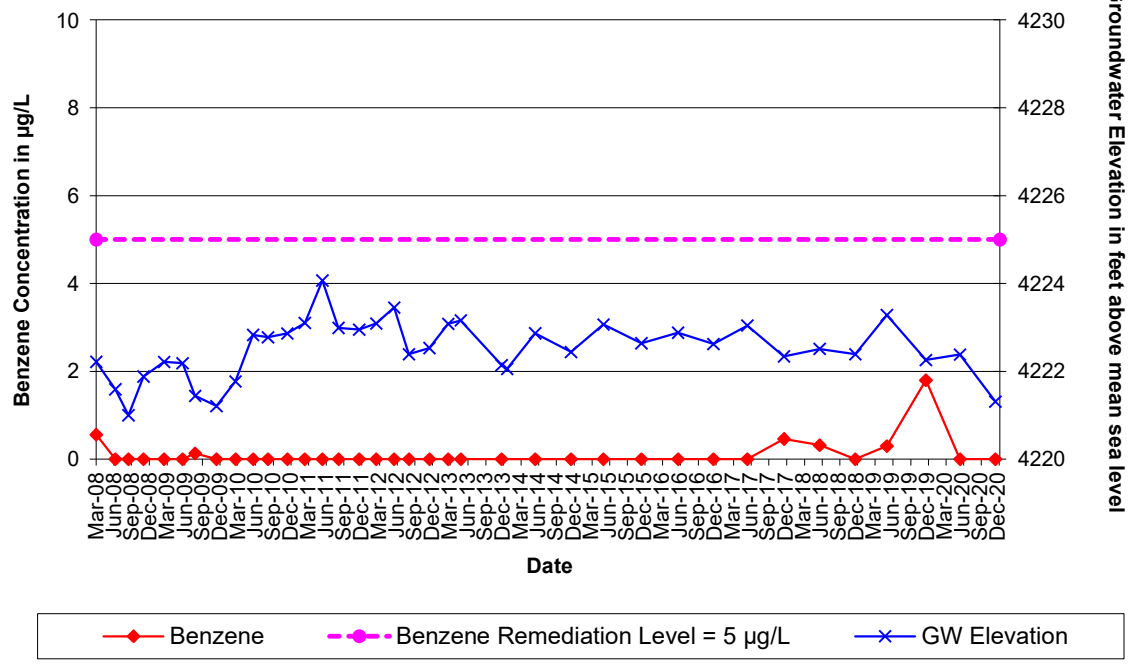
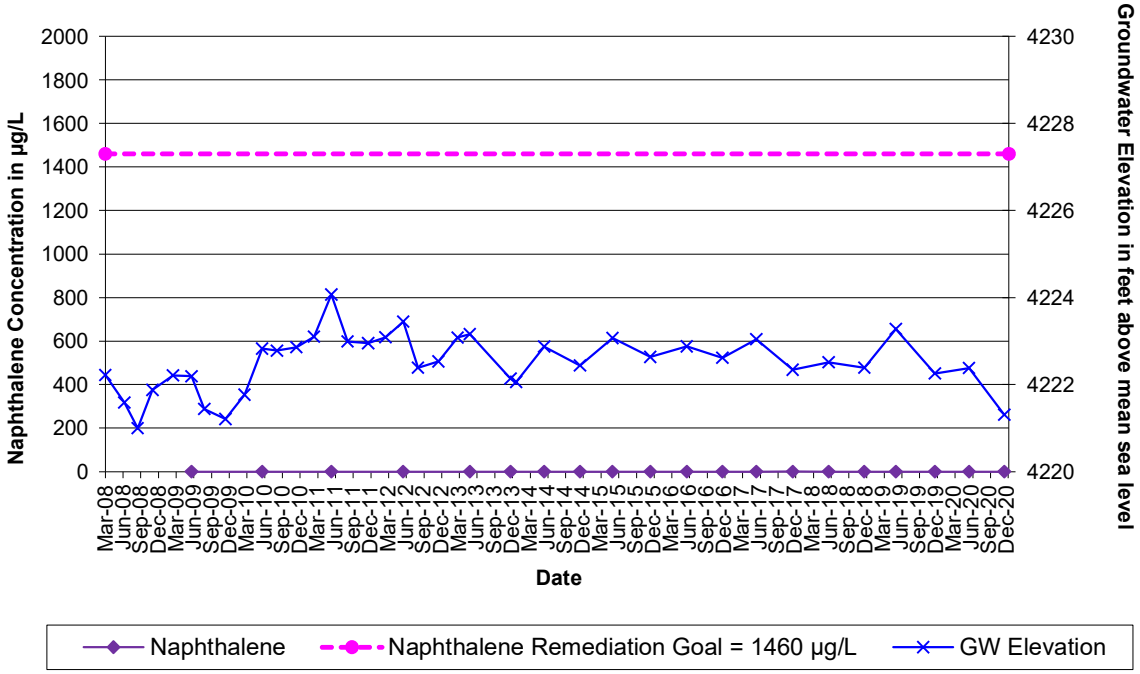


Figure 7: Boundary Well RW-600
Naphthalene in Groundwater Trends 2009-Present



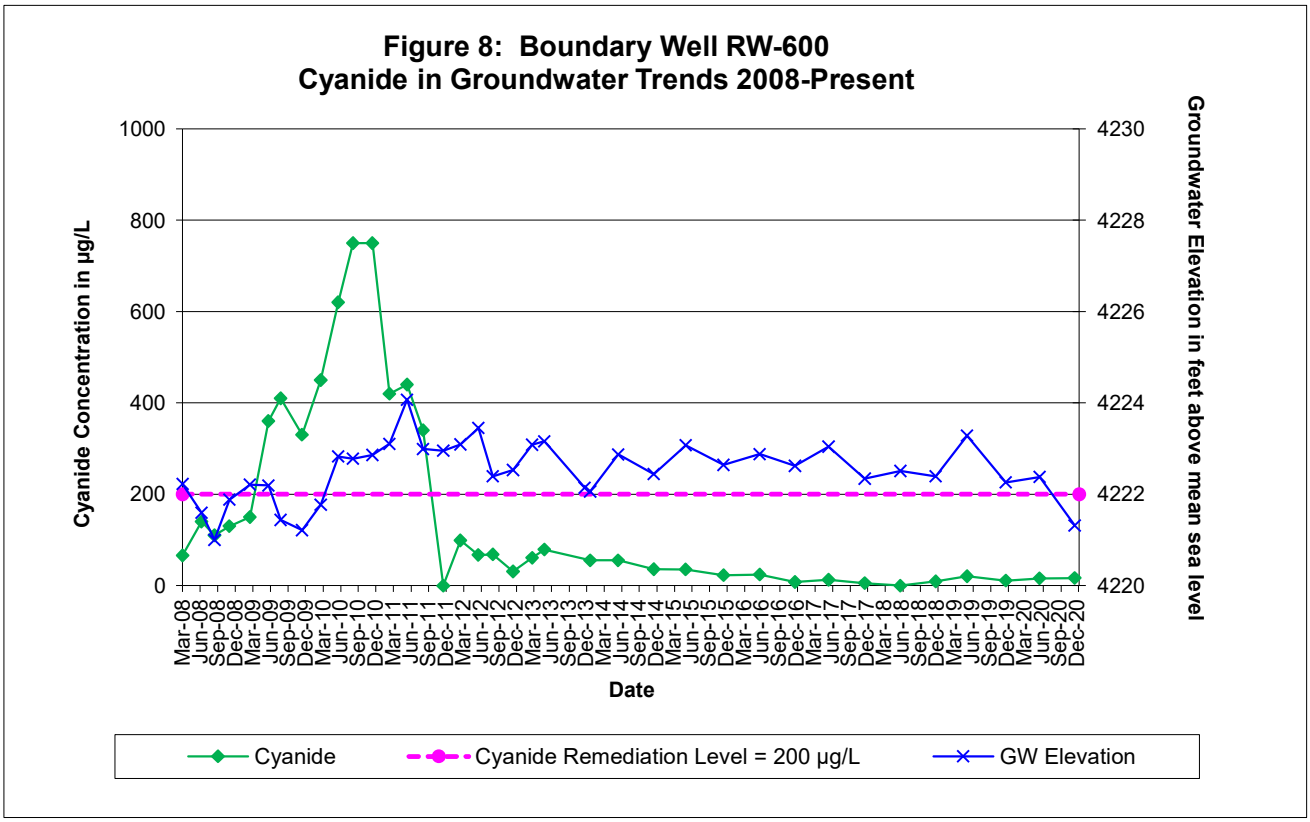


Figure 8: Boundary Well RW-600
Cyanide in Groundwater Trends 2008-Present
Cyanide Concentration in µg/L
Groundwater Elevation in feet above mean sea level
1000
800
600
400
200
0
4230
4228
4226
4224
4222
4220
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16
Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
Dec-20
Date
Cyanide
Cyanide Remediation Level = 200 µg/L
GW Elevation

Figure 9: Boundary Well RW-601
Benzene in Groundwater Trends 2008-Present

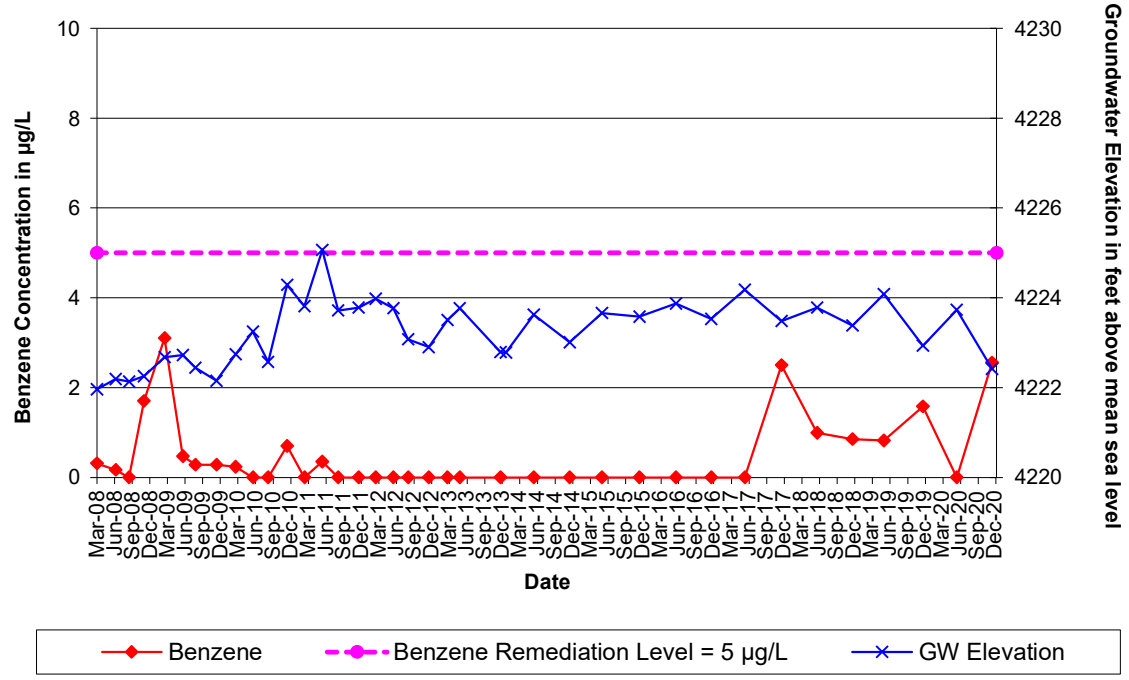
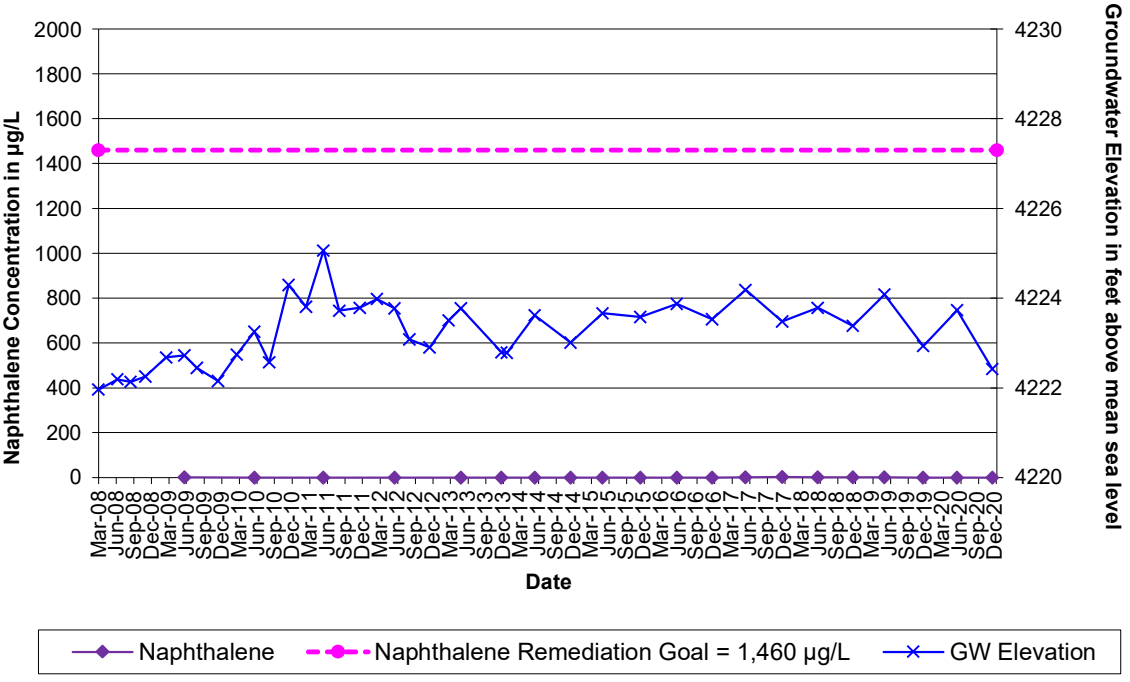


Figure 10: Boundary Well RW-601
Naphthalene in Groundwater Trends 2009-Present



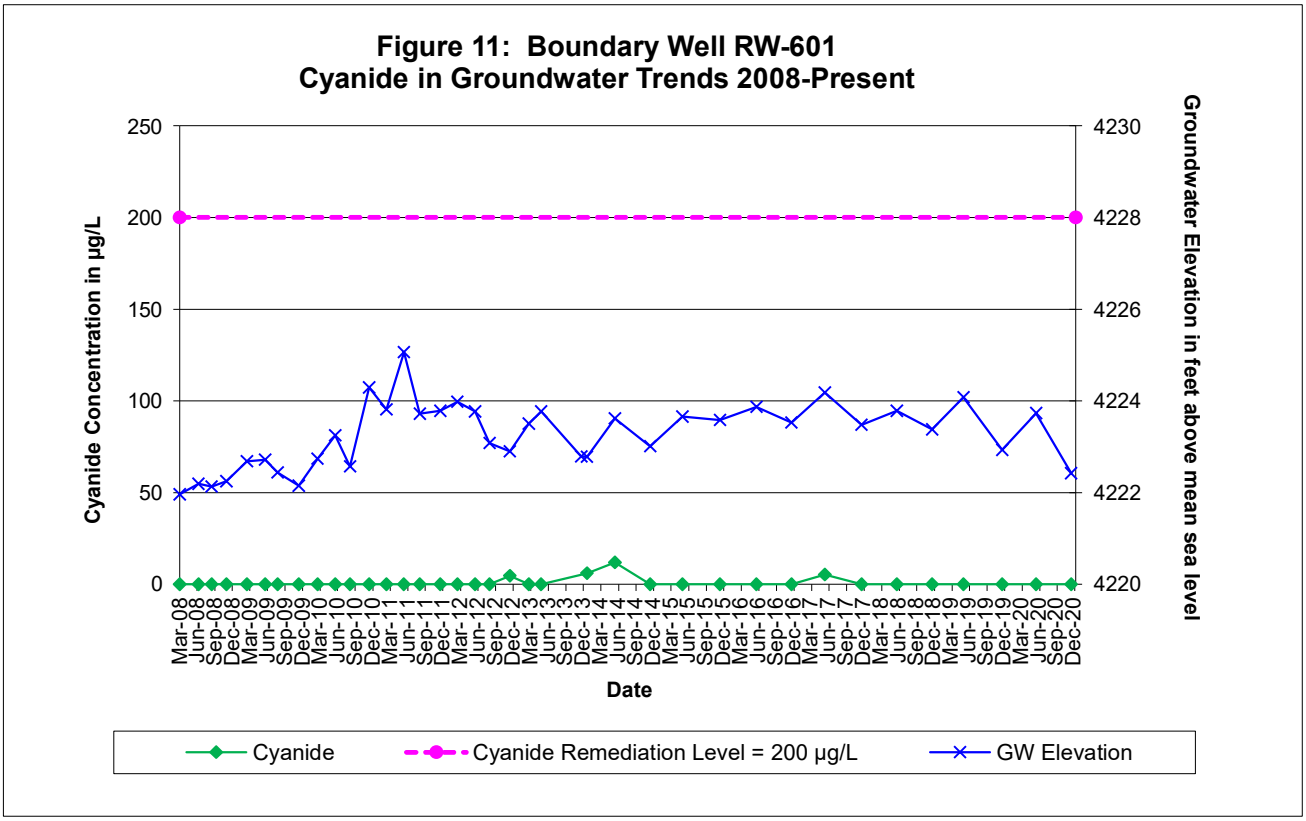


Figure 11: Boundary Well RW-601
Cyanide in Groundwater Trends 2008-Present
Cyanide Concentration in µg/L
Groundwater Elevation in feet above mean sea level
250
200
150
100
50
0
4230
4228
4226
4224
4222
4220
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16
Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
Dec-20
Date
Cyanide
Cyanide Remediation Level = 200 µg/L
GW Elevation

Figure 12: Boundary Well RW-606
Benzene in Groundwater Trends 2015-Present

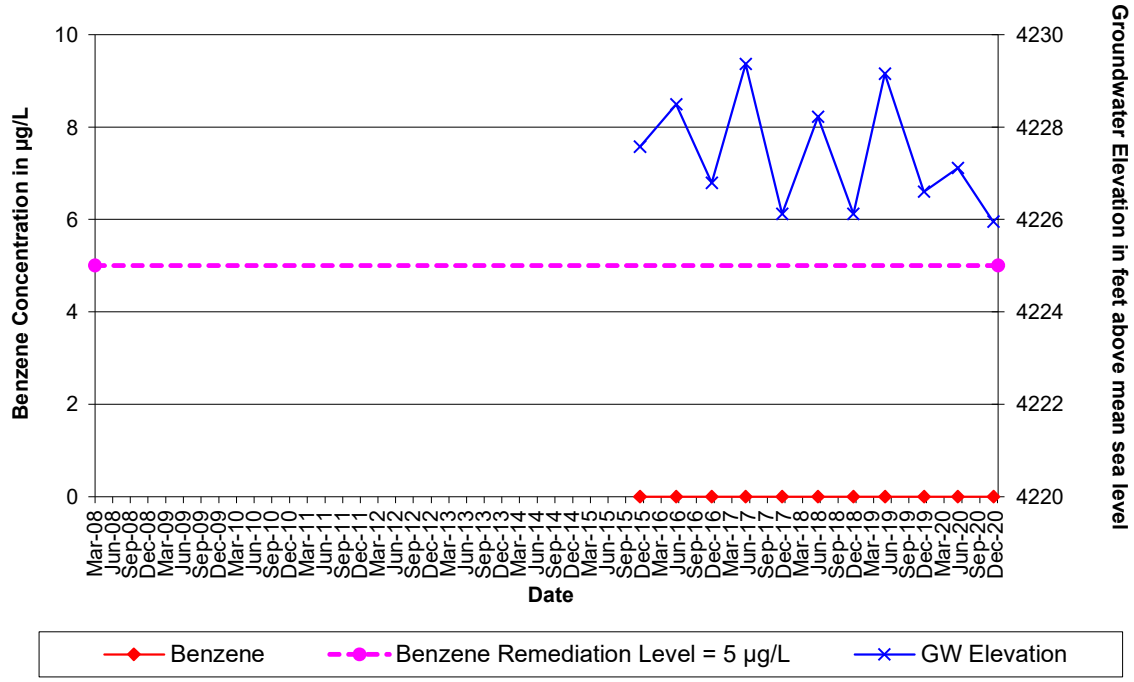


Figure 13: Boundary Well RW-606
Naphthalene in Groundwater Trends 2015-Present

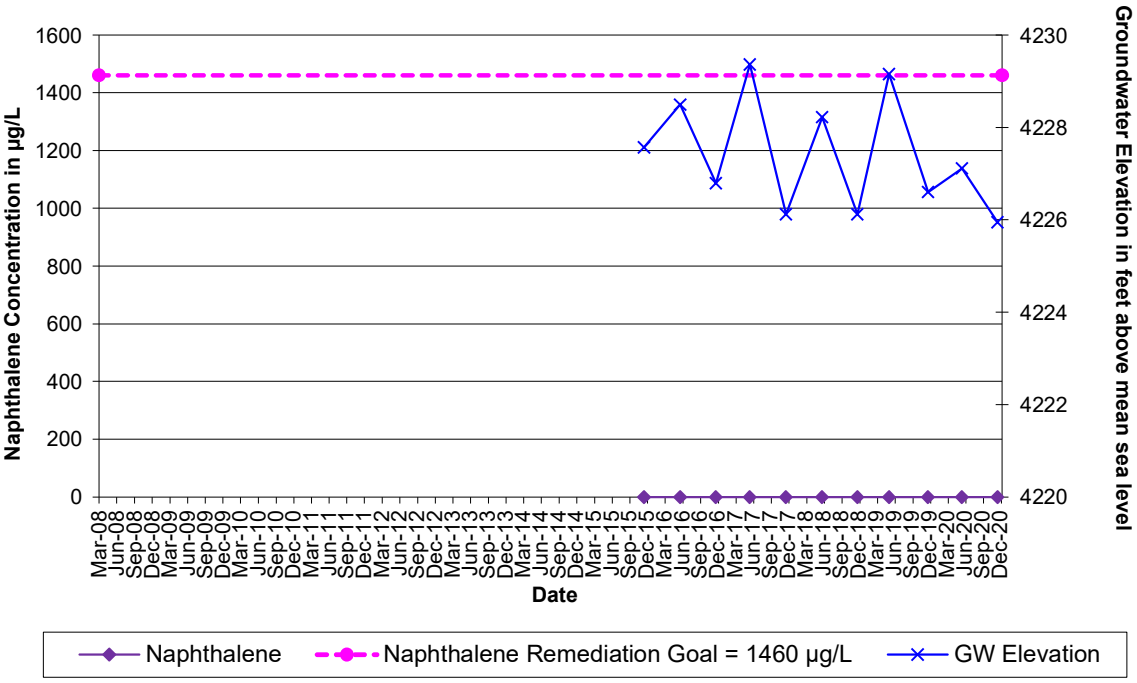


Figure 14: Boundary Well RW-606
Cyanide in Groundwater Trends 2015-Present

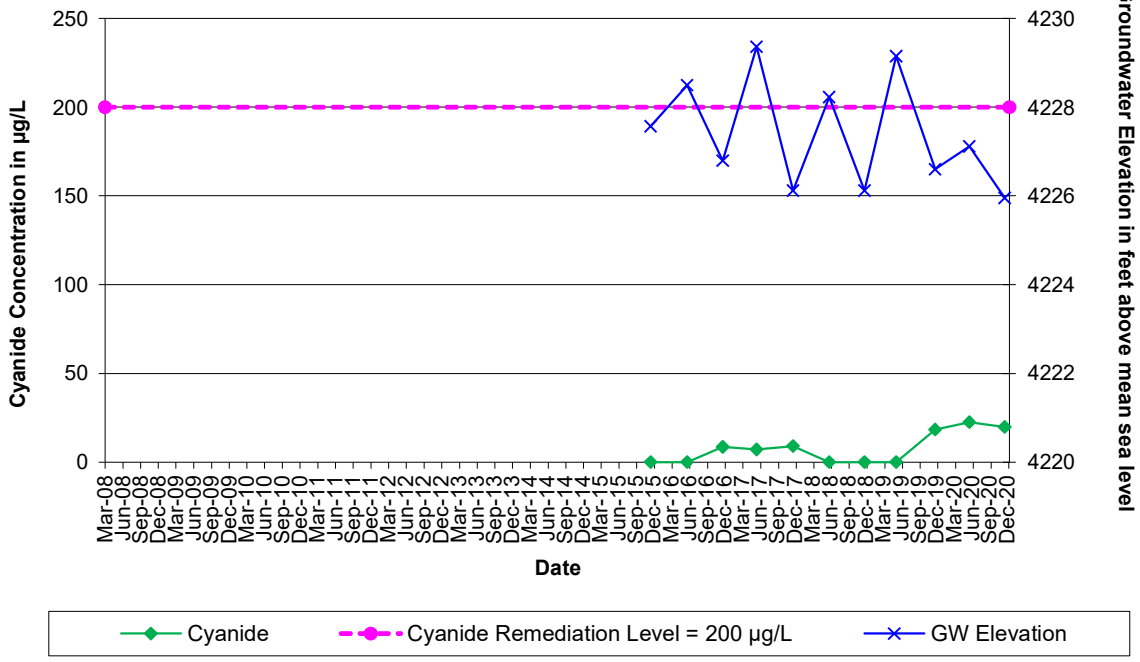


Figure 15: Onsite Well RW-514
Benzene in Groundwater Trends 2013-Present

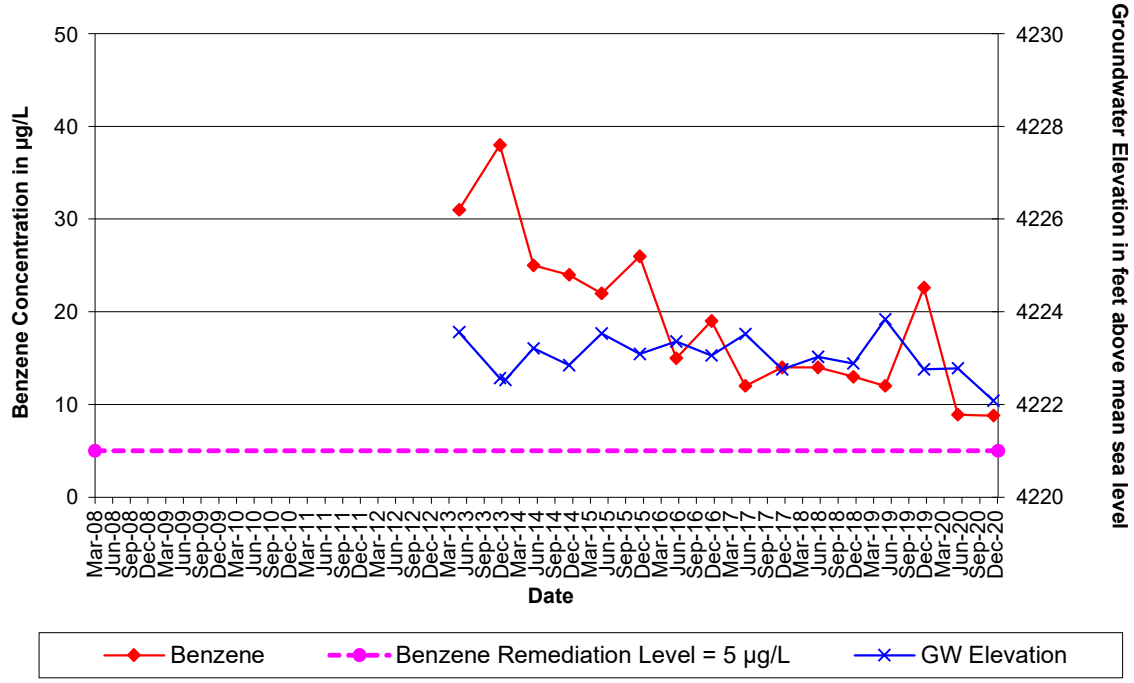


Figure 16: Onsite Well RW-514
Naphthalene in Groundwater Trends 2013-Present

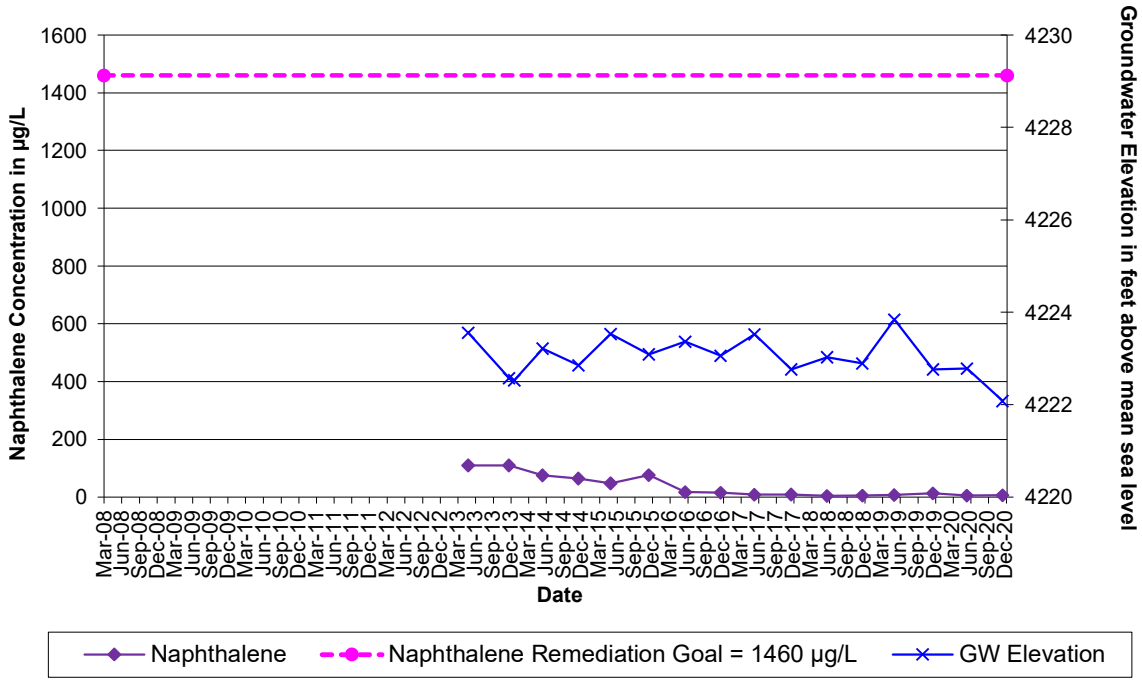


Figure 17: Onsite Well RW-514
Cyanide in Groundwater Trends 2013-Present

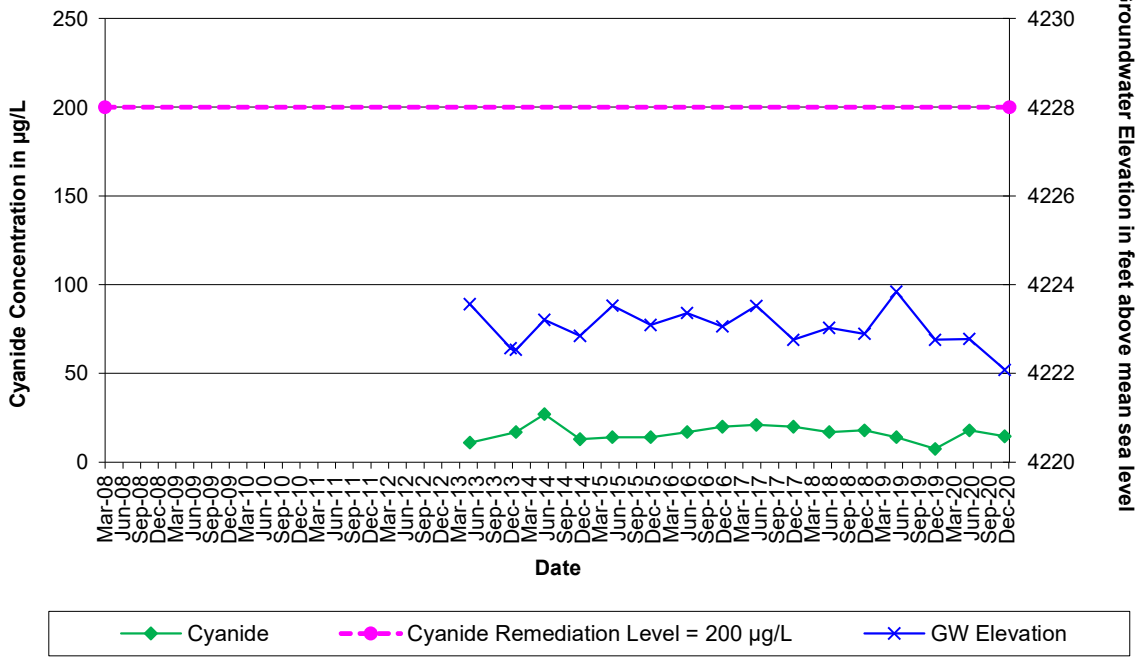


Figure 18: Onsite Well RW-607
Benzene in Groundwater Trends 2015-Present

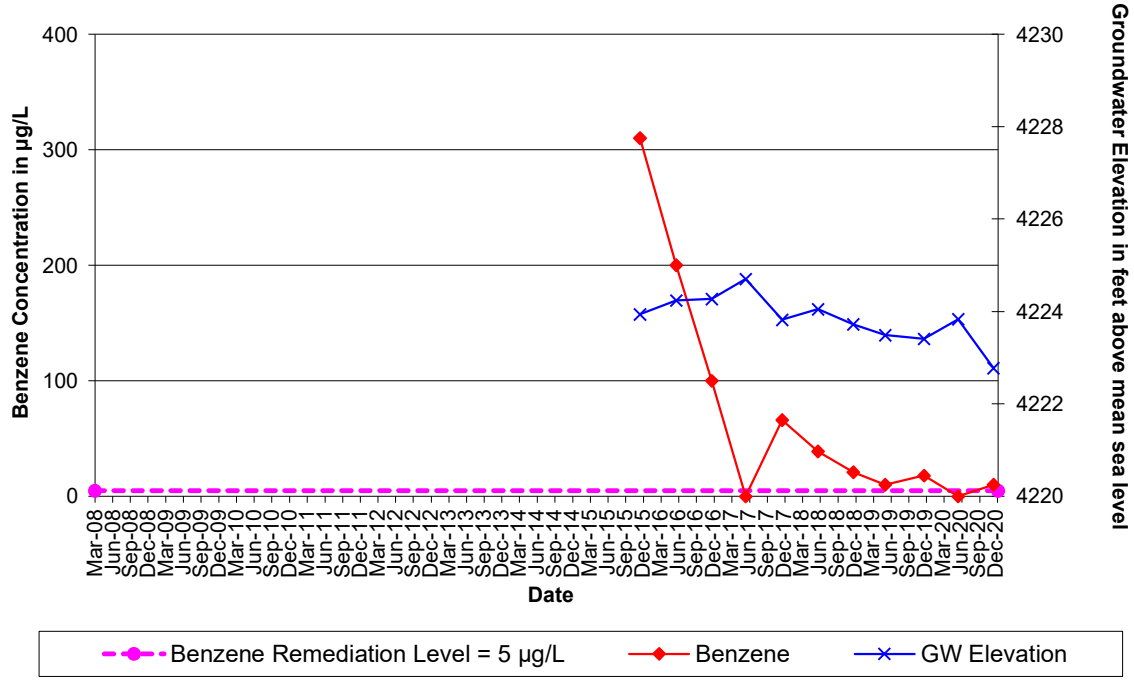


Figure 19: Onsite Well RW-607
Naphthalene in Groundwater Trends 2015-Present

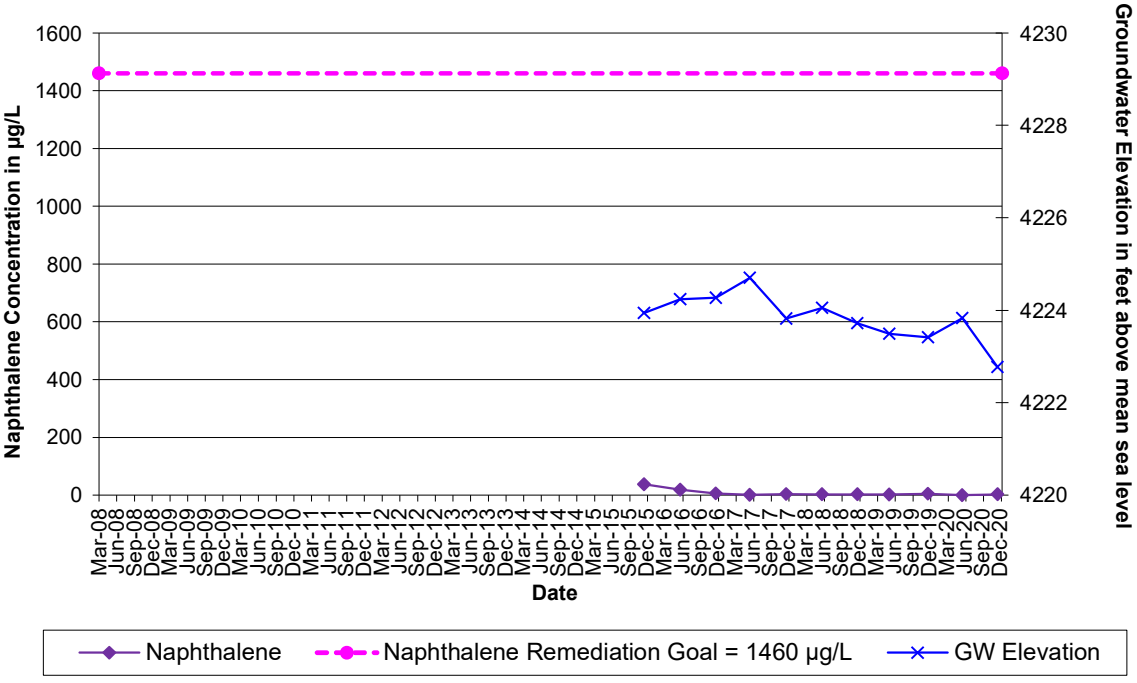


Figure 20: Onsite Well RW-607
Cyanide in Groundwater Trends 2015-Present

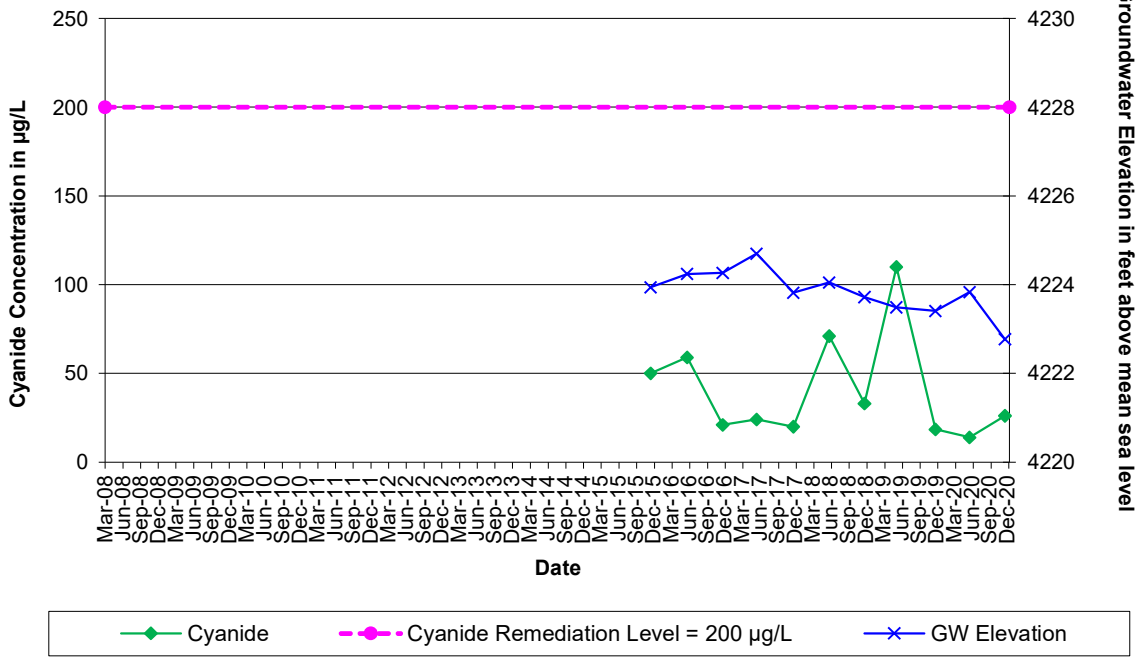


Figure 21: Source Well RW-602
Benzene in Groundwater Trends 2008-Present

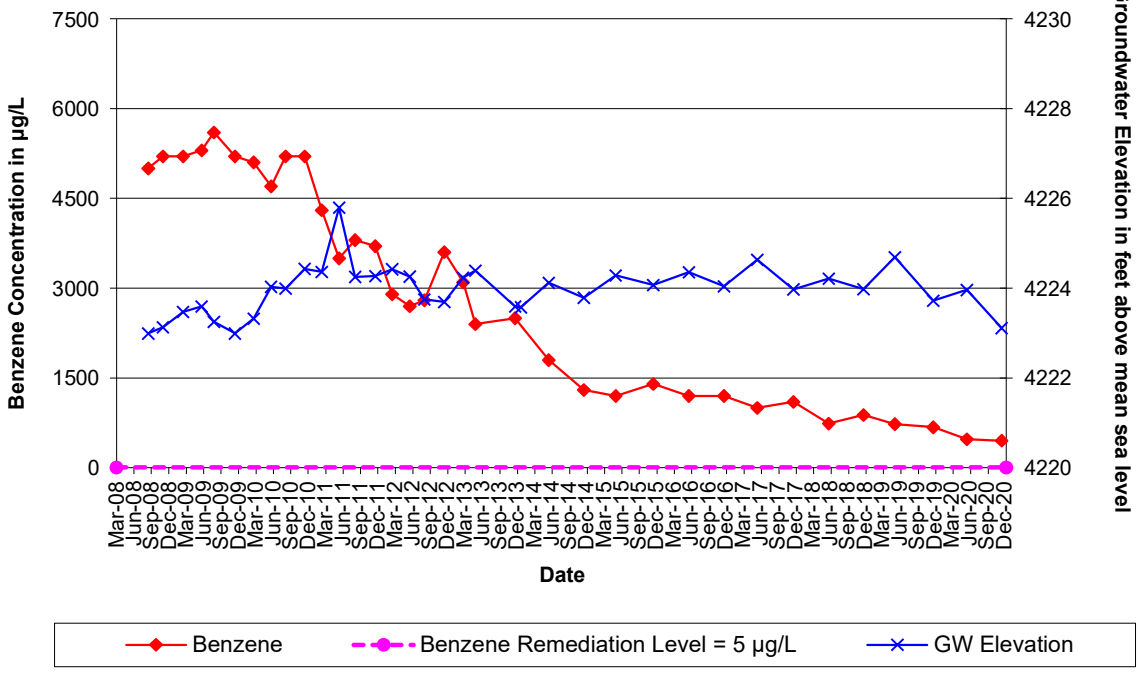


Figure 22: Source Well RW-602
Naphthalene in Groundwater Trends 2009-Present

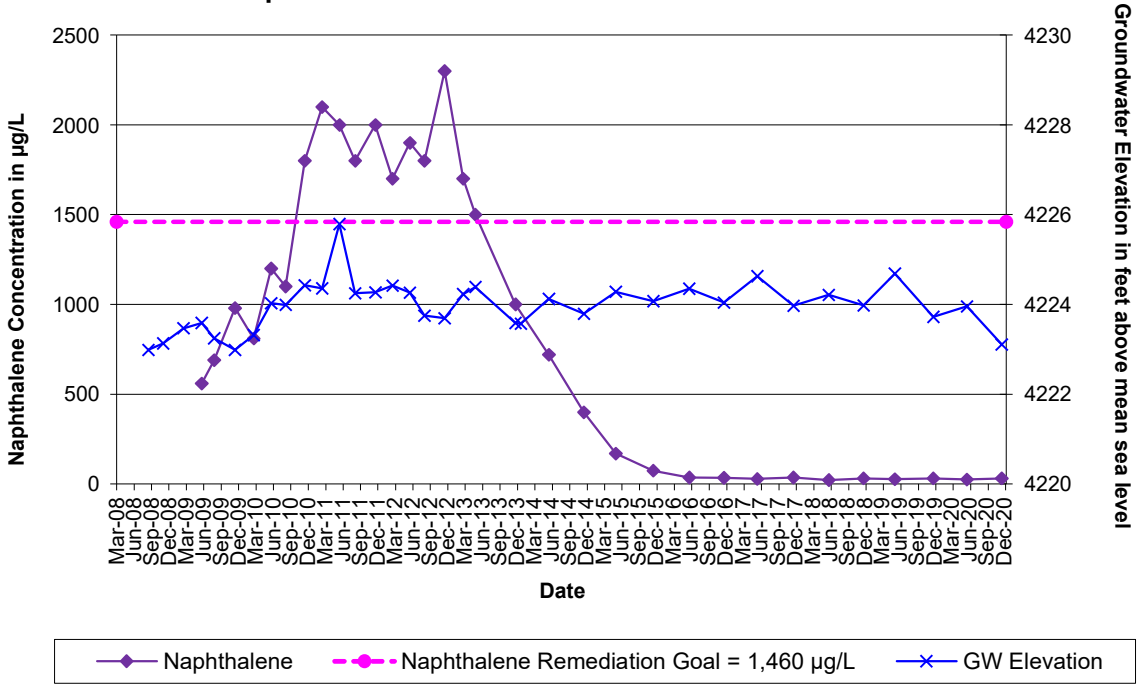


Figure 23: Source Well RW-602
Cyanide in Groundwater Trends 2008-Present

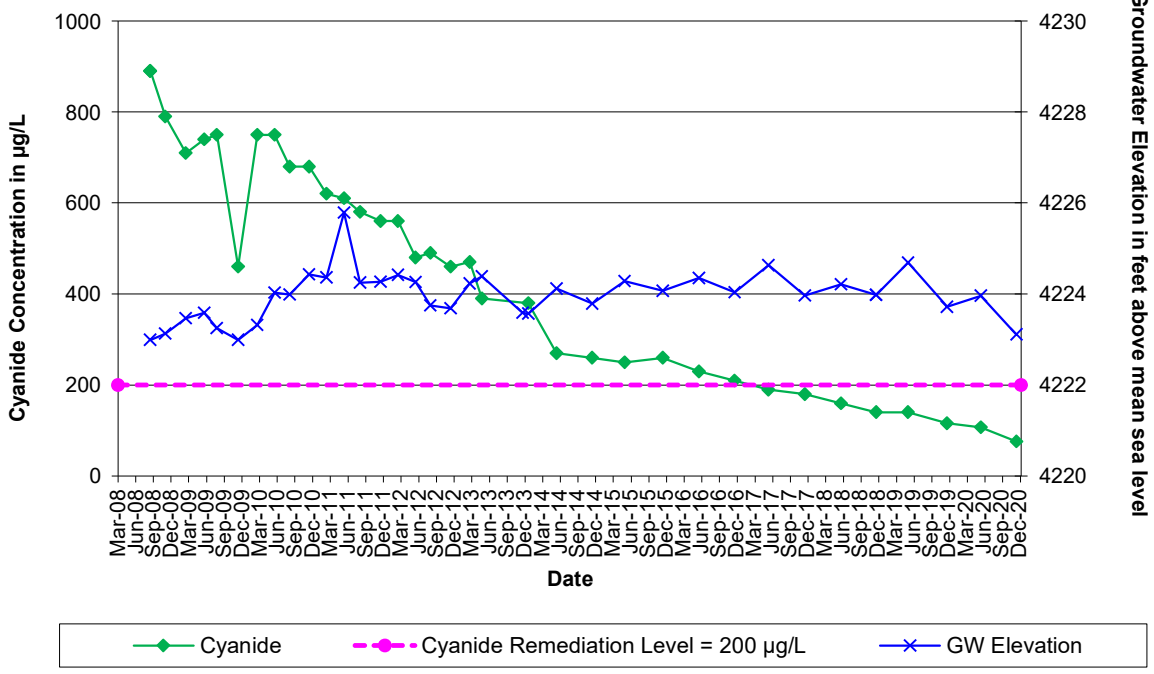


Figure 24: Source Well RW-603
Benzene in Groundwater Trends 2008-Present

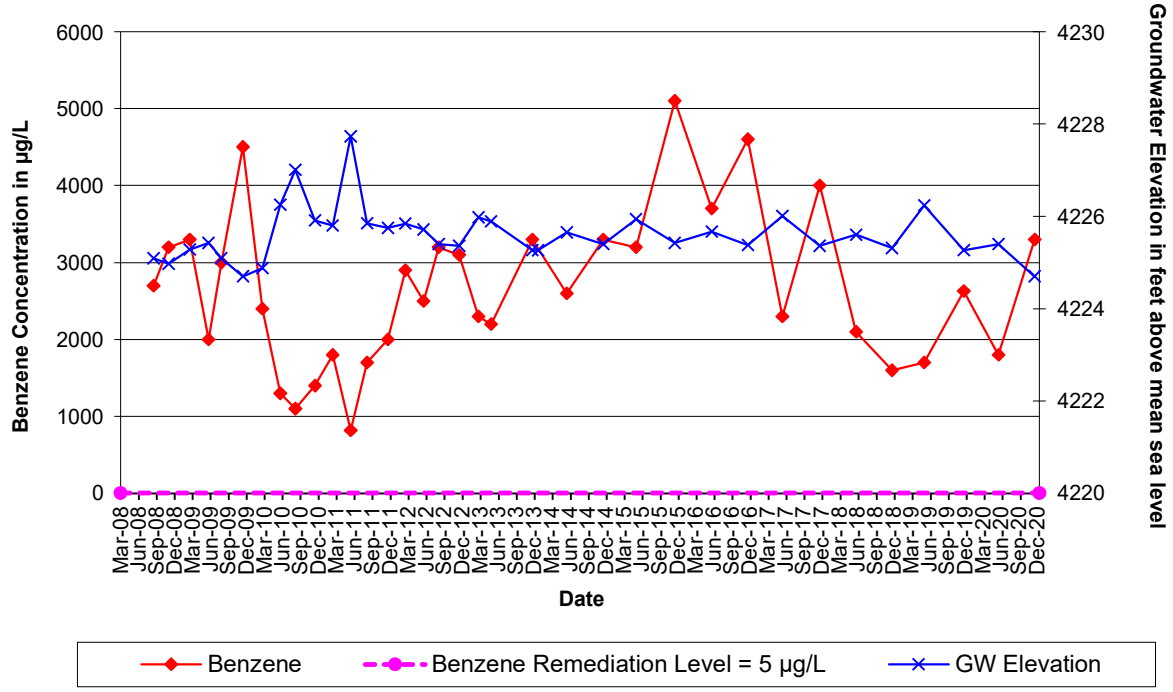


Figure 25: Source Well RW-603
Naphthalene in Groundwater Trends 2009-Present

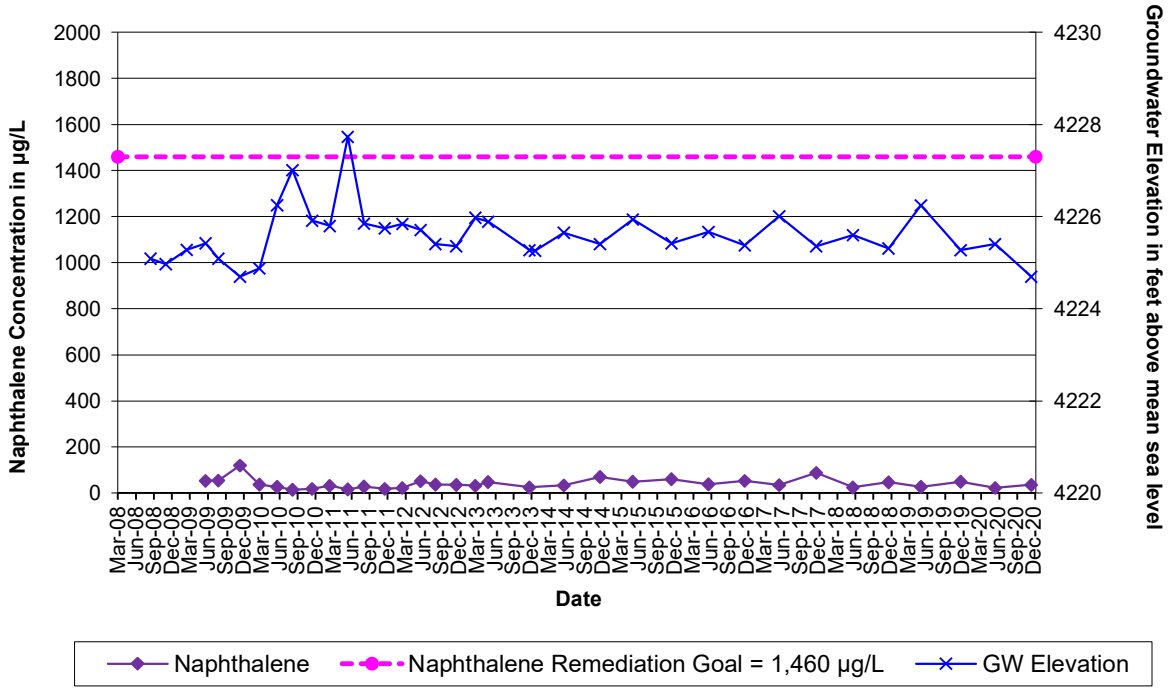


Figure 26: Source Well RW-603
Cyanide in Groundwater Trends 2008-Present

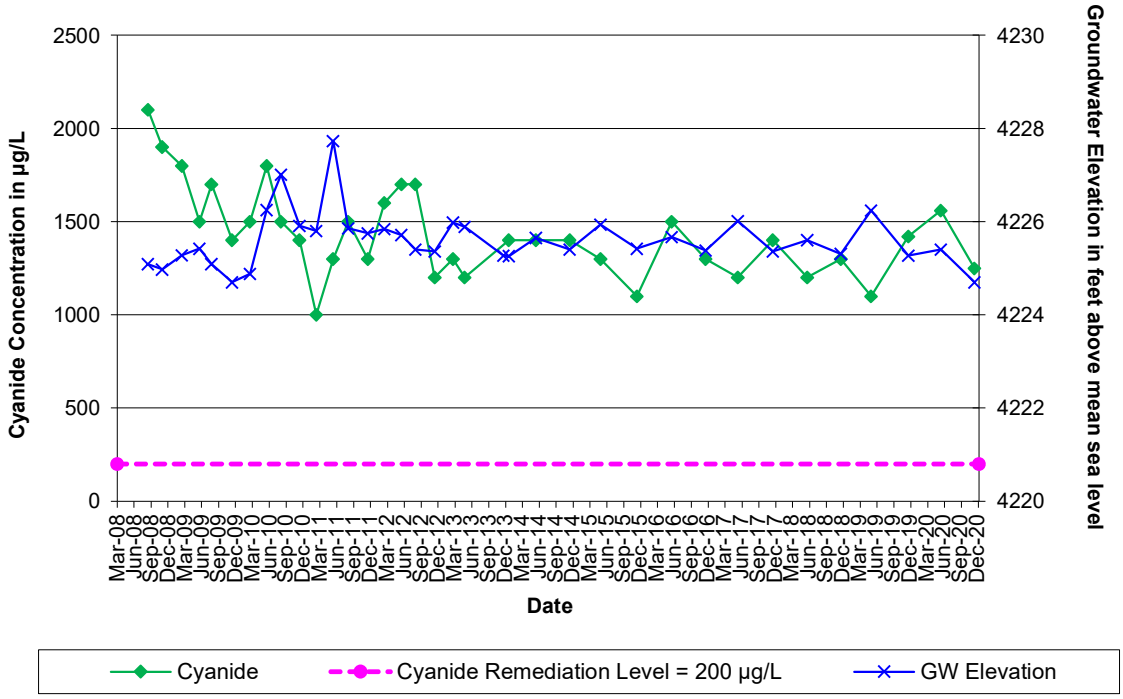


Figure 27: Source Well RW-604
Benzene in Groundwater Trends 2008-Present

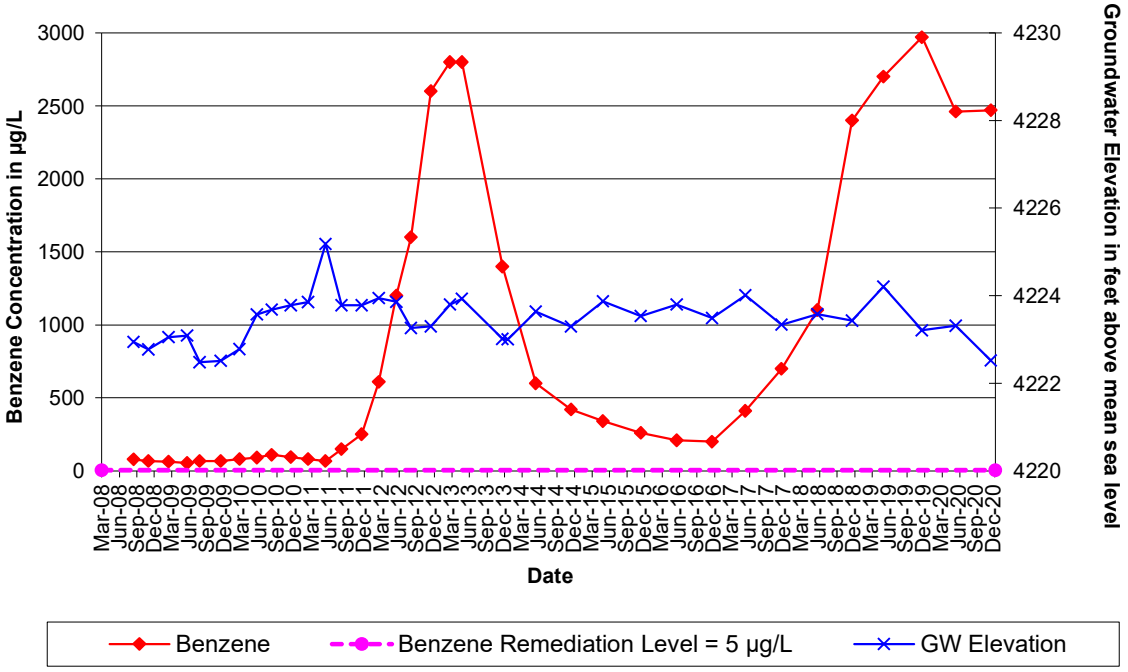


Figure 28: Source Well RW-604
Naphthalene in Groundwater Trends 2009-Present

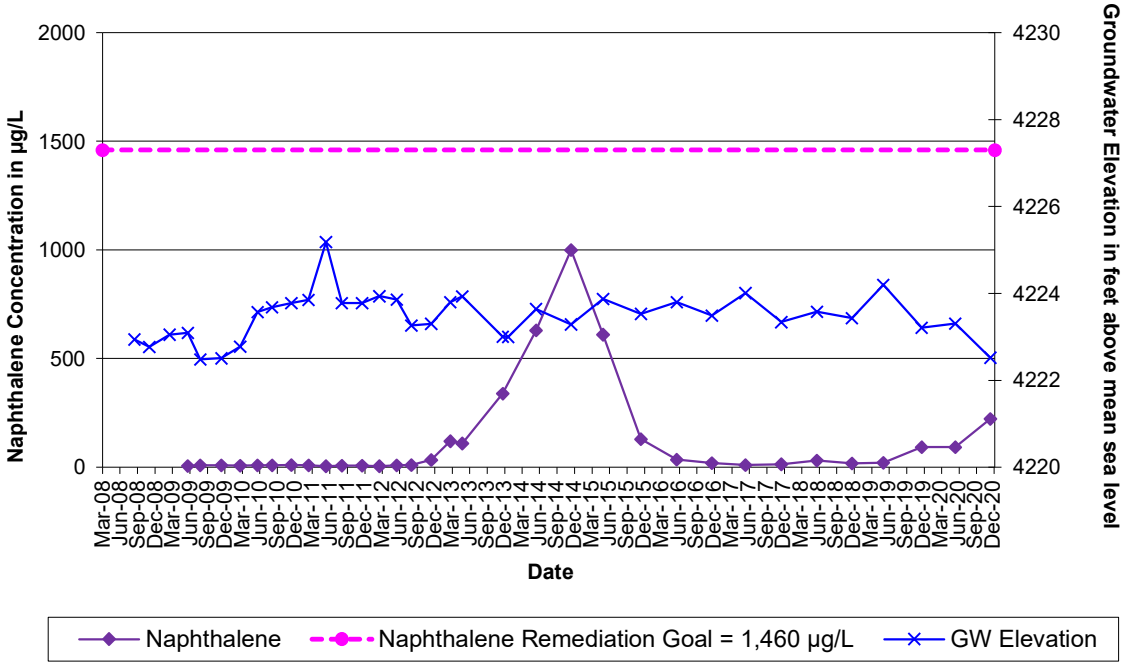


Figure 29: Source Well RW-604
Cyanide in Groundwater Trends 2008-Present

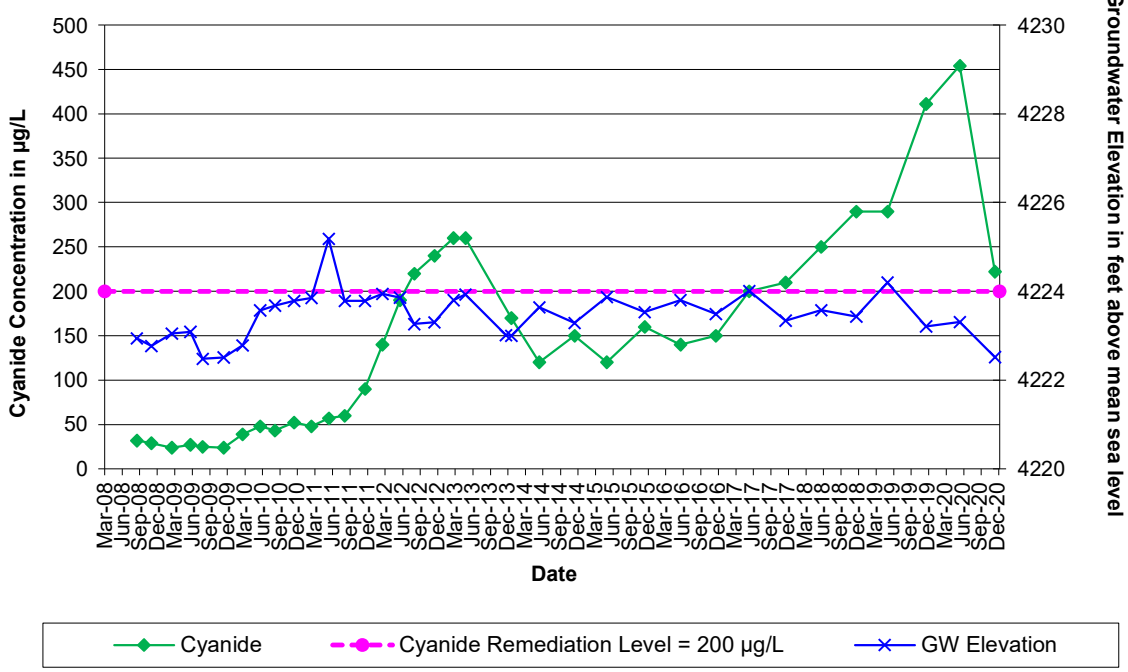


Figure 30: Source Well RW-605
Benzene in Groundwater Trends 2008-Present

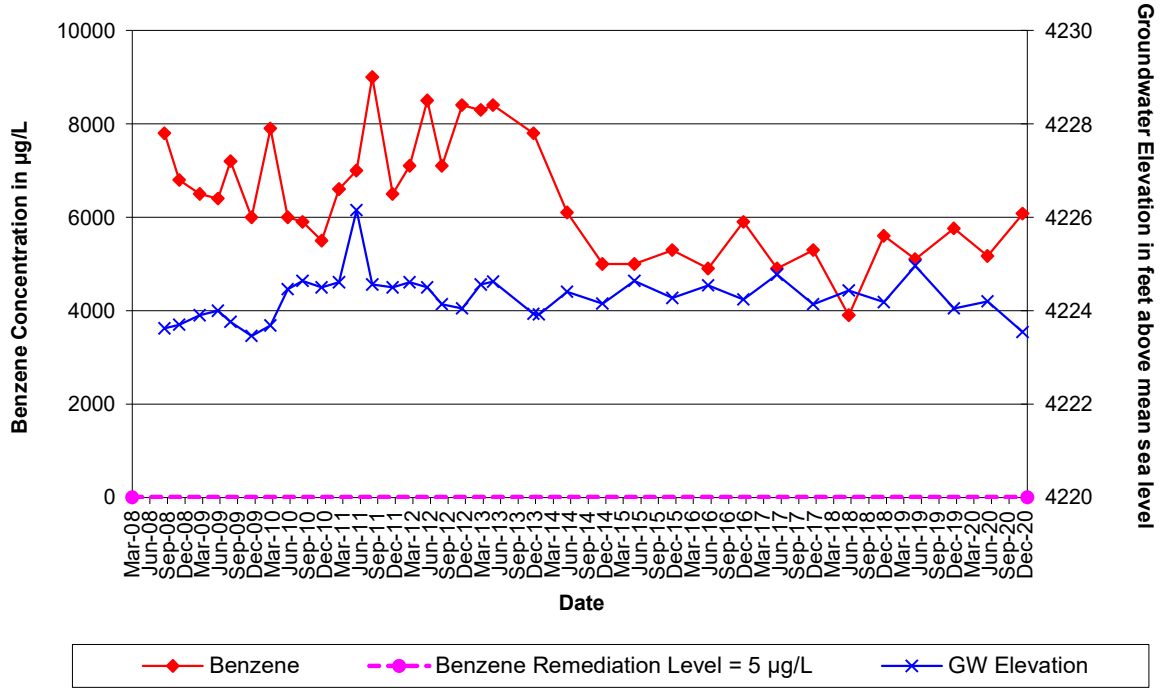


Figure 31: Source Well RW-605
Naphthalene in Groundwater Trends 2009-Present

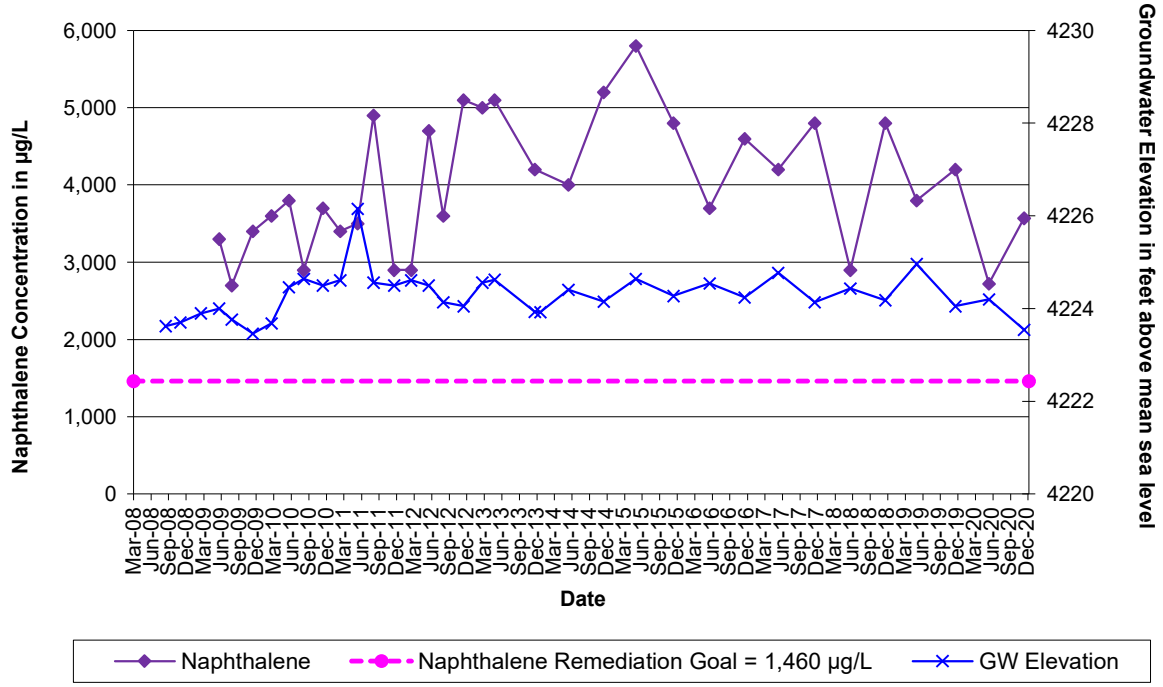
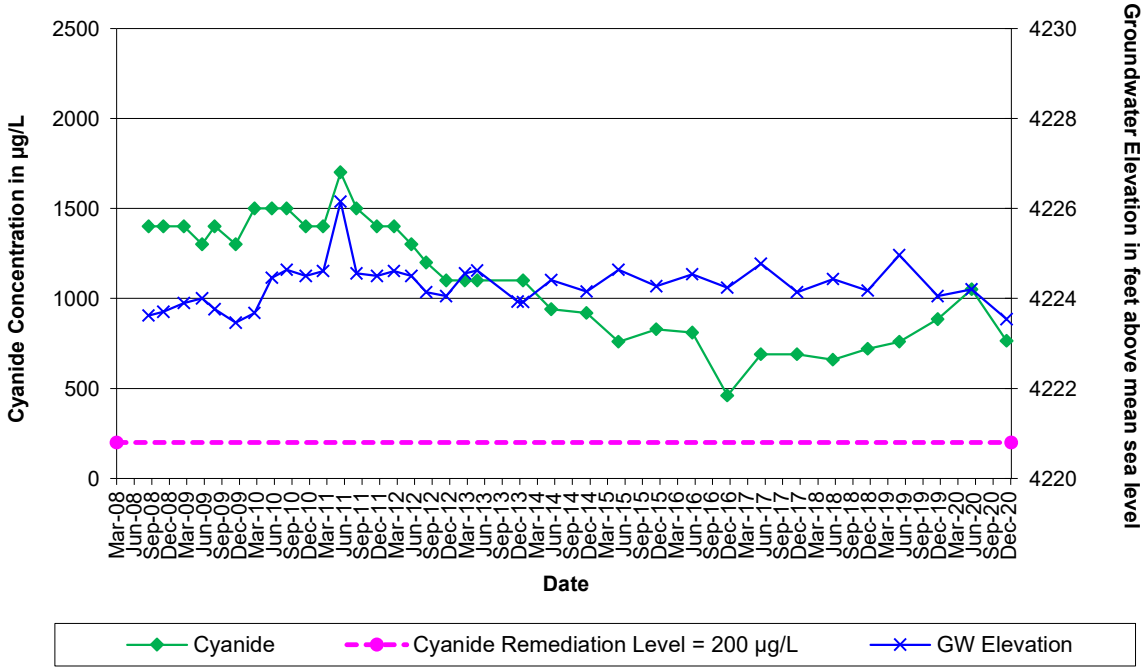


Figure 32: Source Well RW-605
Cyanide in Groundwater Trends 2008-Present



BARR

PacifiCorp
American Barrel Site
2nd Semi-Annual 2020
Groundwater Monitoring Report

Figure 33
Benzene In Groundwater Isoconcentration Contour Map Sampled on December 3-4, 2020

BARR

PacifiCorp
American Barrel Site
2nd Semi-Annual 2020
Groundwater Monitoring Report

Figure 34
Naphthalene In Groundwater Isoconcentration Contour Map Sampled on December 3-4, 2020

N W E S

RW-505R
17

Monitoring Well Locations
with cyanide in groundwater concentrations in µg/L

Cyanide in Groundwater Isoconcentration Contour

Groundwater Flow Direction

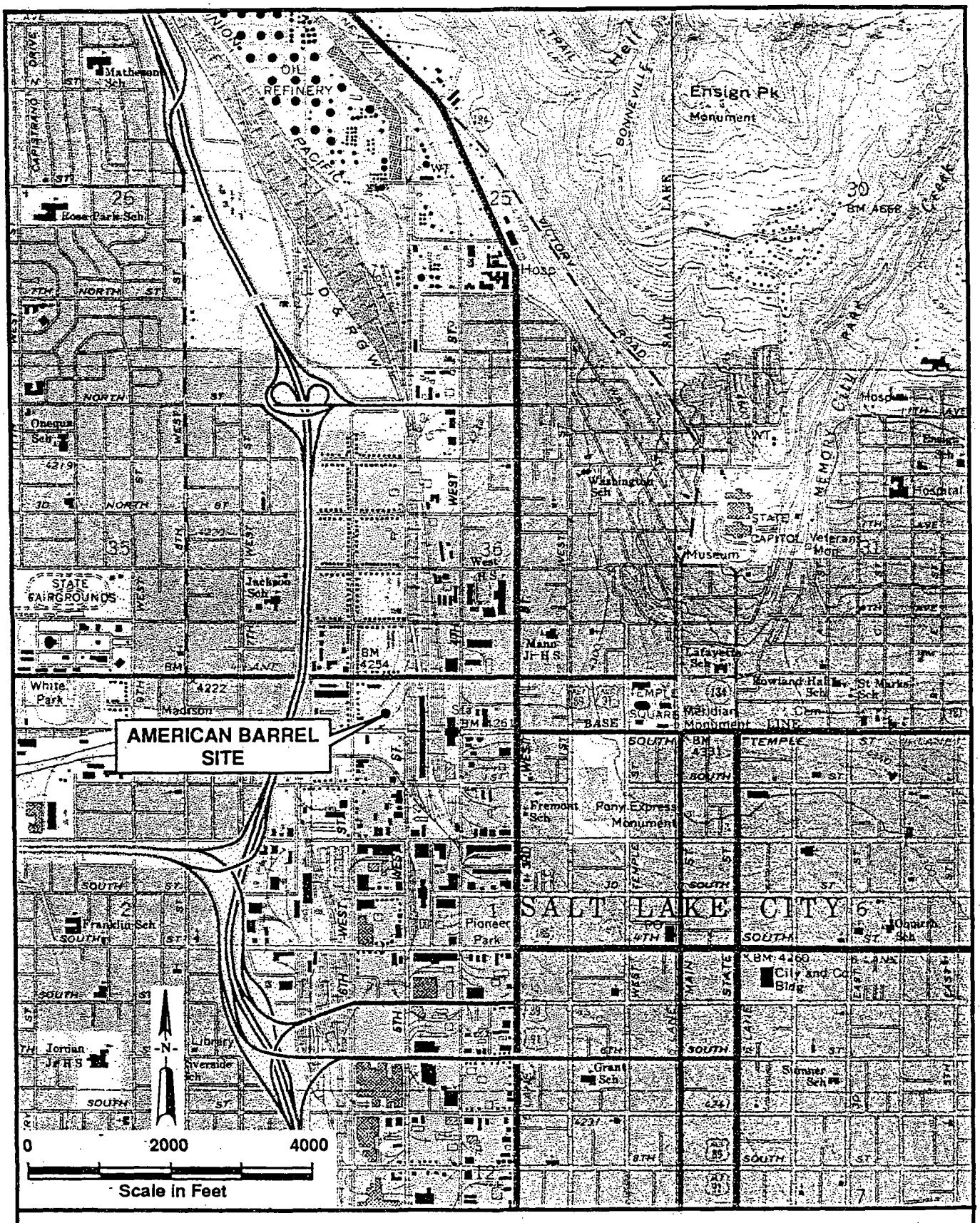
BARR

PacifiCorp
American Barrel Site
2nd Semi-Annual 2020
Groundwater Monitoring Report

Figure 35
Cyanide In Groundwater Isoconcentration Contour Map Sampled on December 3-4, 2020

APPENDIX D

Historical Figures from the 1993 Record of Decision



Source: USGS 7.5 minute quadrangle - Salt Lake City North, Utah

SITE LOCATION MAP

FIGURE 1

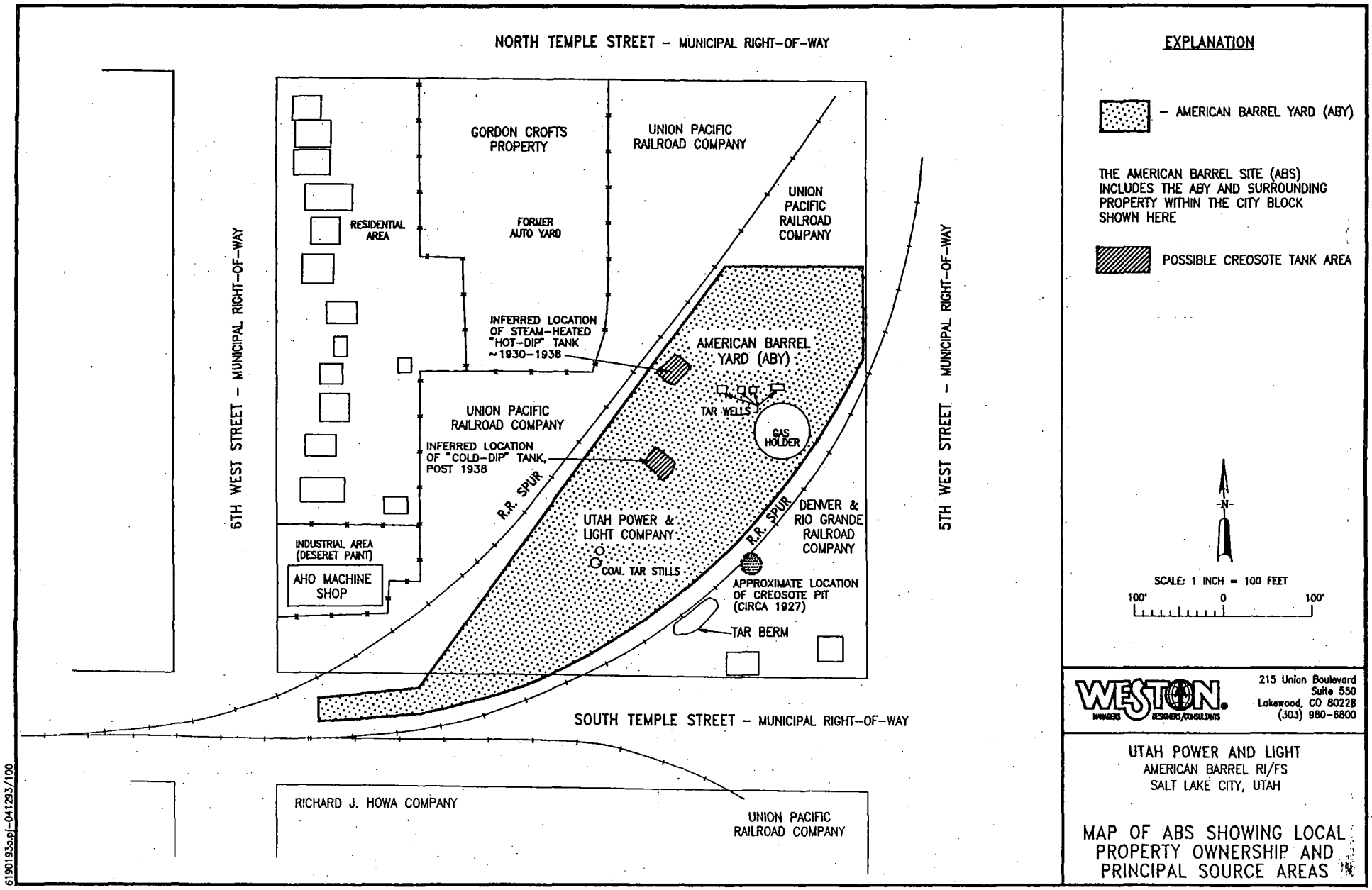

NORTH TEMPLE STREET – MUNICIPAL RIGHT-OF-WAY
6TH WEST STREET – MUNICIPAL RIGHT-OF-WAY
5TH WEST STREET – MUNICIPAL RIGHT-OF-WAY
SOUTH TEMPLE STREET – MUNICIPAL RIGHT-OF-WAY
GORDON CROFTS PROPERTY
UNION PACIFIC RAILROAD COMPANY
RESIDENTIAL AREA
FORMER AUTO YARD
INFERRED LOCATION OF STEAM-HEATED "HOT-DIP" TANK ~1930-1938
AMERICAN BARREL YARD (ABY)
TAR WELLS
GAS HOLDER
UNION PACIFIC RAILROAD COMPANY
INFERRED LOCATION OF "COLD-DIP" TANK, POST 1938
R.R. SPUR
UTAH POWER & LIGHT COMPANY
COAL TAR STILLS
DENVER & RIO GRANDE RAILROAD COMPANY
INDUSTRIAL AREA (DESERET PAINT)
AHO MACHINE SHOP
APPROXIMATE LOCATION OF CREOSOTE PIT (CIRCA 1927)
TAR BERM
RICHARD J. HOWA COMPANY
UNION PACIFIC RAILROAD COMPANY
EXPLANATION
– AMERICAN BARREL YARD (ABY)
THE AMERICAN BARREL SITE (ABS) INCLUDES THE ABY AND SURROUNDING PROPERTY WITHIN THE CITY BLOCK SHOWN HERE
POSSIBLE CREOSOTE TANK AREA
N
SCALE: 1 INCH = 100 FEET
100' 0 100'
WESTON MANAGERS DESIGNERS/CONSULTANTS
215 Union Boulevard
Suite 550
Lakewood, CO 80228
(303) 980-6800
UTAH POWER AND LIGHT
AMERICAN BARREL RI/FS
SALT LAKE CITY, UTAH
MAP OF ABS SHOWING LOCAL PROPERTY OWNERSHIP AND PRINCIPAL SOURCE AREAS
6190193a.pl-041293/100

FIGURE 2

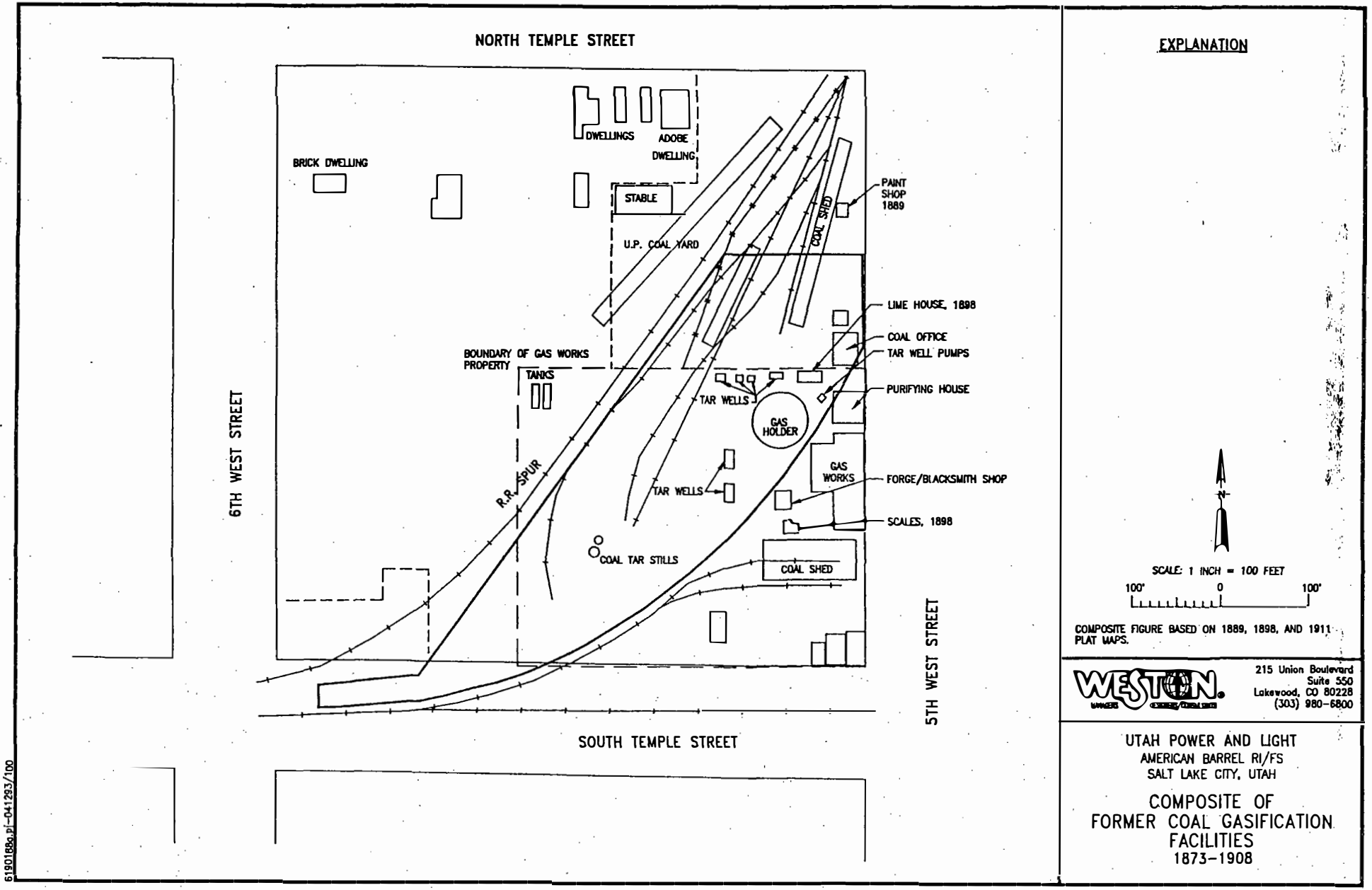

NORTH TEMPLE STREET
6TH WEST STREET
5TH WEST STREET
SOUTH TEMPLE STREET
DWELLINGS
ADOBE DWELLING
BRICK DWELLING
STABLE
U.P. COAL YARD
COAL SHED
PAINT SHOP 1889
LIME HOUSE, 1898
COAL OFFICE
TAR WELL PUMPS
PURIFYING HOUSE
BOUNDARY OF GAS WORKS PROPERTY
TANKS
TAR WELLS
GAS HOLDER
GAS WORKS
FORGE/BLACKSMITH SHOP
R.R. SPUR
TAR WELLS
SCALES, 1898
COAL TAR STILLS
COAL SHED
EXPLANATION
SCALE: 1 INCH = 100 FEET
100' 0 100'
COMPOSITE FIGURE BASED ON 1889, 1898, AND 1911 PLAT MAPS.
WESTON
215 Union Boulevard
Suite 550
Lakewood, CO 80228
(303) 980-6800
UTAH POWER AND LIGHT
AMERICAN BARREL RI/FS
SALT LAKE CITY, UTAH
COMPOSITE OF FORMER COAL GASIFICATION FACILITIES 1873-1908
61901688.pj-041293/100

FIGURE 3

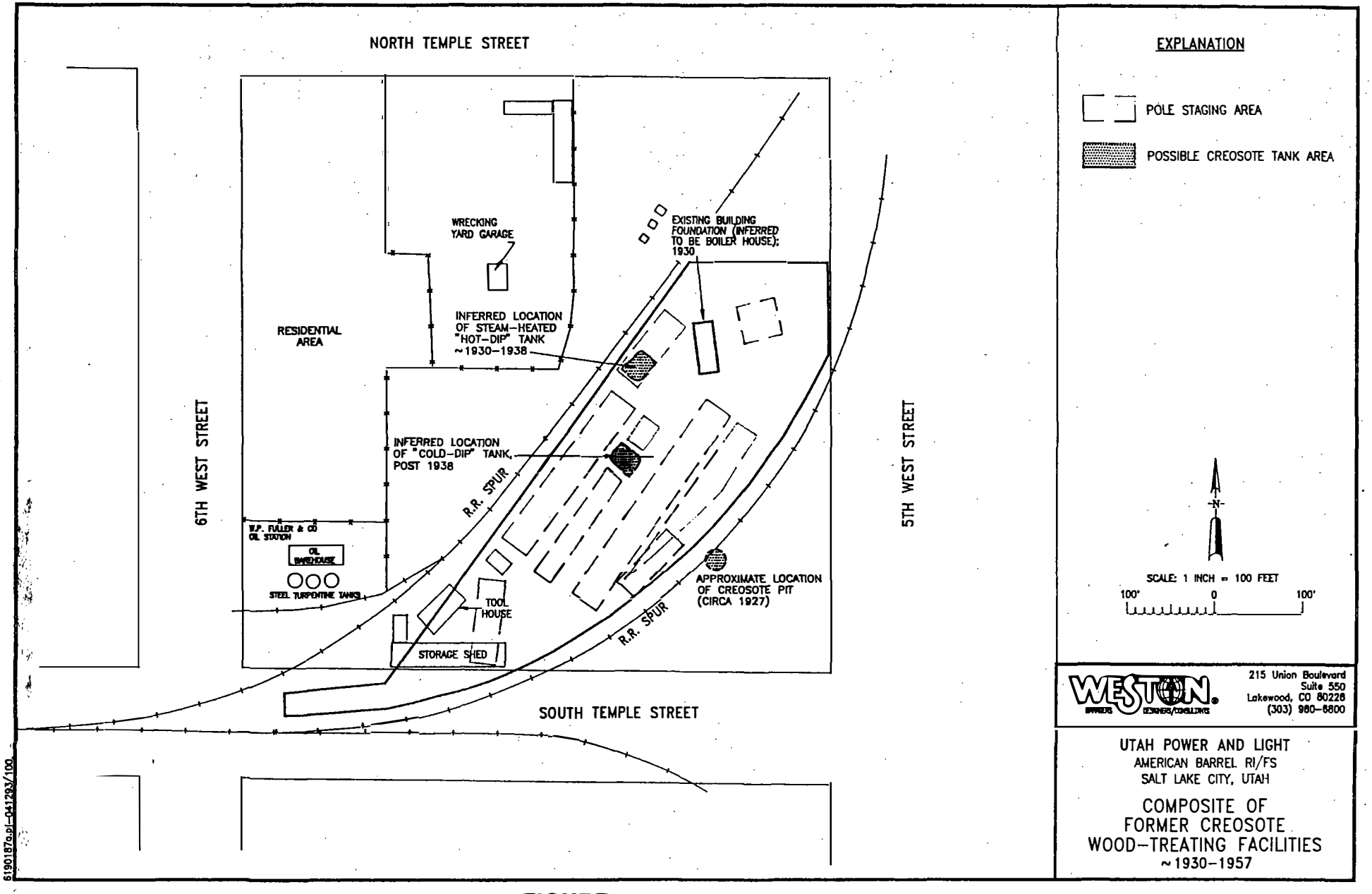

NORTH TEMPLE STREET
6TH WEST STREET
5TH WEST STREET
SOUTH TEMPLE STREET
RESIDENTIAL AREA
WRECKING YARD GARAGE
EXISTING BUILDING FOUNDATION (INFERRED TO BE BOILER HOUSE); 1930
INFERRED LOCATION OF STEAM-HEATED "HOT-DIP" TANK ~1930-1938
INFERRED LOCATION OF "COLD-DIP" TANK, POST 1938
R.R. SPUR
W.P. FULLER & CO OIL STATION
OIL WAREHOUSE
STEEL TURPENTINE TANKS
TOOL HOUSE
STORAGE SHED
APPROXIMATE LOCATION OF CREOSOTE PIT (CIRCA 1927)
R.R. SPUR
EXPLANATION
POLE STAGING AREA
POSSIBLE CREOSOTE TANK AREA
N
SCALE: 1 INCH = 100 FEET
100' 0 100'
WESTON DESIGNERS/CONSULTANTS
215 Union Boulevard
Suite 550
Lakewood, CO 80228
(303) 980-6800
UTAH POWER AND LIGHT
AMERICAN BARREL RI/FS
SALT LAKE CITY, UTAH
COMPOSITE OF FORMER CREOSOTE WOOD-TREATING FACILITIES ~1930-1957
6190187a.pl-041293/100

FIGURE 4

APPENDIX E

Site Photographs

Photo 1 **View: Northeast** **4/12/2021**

Boundary Well RW-600 (bottom center) looking back towards the North Sixth Apartment Complex.

Photo 2 **View: Southeast** **4/12/2021**

View of residential homes slated for redevelopment and the North Sixth Apartments from the corner of 600 West and North Temple.

Photo 3 **View: Southeast** **4/12/2021**

View from the north corner across the Site. UPRR property and Gateway Development is in the background.

Photo 4 **View: West** **4/12/2021**

UTA No Trespassing/No Dumping sign.

Photo 5 **View: Northeast** **4/12/2021**

View looking towards the location of DNAPL source area left in place. DNAPL source are is located underneath the rail road tracks at a depth of approximately 25 feet.

Photo 6 **View: Southwest** **4/12/2021**

View of the monitoring well field with Source Area Well RW-603 located at the bottom.

Photo 7 **View: Northwest** **4/12/2021**

View of graffiti found along wall behind Source Area Wells RW-604 and RW-602. Although secured behind fencing, graffiti indicates some trespass occurs in the area.

Photo 8 **View: West** **4/12/2021**

View of the Gateway Community Gardens.

Photo 9 **View: South** **4/12/2021**

View of Boundary Well RW-606 located inside the Gateway Community Garden at the southwest corner.

Photo 10 **View: West** **4/12/2021**

View of the planned pathway for the Folsom Trail pedestrian trail towards 600 West. Information from UTA indicates construction will start in June 2021

Photo 11 **View: West** **4/12/2021**

View of Groundwater Elevation Well UG-3 (bottom center) located in the parking strip along 500 West. View back towards the American Barrel site.

Photo 12 **View: Southwest** **4/12/2021**

Panaromic view of the American Barrel site from the North Temple Overpass.

APPENDIX F

Press Release and Community Interviews

CLASSIFIED ADS

PROJECT CLAIMS & RISK MANAGER
FLSmidth Inc., Project Claims & Risk Manager, Midvale, UT: invstgt & eval claims while applyg tech knwldg & human rel skills to effect fair & prompt disposal of cases & contr. to reduced loss ratio & protect proj contrib margin, & provide necessary input to adjust reserves or provide reserve recs to ensure that reserve activitiess are consist w/ corp policies. Reqs: a min of MBA or JD plus 5 yrs' prog, post-bacc exp in job offrd, or rel, to incl. 5 yrs' exp in mining industry; 5 yrs' exp w/ claims/ risk mgmt; 5 yrs' exp w/project contracts, incl. tech scope, comm. terms, & legal terms & conditns; 5 yrs' exp analyzg complex data & compellg supportg evid to support claims process; & 5 yrs' int'l. exp & knwldg of contract mgmt & legislative knwldg, mainly focused on Russia & Eastern Europe. Exp may be gained concurrently. Emplyr will accept any combo of edu, exp & training. Apply online at https://www.flsmidth.com/en-gb/company/careers using keywords "Project Claims & Risk Manager."

TECHNICAL
Oracle America, Inc. has openings for Technical Analyst positions in Lehi, UT. Job duties include: Deliver solutions to the Oracle customer base while serving as an advocate for customer needs. Some positions may allow for telecommuting. Apply by e-mailing resume to amaresh.padhi@oracle.com, referencing 385.24924. Oracle supports workforce diversity.

INFORMATION TECHNOLOGY
SOFTWARE ARCHITECT sought by inContact, Inc. in Sandy, UT. To design, develop, test, oversee the implementation of InContact software features. Send resumes to: HR, inContact, Inc., 75 West Towne Ridge Pkwy, Tower 1, Sandy, UT 84070.

EDUCATION
Utah Valley University, located in Orem, Utah, seeks an Assistant Professor - Philosophy. Duties: Teach 4 courses per semester (8 per year) in the undergraduate philosophy program at the upper and lower division, including, but not limited to Introduction to Philosophy, Ethics and Values, Environmental Ethics, Environmental Aesthetics.
Requirements: PhD in Philosophy or related degree from an accredited institution. ABD accepted. Foreign equivalent degree accepted. Demonstrable ability to teach a variety of University/College undergraduate philosophy courses including, but not limited to, the courses listed above. For additional information and instructions on how to apply, visit https://www.uvu.jobs/ click on "Search Jobs", then follow the instructions on how to apply.

JIM MORETON REMODELING AND CONSTRUCTION
1021 N Nocturne Dr Salt Lake City, 84106. 801-808-6291. Pre-estimate kitchens, bath, decks, room editions.

INFORMATION TECHNOLOGY
Senior Engineer, Data sought by Social Finance, Inc. in Murray, UT. Partner with BI Analysts, Data Scientists and other business stakeholders to meet their data requirements. Apply @ www.jobpostingtoday.com #44659.

MASONRY - ALL REPAIRS
Bricks, Rocks, Walls, Steps, Stucco, Cement, Plaster, Chimneys, Lock Mailbox. BIG or small. Fast, Quality. Dan 801-918-5570

BROTHER'S ROOFING
ALL TYPES OF ROOFING
385-296-6706

LEGAL NOTICES

PUBLIC NOTICE
Utah Power & Light-American Barrel Superfund Site
Five-Year Review
Salt Lake County, Utah

The Utah Department of Environmental Quality (UDEQ), Division of Environmental Response and Remediation (DERR), in cooperation with the U.S. Environmental Protection Agency (EPA), is conducting a Five-Year Review of the Utah Power and Light-American Barrel Superfund site located in Salt Lake City, Utah. Barrel storage, wood-treating, and coal gasification operations took place on-site from 1870 to 1987.

The wood-treated and coal gasification operations produced byproducts such as tar, sludge, ash, and liquid wastes. Site activities and waste disposal practices contaminated soil and groundwater with hazardous chemicals. Cleanup was completed in 1996, monitored natural attenuation of groundwater contaminants is ongoing.

What is a Five-Year Review? The purpose of a Five-Year Review is to determine whether or not cleanup and other actions taken at the site are protective of human health and the environment. The Five-Year Review will include a review of site documents, community interviews, and a site inspection to evaluate all remedy components as well as the status of land-use controls. Upon completion of the review, a report will be made available to the public by October 2021.

To review previous Five-Year Review reports and other site-related files: The Administrative Record for the Utah Power and Light-American Barrel Superfund site includes all reports and decision documents and is available for public review at:

Utah Department of Environmental Quality
Multi-Agency State Office Building
195 North 1950 West (First Floor)
Salt Lake City, Utah 84116
Phone: 801-536-4100

Project documents are available online at: **eqdocs.utah.gov** using the search phrase "American Barrel". You can also find information about the Utah Power and American Barrel Superfund site on the EPA Website at: https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0800680.

If you would like more information on the Five-Year Review or participate in an interview, please contact:

Craig Barnitz
UDEQ/DERR
Project Manager
Phone: (801) 536-0071
Email: cbarnitz@utah.gov

Dave Allison
UDEQ/DERR
Community Involvement
Phone: (801) 536-4479
Email: dallison@utah.gov

SLT0011468

REQUEST FOR QUALIFICATIONS
GOVERNMENT FACILITATION AND STAKEHOLDER COORDINATION

Mountainland Association of Governments (MAG) is soliciting experienced facilitation and stakeholder coordination consultants to assist in the development of a Vision Statement for the Wasatch County Housing Authority (WCHA) and identify the most viable, feasible, and sustainable management/leadership structure based on understanding the needs, desires, requirements, and opportunities of the service area, agencies/entities, and communities concerned about Affordable Housing in Wasatch County, Utah.

Go to mountainland.org/wasatchhousing to see RFQ outline for scope of work to be accomplished by the consultant or consulting agency contracted.
Questions may be directed to the project manager, Shawn Seager, at 801.824.1066 or sseager@mountainland.org.

Submittal deadline: April 2, 2021, 5:00 p.m. MST
SLT0011460

INVITATION TO BID

The City of South Salt Lake will accept bids for the project titled: *2021 South Salt Lake City Mastic Seal Project (Multiple Locations)*, until 2:00 p.m. on April 15th, 2021. Bids received after 2:00 p.m. will not be opened. The scope of work for this contract includes furnishing and installing a Frictional Mastic Surface Treatment as per the project specifications. All required documents for the bidding process shall be directly emailed to South Salt Lake City Recorder, Craig Burton, at cburton@southsaltlakecity.com until 2:00 p.m. on April 15th, 2021.

Plans and specifications for the project can be obtained from SciQuest or the Engineer, Lingkun Li, at lli@southsaltlakecity.com after 9:00 a.m. on March 22nd, 2021. There will NOT be a Pre-Bid Meeting for this project. Due to COVID-19, bids will be opened internally at 2:00 p.m. on April 15th, 2021. The apparent low bidder will be notified by 5:00 p.m. on April 16th, 2021. A 5% Bid Security will be required. The City of South Salt Lake reserves the right to reject any and all bids or to waive any informality or technicality in any bid if deemed to be in the best interest of the City. For further information, contact Lingkun Li at 801-483-6040.
SLT0011462

MIDVALE CITY
PUBLIC NOTICE

Notice is hereby given that during a City Council meeting on March 16, 2021, the Midvale City Council adopted Ordinance No. 2021-O-06; An Ordinance Amending Midvale Municipal Code Section 8.08.080, Disposal of Community Refuse, Bulky Waste, and Recyclable Items to Allow Recycling Collection Services by Authorized Qualified Entities.
Rori L. Andreason, MMC
City Recorder
SLT0011456

FINANCE
Associate w/ Goldman Sachs & Co. LLC in Salt Lake City, UT. Compile & calculate internal, regulatory, & resolution metrics on a wkly/ quarterly/daily basis; Analyze data to determine the impact of various factors on the Firm's overall liquidity, GCLA, & regulatory liquidity ratios, such as Liquidity Coverage Ratio (LCR), Net Stable Funding Ratio (NSFR), & other internal liquidity stress testing metrics. Reqs: Bach deg (U.S. or foreign equiv) in Fin, Financial Risk Mgmt or a rel field. 3 yrs of exp in the job offered or in a rel role. Job Code: RIS5247406
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INFORMATION TECHNOLOGY
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EDUCATION
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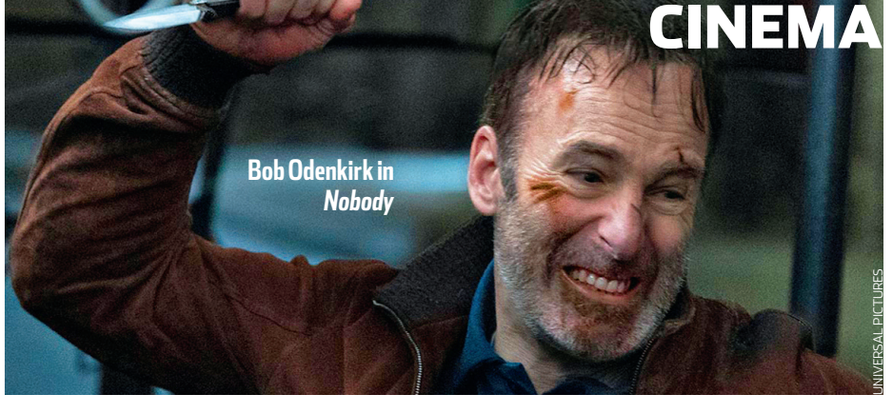

Bob Odenkirk in *Nobody*

UNIVERSAL PICTURES

Mr. Show-Off

Bob Odenkirk expands his repertoire to action hero in *Nobody*.

BY SCOTT RENSHAW
scottr@cityweekly.net
@scottrenshaw

Consider, if you will, the curious career path of one Robert John Odenkirk—Bob, to his friends and fans. For a decade from the mid-'80s to the mid-'90s, Odenkirk was able to build a successful career as a comedy writer, winning Emmys for *Saturday Night Live* and *The Ben Stiller Show*, until he got a hankering for doing more on-screen work. For another decade, he was a reliable comedy performer, starring with David Cross in his own *Mr. Show with Bob and Dave* and doing guest spots on multiple sit-coms. Then he took another 45-degree turn, shifting to drama for the role of low-rent attorney Saul Goodman on *Breaking Bad* and continuing with *Better Call Saul*. So it only stands to reason that, at the age of 58, Bob Odenkirk might think, "Hey, why not become an action hero?"

In many ways, there's a familiarity to *Nobody* in both concept and execution; as written by *John Wick* creator Derek Kolstad, it could easily be tweaked to become another entry in that franchise. Yet there's also something distinctive that Odenkirk brings to it, simply by virtue of his versatility and the previous stops on his career journey. Here's a movie with a protagonist who needs to be believable both as a wimp and as a badass, and Odenkirk nails them both.

The wimp part is clear from an effective early montage that distills the life of Hutch Mansell (Odenkirk) to a few repetitive moments in every single work day: leaving his wife (Connie Nielsen) and two kids to head to the bus stop; arriving at the machine shop owned by his father-in-law (Michael Ironside) where he works as an accountant; drinking some coffee; heading home. But there's a disruption in that routine when two burglars break into the Mansell house one night, leaving the family shaken and everyone questioning Hutch's masculinity.

What they don't realize is that Hutch has … let's just leave it at "a past." Therein lies the badass part, which erupts when a bunch of drunks get on the same bus with Hutch, start to hassle other passengers, and Hutch proceeds to dispatch them all with extreme prejudice. It's actually a fairly nifty fight sequence constructed by director Ilya Naishuller and fight coordinators Kirk A. Jenkins and Daniel Bernhardt, one that refuses to turn Hutch into a superhero and suggests a guy shaking off quite a bit of rust. The narrative plays coy for quite a while with the exact nature of Hutch's predomesticity life, but it doesn't take much puzzle-solving to figure out that he's one of those people—like John Wick himself, or *Kill Bill*'s Beatrix Kiddo—who abruptly found that you can leave a certain kind of life, but that doesn't mean it will leave you.

Most of the story revolves around the fallout from that bus battle, as one of Hutch's victims turns out to be the kid brother of Russian gangster Yulian Kuznetsov (Alexey Serebryakov). The subsequent warfare between the two provides the motivation for the action beats, and nobody's kidding anybody that *Nobody*—again, like the *John Wick* films—exists primarily as a vehicle for those beats. Most of them are creatively staged and full of the kind of ridiculousness and improvisational weaponry that inspires a guilty giggle right before the kill shot. While Naishuller proves inordinately fond of ironically underscoring his big sequences with bombastic standards like—"The Impossible Dream" and "You'll Never Walk Alone"—he rarely makes a choice that gets in the way of the crunching entertainment.

And he's got Odenkirk, who unexpectedly feels like he was born for a movie like this. Every sadsack indignity he endures at the outset seems completely in keeping with the actor playing him, but that's just as much the case when he gets that look in his eyes that is action-hero code for "aw shit, somebody's in trouble now." There are comedic moments here as well, naturally—not all of which are smoothly executed—and Odenkirk hasn't lost any of his facility for biting off a line to inspire a laugh. While some action movies work because they cast exactly the guy you'd expect, *Nobody* works because it casts exactly the guy you wouldn't expect. Maybe this is the start of a Liam Neeson-esque next act for Bob Odenkirk. Or maybe he'll try opera next. At this point, I wouldn't put anything past him. **CW**

NOBODY
★★★1/2
Bob Odenkirk
Alexey Serebryakov
Connie Nielsen
R
Available March 26 in theaters

Utah Power & Light-American Barrel
Superfund Site Five-Year Review
Interview of Local Agencies

Site Name: EPA ID: UTD980667240	Date: 12 April 2021
Type of Contact: Site Visit	Contact Made By: Dave Allison, UDEQ/DERR Community Involvement Coordinator and Craig Barnitz, UDEQ/DERR Project Manager
Person Contacted	
Jeff Tucker, Principal Engineer of the Environmental Services Department for PacifiCorp Scott Wetzel, Principal Engineer of the Environmental Services Department for PacifiCorp	PacifiCorp 1407 West North Temple, Suite 280 Salt Lake City, Utah 84116 pacificorp.com

1. Is your organization/department aware of the Utah Power & Light-American Barrel Superfund Site and the actions taken/underway to address environmental contamination? Jeff Tucker and Scott Wetzel are Principle Engineers in the Environmental Services Department for PacifiCorp and overseas semi-annual sampling of eight wells for the site. Tucker has worked throughout the history of cleanup actions at the site.

2. What's your overall impression (your general sentiment) of the actions taken/underway at the Utah Power & Light-American Barrel Superfund Site? Tucker said although contaminants remain on site, the monitored natural attenuation (MNA) remedy continues to show signs of reductions and is meeting current site goals. Plume conditions are contracting and groundwater concentrations are decreasing and remain on site according to recent semi-annual groundwater monitoring data.

3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) which pertain to or involve the Utah Power & Light-American Barrel Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the last five years. Tucker said PacifiCorp provides semi-annual sampling reports to the EPA and UDEQ-DERR and conducts site inspections related to Five-Year Review activities.

4. Are you aware of any community concerns regarding the Utah Power & Light-American Barrel Superfund Site, as it pertains to actions taken or underway to address environmental contamination? If so, please give details. Tucker said there are no community concerns he is aware of as vapor mitigation controls were taken during the construction of the North Sixth Apartments and access to the railroad yard is restricted and fenced.

Within the last five years, Tucker has coordinated site environmental information with Salt Lake City and the Utah Transit Authority (UTA) for a planned paved walking and bike path near the rail corridor connecting the Jordan River Parkway Trail to downtown Salt Lake City. The trail is anticipated to be completed by the end of 2021.

5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Utah Power & Light-American Barrel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response. Tucker said PacifiCorp has not had to address any incidents or emergency responses for the site. The eight well caps are in good shape and signs warn trespassers from entering the site. There is a area behind the North Sixth Apartments where an occasional transient camp occurs and authorities are called to remove a tent from time to time.

6. Do you feel well informed about the activities and progress over the last five years at the Utah Power & Light-American Barrel Superfund Site? Do you know how to contact the Environmental Protection Agency and/or UDEQ – DERR if you have questions or concerns about the Utah Power & Light-American Barrel Superfund Site? Tucker said PacifiCorp has worked well with EPA and UDEQ Project Managers with regular communication on sampling reports and Five-Year Reviews.

7. Over the past five years, have there been any changes in your department's policies or regulations that might impact the Utah Power & Light-American Barrel Superfund Site from a perspective of land use, water rights, redevelopment, and site management? Any changes to your role? If so, please describe the changes and potential impact each might have. Tucker said the American Barrel PacifiCorp property was a potential site for a substation which is not the plan now. Tucker is not aware of any future plans for PacifiCorp to develop the site property and expects the site to be left as is.

8. Over the past five years, have there been any changes in land use surrounding the Utah Power & Light-American Barrel Superfund Site to your knowledge? Are you aware of potential future changes in land use? If so, please describe including any concerns you and/or your agency might have with land use changes. Tucker said a small community garden on Salt Lake City's portion of the site to the southeast of the site boundary line was put in 2018. Tucker said PacifiCorp has a monitoring well within garden fence and has site access for samping. The garden has raised beds to avoid any runoff conditions from a parking lot to the east. Tucker said the only other land use changes is a planned public walking and biking trail by the Utah Transit Authority (UTA) and Salt Lake City. The trail design runs to the east and south of the existing tracklines and PacifiCorp has been involved with UTA's design meetings.

9. Do you have any comments, suggestions, or recommendations regarding the Utah Power & Light-American Barrel Superfund Site management (for example, questions pertaining to institutional controls)? If you have questions or are aware of potential problems in the future, what problems might arise? What are your agencies' concerns if such do arise? Tucker said the site groundwater will continue to be monitored twice a year and institutional controls are in place to maintain site groundwater conditions. Although soil vapor extraction was discontinued based upon monitoring data in 2007, Tucker is aware of EPA and UDEQ questions regarding possible indoor air vapor intrusion at the North Sixth Apartments and how well the vapor barrier in place is performing. Tucker said additional air sampling efforts may be required to answer these questions. Whether this involves sampling of the passive venting system currently in place or inside the apartments, Tucker said PacifiCorp wants to proactively address any potential site issues.

Utah Power & Light-American Barrel
Superfund Site Five-Year Review
Interview of Local Agencies

Site Name: EPA ID: UTD980667240	Date: 26 April 2021
Type of Contact: Teleconference	Contact Made By: David Allison UDEQ/DERR Community Involvement Coordinator and Craig Barnitz, UDEQ/DERR Project Manager
Person Contacted	
Executive Director	The Giv Group North Sixth Apartments 50 North 600 West, Unit D Salt Lake City, Utah 84116

1. Is your organization/department aware of the Utah Power & Light-American Barrel Superfund Site and the actions taken/underway to address environmental contamination? The Executive Director is founder and CEO for the GIV Group, an affordable housing development company based in Salt Lake City, UT. The Giv Group acquired residential property in 2013 on the furthest west portion of the American Barrel site and built the North Sixth apartments in 2014 on 6th West. North Sixth is 5 floors with ground floor retail, 4 floors of residential and underground parking, and has 115 one- and two-bedroom apartments, with 86 of them rent-subsidized.

The GIV Group was heavily involved in all construction decisions for the site. He said building on a cleanup site added emphasis to ensure appropriate design measures were taken to eliminate any environmental impacts to the North Six Apartment development.

2. What's your overall impression (your general sentiment) of the actions taken/underway at the Utah Power & Light-American Barrel Superfund Site? The Executive Director said everything has worked well with the North Sixth Apartment development. He said extensive construction measures were taken to ensure any site groundwater contaminants did not impact the safety and protectiveness of their development.

No apartments were built on ground level. He said a lined vapor barrier with three feet of concrete foundation to address any vapor conditions was placed with an open floor level garage design. He said every consideration was taken at the time the apartments were built in 2014 to prevent any potential vapor or radon issues.

He said they would not have acquired or built on the property if site remedies had not achieved appropriate cleanup conditions for building the apartments. He said he is not aware of any negative changes to site conditions which impact the apartments and knows the groundwater conditions are reducing in concentrations and size.

3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) which pertain to or involve the Utah Power & Light-American Barrel Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the last five years. The Executive Director does not have any routine communications regarding monitoring reports or site inspections. He said the Giv Group offices on the site location does provide access to

Pacific Corp to conduct groundwater monitoring whenever they need to do so.

4. Are you aware of any community concerns regarding the Utah Power & Light-American Barrel Superfund Site, as it pertains to actions taken or underway to address environmental contamination? If so, please give details. The Executive Director is not aware of any negative community concerns regarding health or safety of the environment regarding the apartments. The apartments filled a need in an area of Salt Lake City lacking affordable housing and improvements to the area where new building was not occurring.

5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Utah Power & Light-American Barrel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response. The Executive Director said there were no incidents or emergency responses over the last five years for the site.

6. Do you feel well informed about the activities and progress over the last five years at the Utah Power & Light-American Barrel Superfund Site? Do you know how to contact the Environmental Protection Agency and/or UDEQ – DERR if you have questions or concerns about the Utah Power & Light-American Barrel Superfund Site? The Executive Director said he has received very good communication from the PacifiCorp , EPA, and UDEQ project managers over the years and has contact information to address any questions.

7. Over the past five years, have there been any changes in land use surrounding the Utah Power & Light-American Barrel Superfund Site to your knowledge? Are you aware of potential future changes in land use? If so, please describe including any concerns you and/or your agency might have with land use changes. The Executive Director said there have been no changes to the property use or construction activities and no plans to alter land use in the near future.

8. Do you have any comments, suggestions, or recommendations regarding the Utah Power & Light-American Barrel Superfund Site management (for example, questions pertaining to institutional controls)? If you have questions or are aware of potential problems in the future, what problems might arise? What are your agencies' concerns if such do arise? The Executive Director said he is in the process of a refinance for the property and will require site remedy information to his bank to enable financing. He said assurances are required from the bank's environmental contractor regarding liability and anything the EPA, UDEQ, or PacifiCorp could do to help or provide, as far as cleanup documentation, would be helpful. He said there are indoor air questions by the bank environmental contractor He felt were addressed at the time of construction yet may need to be reevaluated in the near future to move forward with the refinance.

Utah Power & Light-American Barrel
Superfund Site Five-Year Review
Interview of Local Agencies

Site Name: EPA ID: UTD980667240	Date: 28 April 2021
Type of Contact: Teleconference	Contact Made By: Dave Allison, UDEQ/DERR Community Involvement Coordinator and Craig Barnitz, UDEQ/DERR Project Manager
Person Contacted	
Debbie Lyons, Director of the Salt Lake City Sustainability Department	Salt Lake City Corporation 451 S State St Salt Lake City, UT 84111 slcgreen@slcgov.com

1. Is your organization/department aware of the Utah Power & Light-American Barrel Superfund Site and the actions taken/underway to address environmental contamination? Debbie Lyons is the Deputy Director of the Salt Lake City Sustainability Department and the City owns property located in the southeast corner of the site. Lyons said Salt Lake City oversees an environmental covenant for their property and had a couple of major changes with development at the site.

Salt Lake City removed a Union Pacific switch station building in 2017 and contracted with Wasatch Community Gardens to manage the Gateway Community Garden in the area located just west of the Gateway Mall. Opening in Fall of 2018, the garden is all raised beds with protective liners and incorporates the environmental covenant restrictions. A monitoring well is also located within the garden. Lyons also said they are working with the Utah Transit Authority to construct a walkway/biking trail to the east of the rail lines to be put in in 2021.

2. What's your overall impression (your general sentiment) of the actions taken/underway at the Utah Power & Light-American Barrel Superfund Site? Lyons said the site conditions and institutional controls have not kept the City from using their property and her understanding of the remedy is that conditions are gradually decreasing and being managed well by PacifiCorp.

3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) which pertain to or involve the Utah Power & Light-American Barrel Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the last five years. Lyons said the City does not have any routine inspections or reporting activities other than Parks staff checking in on community gardens. Salt Lake City has good coordination with community gardens meetings to address any issues and a has a regular presence in the area.

4. Are you aware of any community concerns regarding the Utah Power & Light-American Barrel Superfund Site, as it pertains to actions taken or underway to address environmental contamination? If so, please give details. Lyons had not heard any community concerns regarding health or the environment in this area and has not had any property issues with managing contamination with the community garden. Lyons said any community concerns are more focused on development pressures in the area for displacing the community gardens with a parking lot or buildings. The public is very protective of their community gardens and it would be

an unpopular decision to do away with them for development.

5. Over the past five years, have there been any complaints, violations, or other incidents (e.g., vandalism, trespassing, or emergency responses) at or related to the Utah Power & Light-American Barrel Superfund Site requiring your office to respond? If so, please give details of the events and results of the response. Lyons is not aware of any incidents, trespassing, or illegal dumping in the area and Salt Lake City would manage it very quickly.

6. Do you feel well informed about the activities and progress over the last five years at the Utah Power & Light-American Barrel Superfund Site ? Do you know how to contact the Environmental Protection Agency and/or UDEQ – DERR if you have questions or concerns about the Utah Power & Light-American Barrel Superfund Site? Lyons said she has good communication from the regulators. Lyons said the variety of project managers have always been responsive. Also, Sage Environmental who conducts sampling for PacifiCorp provides a heads-up every six months to keep her office informed on monitoring activities at the site.

7. Over the past five years, have there been any changes in your department's policies or regulations that might impact the Utah Power & Light-American Barrel Superfund Site from a perspective of land use, water rights, redevelopment, and site management? Any changes to your role? If so, please describe the changes and potential impact each might have. Lyons said there are no regulation changes regarding site management and environmental compliance measures have remained consistent over the last five years.

8. Over the past five years, have there been any changes in land use surrounding the Utah Power & Light-American Barrel Superfund Site to your knowledge? Are you aware of potential future changes in land use? If so, please describe including any concerns you and/or your agency might have with land use changes. Other than the property amendments with the community garden in 2018, Lyons said the SLC Redevelopment Agency (RDA) is working with the Utah Transit Authority, who provided some grant money for the construction of a public walkway and bike trial called the Folsom Trail. Lyons said her office shared the site environment records with the UTA and RDA office. A segment of the trail will run adjacent along the rail corridor to 6th West and is scheduled for construction in 2021. No other future plans for the property are under consideration.

9. Do you have any comments, suggestions, or recommendations regarding the Utah Power & Light-American Barrel Superfund Site management (for example, questions pertaining to institutional controls)? If you have questions or are aware of potential problems in the future, what problems might arise? What are your agencies' concerns if such do arise? Lyons said the environmental controls and management plans are in place and as long as good coordination with regulators continues doesn't foresee any potential issues for this site. The environmental covenant is tied into their property and right of way permitting systems keep all entities appraised of environmental conditions and requirements throughout the city.

Utah Power & Light-American Barrel
Superfund Site Five-Year Review
Interview of Local Agencies

Site Name: EPA ID: UTD980667240	Date: 6 May 2021
Type of Contact: Teleconference	Contact Made By: Dave Allison, UDEQ/DERR Community Involvement Coordinator and Craig Barnitz, UDEQ/DERR Project Manager
Person Contacted	
Autumn Hu, NEPA Project Administrator Andrew Kitchen, Project Manager Civil Science	Utah Transit Authority 669 West 200 South Salt Lake City, Utah 84101 rideuta.com

1. Is your organization/department aware of the Utah Power & Light-American Barrel Superfund Site and the actions taken/underway to address environmental contamination? Autumn Hu, NEPA Project Administrator, and Andrew Kitchen, Project Manager Civil Science, for the Utah Transit Authority (UTA) and have planned with Salt Lake City to build a public walkway and biking path called the Folsom Trail. The UTA acquired grant money and collaborated with Salt Lake City Redevelopment Agency on implementing the trail which runs next to and through a portion of the American Barrel site on the east side of the rail tracks.

The UTA was required to assess any environmental conditions related to the American Barrel site prior to planning trail design at the site. The UTA has a light rail commuter North Temple station nearby and a set of tracks running adjacent to Union Pacific Railroad tracks through the site. UTA completed the trail design in 2019 and with rail coordination finished is ready to build in June 2021.

2. What's your overall impression (your general sentiment) of the actions taken/underway at the Utah Power & Light-American Barrel Superfund Site? The UTA staff said during the preliminary planning phase of the Folsom Trail they reached out to UDEQ-DERR managers and did some surface soil sampling along the trail corridor of the site. UTA worked with EPA and UDEQ on a soil management plan and the UTA design approach was to minimize any soil disturbance to avoid taking soil off site. This required UTA to raise the trail in areas to avoid digging into the ground.

UTA staff said from a planning perspective, the trail is an ideal location for Salt Lake City and meets the transportation needs for the area. The UTA staff said the trail location at the American Barrel site has not been a problem and respective agencies have worked well to coordinate any potential issues for the Folsom Trail Project.

3. Does your office conduct routine communications and/or activities (site visits, inspections, reporting activities, participation in meetings, etc.) which pertain to or involve the Utah Power & Light-American Barrel Superfund Site? If so, please briefly summarize the purpose and results of these communications and/or activities over the last five years. The UTA staff said as part of any federal project a National Environmental Policy Act (NEPA) environmental clearance is required. Once the Superfund environmental conditions were determined, UTA needed to coordinate with the appropriate authorities for the site activities which included PacifiCorp, UDEQ, and EPA. UTA staff said they conducted a coordinated site inspection with PacifiCorp to identify monitoring wells or other potential issues. Only one well is near the trail and UTA will have to extend a well head for sampling access.

UTA also has required environmental and construction permits. Environment permits included a storm water prevention plan and dust control plan. For construction permits, the Salt Lake City requires their own projects to go through their full permitting process working through the Engineering and Business Development departments.

4. Are you aware of any community concerns regarding the Utah Power & Light-American Barrel Superfund Site, as it pertains to actions taken or underway to address environmental contamination? If so, please give details. The UTA staff is not aware of any public concerns regarding health or the environment for the trail site. Salt Lake City does a very good job with civic engagement and did so with the trail project soliciting public feedback on all aspects of the site prior to UTA design.

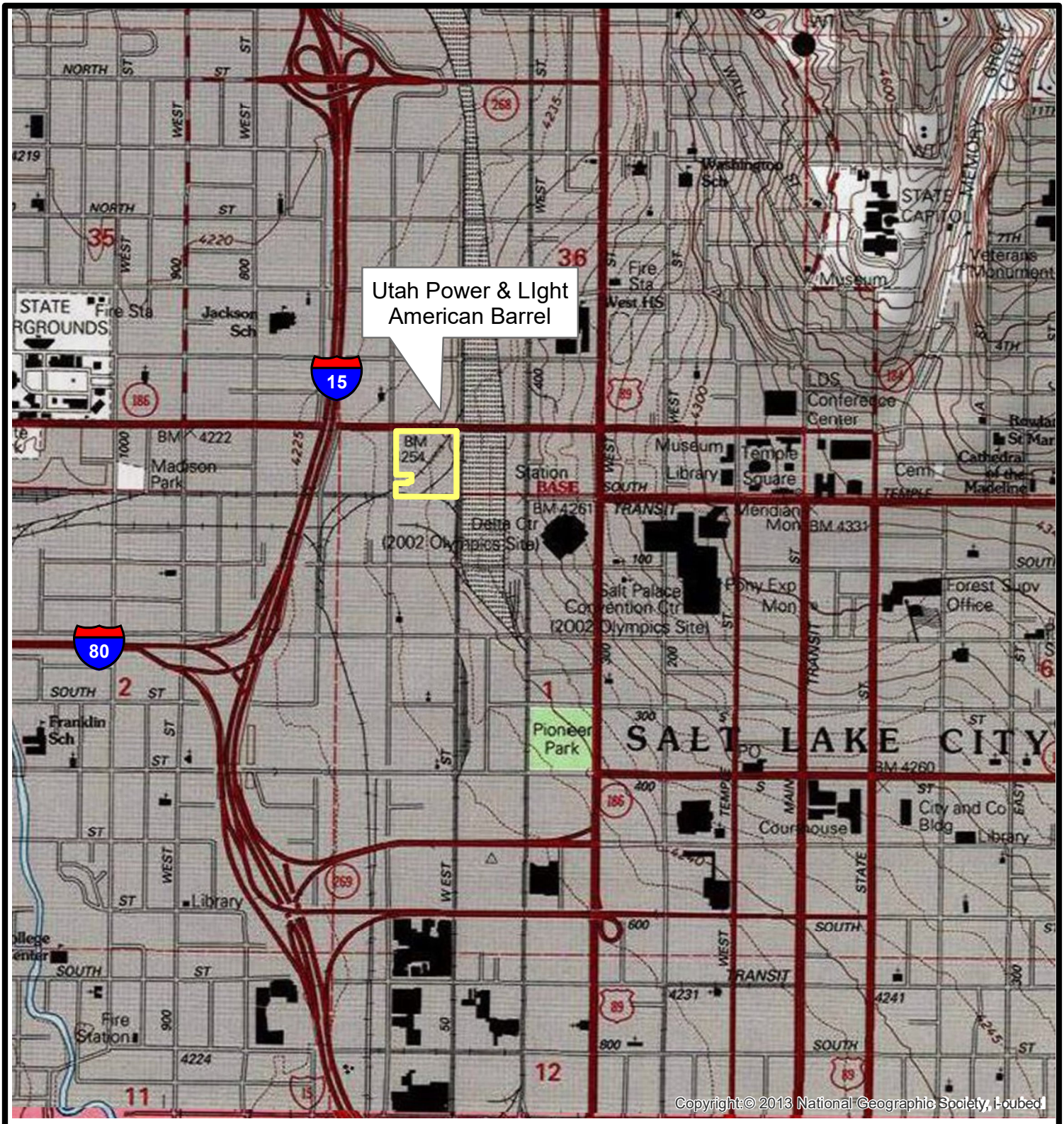
UTA staff said everybody is in favor of this trail as it provides an active transportation connection to the North Temple Frontrunner Station. UTA said the initial plan was to take the trail to the Jordan River and, unfortunately, could not come up with the funding to do so and had to end the trail at 1000 West. Because of the Folsom Trail proximity to the American Barrel site, no irrigation landscaping could be a part of the trail design and as the trail is a City project, Salt Lake City was involved with all landscaping decisions.

5. Do you feel well informed about the activities and progress over the last five years at the Utah Power & Light-American Barrel Superfund Site? Do you know how to contact the Environmental Protection Agency and/or UDEQ – DERR if you have questions or concerns about the Utah Power & Light-American Barrel Superfund Site? The UTA staff said in coordination with the planning and design of this project EPA, UDEQ and PacifiCorp have been very forthcoming and cooperative. UTA received quick input and information with the soil management plan which has been in place very early waiting for construction to start. PacifiCorp provided monitoring well reports and UTA uses the UDEQ EZ-Search online database to research projects.

6. Do you have any comments, suggestions, or recommendations regarding the Utah Power & Light-American Barrel Superfund Site management (for example, questions pertaining to institutional controls)? If you have questions or are aware of potential problems in the future, what problems might arise? What are your agencies' concerns if such do arise? The UTA is not aware of any future potential issues with the Folsom Trail and the American Barrel site. After construction, the project will be maintained by Salt Lake City. If additional grant funding were to be acquired, UTA would expect Salt Lake City to extend the trail to the Jordan River and not alter the plan currently in place at the American Barrel site. There may be a City Creek daylighting project which may intersect the trail and would not be within the American Barrel site segment and west near 8th West.

APPENDIX B

Site Location Map



0 400 800 1,600 2,400 3,200

Feet

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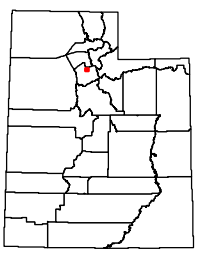

UTAH DEPARTMENT of ENVIRONMENTAL QUALITY

ENVIRONMENTAL RESPONSE & REMEDIATION

APPENDIX B

SITE LOCATION MAP

Utah Power & Light - American Barrel

Salt Lake County, Utah

by: crb

date: 5/3/2021

APPENDIX C

2020 Second Semi-Annual Groundwater Monitoring Report Data

Table 1:	Groundwater Elevations
Table 2:	Groundwater Field Parameters and Analytical Results (December 10-11, 2020)
Table 3:	Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations
Figure 1:	Groundwater Potentiometric Surface Contour Map
Figure 2:	Hydrographs for Upgradient Wells, UG-1, UG-2R, and UG-3
Figures 3-32:	Groundwater Trends for Monitoring Wells

PacifiCorp
American Barrel Site

Table 1. Groundwater Elevations; 2nd Semi-Annual 2020 Event (December 3-4, 2020)

Well ID	Casing Collar Elevation (ft)	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft-AMSL)	Total Well Depth (ft)
RW-505R	4231.91	12/4/2020	10.42	4221.49	19.89
RW-514	4239.03	12/3/2020	16.95	4222.08	26.30
RW-600	4232.34	12/4/2020	11.03	4221.31	19.39
RW-601	4232.33	12/4/2020	9.91	4222.42	19.57
RW-602	4238.70	12/3/2020	15.59	4223.11	28.05
RW-603	4242.23	12/3/2020	17.53	4224.70	27.13
RW-604	4238.89	12/3/2020	16.37	4222.52	28.25
RW-605	4239.02	12/3/2020	15.48	4223.54	27.45
RW-606	4244.90	12/3/2020	18.95	4225.95	23.17
RW-607	4231.77	12/4/2020	9.00	4222.77	18.90
UG-1	4242.47	12/3/2020	15.34	4227.13	19.82
UG-2R*	4243.49	12/3/2020	14.05	4229.44	19.70
UG-3	4245.31	12/3/2020	15.22	4230.09	19.27

ft = Feet

ft-AMSL = Feet above mean sea level

NA = Not Applicable

* = Well UG-2 was destoyed and was replaced by well UG-2R on January 20, 2014

PacifiCorp

American Barrel Site

Table 2. Groundwater Field Parameters and Analytical Results; 2nd Semi-Annual 2020 Event (December 3-4, 2020)

Well / Sample Identification:	RW-505R	RW-514	RW-600	RW-601	RW-602	RW-603	RW-604	RW-605	RW-606	RW-607	Duplicate "RW-777" (from RW-602)	Trip Blank	Field Blank
Field Parameters													
Groundwater elevation (ft-AMSL)	**4221.49**	**4222.08**	**4221.31**	**4222.42**	**4223.11**	**4224.70**	**4222.52**	**4223.54**	**4225.95**	**4222.77**	NA	NA	NA
Temperature (°C)	**17.21**	**15.02**	**17.11**	**13.89**	**15.47**	**13.68**	**14.14**	**14.16**	**14.86**	**16.66**	NA	NA	NA
pH (standard units)	**7.12**	**7.19**	**7.06**	**7.08**	**7.14**	**6.82**	**7.16**	**7.09**	**6.92**	**7.11**	NA	NA	NA
Specific Conductance (mS/cm)	**1.43**	**1.04**	**1.95**	**1.88**	**1.27**	**1.92**	**1.66**	**2.27**	**3.83**	**1.19**	NA	NA	NA
Turbidity (NTU)	**198**	**7.1**	**727**	**150**	**252**	**42.7**	**28.3**	**118**	**>1000**	**260**	NA	NA	NA
Dissolved Oxygen (mg/L)	**1.66**	**2.54**	**2.39**	**2.66**	**3.33**	**3.68**	**4.84**	**2.81**	**7.09**	**1.70**	NA	NA	NA
Volatile Organic Compounds (µg/L) EPA 8260C													
Benzene	<1.00	**8.81**	<1.00	**2.56**	**451**	**3,300 ~**	**2,470**	**6,080**	<1.00	**10.0**	**453**	<1.00	<1.00
Naphthalene	<2.00	**5.78**	<2.00	<2.00	**31.2**	**36.7**	**223**	**3,570**	<2.00	**2.58**	**28.2**	<2.00	<2.00
Cyanide (µg/L) EPA 9012A													
Cyanide	<5.00	**14.6 J**	**16.3 J**	<5.00	**75.7 J**	**1250 J**	**222 [1] J**	**764 J**	**19.8 J**	**26.2 J**	**96.2 J**	NA	<5.00

NA = Not analyzed

ft-AMSL = Feet above mean sea level

< = Not Detected above the RL

Bold = Compound detected above the MDL

[1] = Matrix Spike recovery indicates matrix interference. The method is in control as indicated by the LCS.

[2] = Analyte concentration is too high for accurate matrix spike recovery and/or RPD.

[#] = High RPD due to low analyte concentration. In this range, high RPDs are expected.

[~] = The reporting limits were raised due to high analyte concentrations.

J = Indicates that the value is qualified as "estimated" and potentially biased high based on the data validation report (included as Appendix B)

PacifiCorp

American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	-	-	-	-	-	-	5*	1.460**	200*
RW-505R	3/20/2008	4221.85	13.9	6.98	1.87	186	2.34	0.15 J	NT	34
Duplicate (from RW-505R)	3/20/2008	NA	NA	NA	NA	NA	NA	0.17 J	NT	32
RW-505R	6/26/2008	4221.32	14.7	7.44	1.66	>999	0.72	ND	NT	31
Duplicate (from RW-505R)	6/26/2008	NA	NA	NA	NA	NA	NA	ND	NT	ND
RW-505R	9/3/2008	4220.95	15.2	7.76	1.51	190	1.07	ND	NT	23
RW-505R	11/19/2008	4221.60	15.0	7.34	1.82	351	0.78	<1	NT	30
RW-505R	3/5/2009	4222.04	13.7	7.62	1.70	84	0.61	<1	NT	24
RW-505R	6/9/2009	4222.02	14.2	7.34	1.74	284	0.40	0.47 J	<1.0	15 J
RW-505R	8/13/2009	4221.41	15.2	7.18	1.85	516	0.95	<1.0	NA	8.5 J
RW-505R	12/1/2009	4221.24	14.7	7.12	1.88	504	0.76	<1.0	NA	6.9 J
RW-505R	3/9/2010	4221.76	13.6	6.80	1.99	421	5.37	<1.0	NA	8.8 J
RW-505R	6/8/2010	4222.67	15.1	7.13	1.86	108	4.07	<1.0	<1.0	17
RW-505R	8/24/2010	4222.48	14.5	6.88	1.95	290	4.05	<1.0	NA	45
RW-505R	12/2/2010	4223.04	14.3	7.02	1.82	94	5.78	<1.0	NA	30
RW-505R	3/2/2011	4223.13	13.4	7.07	2.13	109	6.41	<1.0	NA	<10
RW-505R	5/31/2011	4223.40	13.92	7.06	1.89	124	4.02	<1.0	<1.0	<10
RW-505R	8/23/2011	4222.98	14.7	7.17	1.61	47	3.33	<1.0	NA	<10
RW-505R	12/7/2011	4223.05	14.0	7.39	1.22	73	3.91	<1.0	NA	<10
RW-505R	3/5/2012	4223.21	14.2	7.38	1.21	178	3.63	<1.0	NA	<10
RW-505R	6/6/2012	4223.40	13.14	7.35	1.37	61.9	2.59	<1.0	<1.0	<10
RW-505R	8/20/2012	4222.61	15.05	7.25	1.26	51	4.13	0.5 J	NA	<10
RW-505R	12/4/2012	4222.61	14.89	6.90	1.27	143	3.01	<1.0	NA	<10
RW-505R	3/12/2013	4223.12	13.63	7.25	1.36	39.3	2.77	<1.0	NA	<10
RW-505R	5/15/2013	4223.24	14.65	7.42	1.48	457	3.39	<1.0	<1.0	3.5 J
RW-505R	12/11/2013	4222.16	15.60	7.45	1.43	460	4.25	<1.0	<1.0	<10 HT
RW-505R	1/9/2014	4222.12	16.29	7.42	1.34	86.0	8.64	NS	NS	5.5 J
RW-505R	6/3/2014	4222.96	14.58	7.42	1.35	823	4.12	<1.0	<1.0	14
RW-505R	12/5/2014	4222.46	15.64	7.32	1.39	136	2.90	<1.0	<1.0	<10 J
RW-505R	5/20/2015	4231.91	16.12	7.27	1.46	231	1.93	<1.0	<1.0	<10
RW-505R	12/4/2015	4222.89	17.46	7.17	1.46	562	4.11	<1.0	<1.0	<10
RW-505R	6/9/2016	4223.16	16.92	7.14	1.59	256	3.79	<1.0	<1.0	14
RW-505R	12/9/2016	4222.84	17.52	7.06	1.44	512	3.98	<1.0	<1.0	<10
RW-505R	6/1/2017	4223.34	17.01	7.09	1.58	324	6.82	0.35 J	0.59 J	4.2 J
RW-505R	12/8/2017	4222.64	17.16	7.01	1.26	306	1.59	0.55 J	0.97 J	4.6 JJ
RW-505R	6/11/2018	4222.85	17.79	7.00	1.32	849	2.07	0.54 J	0.67 J	<10
RW-505R	12/11/2018	4222.69	17.74	7.00	1.36	160	1.90	0.3 J	0.45 J	<10
RW-505R	5/24/2019	4223.53	16.70	7.22	1.59	35.2	1.84	0.55 J	0.44 J	<10
RW-505R	12/11/2019	4222.39	17.99	6.88	1.44	28.7	2.64	1.91	2.11	<5.00
Duplicate "RW-777" (from RW-505R)	12/11/2019	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
RW-505R	6/4/2020	4222.62	18.11	6.95	1.63	210	2.06	<1.00	<2.00	<5.00
RW-505R	12/4/2020	4221.49	17.21	7.12	1.43	198	1.66	<1.00	<2.00	<5.00
RW-514	5/14/2013	4223.56	16.27	7.31	1.02	27.0	7.30	31	110	11
Duplicate "RW-777" (from RW-514)	5/14/2013	NA	NA	NA	NA	NA	NA	33	120	13
RW-514	12/11/2013	4222.57	16.22	7.44	1.04	63	4.68	38	110	12 HT
RW-514	1/8/2014	4222.53	16.21	7.37	1.00	109	4.73	NA	NA	17
RW-514	6/3/2014	4223.21	16.97	7.10	0.990	153	2.40	25	75	27
RW-514	12/4/2014	4222.85	16.27	7.21	1.02	128	2.66	24	64	13 J
RW-514	5/20/2015	4239.03	15.68	7.24	0.984	70.9	2.20	22	48	14
RW-514	12/3/2015	4223.09	15.58	7.17	1.02	6.1	2.73	26	76	14
RW-514	6/8/2016	4223.36	15.94	7.19	0.996	67.0	2.10	15	17	17
Duplicate "RW-777" (from RW-514)	6/8/2016	NA	NA	NA	NA	NA	NA	16	18	22
RW-514	12/8/2016	4223.06	15.49	7.03	1.02	226	1.69	19	15	20
RW-514	6/1/2017	4223.52	15.69	7.12	1.03	51.8	9.40	12	8.5	21
RW-514	12/8/2017	4222.76	15.24	6.92	1.07	2.8	2.91	14	9.4	20 J
Duplicate "RW-777" (from RW-514)	12/8/2017	NA	NA	NA	NA	NA	NA	15	9.8	15 J
RW-514	6/11/2018	4223.03	16.06	6.99	1.09	30.0	2.62	14	4.2	17
RW-514	12/10/2018	4222.89	15.40	7.20	1.12	37.7	2.39	13	5.5	18
RW-514	5/23/2019	4223.84	14.47	7.34	1.06	5.1	4.65	12	7.0	14
Duplicate "RW-777" (from RW-514)	5/23/2019	NA	NA	NA	NA	NA	NA	13	7.2	14
RW-514	12/10/2019	4222.76	15.78	7.31	1.08	16.4	3.72	22.6	13.6	7.58 1#
RW-514	6/3/2020	4222.78	15.21	6.79	1.13	1.90	1.77	8.89	5.57	18.0
RW-514	12/3/2020	4222.08	15.02	7.19	1.04	7.1	2.54	8.81	5.78	14.6 J

PacifiCorp

American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	–	–	–	–	–	–	–	5*	1,460**	200*
RW-600	3/20/2008	4222.22	13.5	7.04	2.00	133	0.97	0.56 J	NT	66
RW-600	6/26/2008	4221.59	16.2	7.47	1.48	173	2.28	ND	NT	140
RW-600	9/3/2008	4221.00	16.6	7.52	1.36	356	0.94	ND	NT	110
RW-600	11/19/2008	4221.88	17.0	7.20	1.59	135	1.37	<1	NT	130
RW-600	3/5/2009	4222.21	14.0	7.39	1.66	330	0.76	<1	NT	150
RW-600	6/9/2009	4222.19	14.1	7.11	1.79	92	0.65	<1.0	<1.0	360 J
RW-600	8/13/2009	4221.44	15.7	7.07	1.87	74	0.56	0.13 J	NA	410 J
RW-600	12/1/2009	4221.21	16.1	6.95	1.79	287	0.62	<1.0	NA	330
RW-600	3/9/2010	4221.77	13.7	6.58	2.15	739	2.94	<1.0	NA	450
RW-600	6/8/2010	4222.83	15.8	7.00	2.08	201	4.76	<1.0	<1.0	620
Duplicate "RW-777" (from RW-600)	6/8/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	680
RW-600	8/24/2010	4222.78	16.3	6.84	2.11	169	2.81	<1.0	NA	750
RW-600	12/2/2010	4222.86	15.4	6.87	2.10	514	4.03	<1.0	NA	750
RW-600	3/2/2011	4223.10	13.1	6.98	2.03	356	3.88	<1.0	NA	420
RW-600	6/1/2011	4224.07	14.08	6.92	1.92	307	9.34	<1.0	<1.0	440
Duplicate "RW-777" (from RW-600)	6/1/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	420
RW-600	8/23/2011	4222.99	15.9	6.91	2.11	405	3.66	<1.0	NA	340
RW-600	12/7/2011	4222.95	15.1	7.22	2.00	339	4.23	<1.0	NA	<10
RW-600	3/5/2012	4223.09	14.4	6.90	1.84	236	6.14	<1.0	NA	99
RW-600	6/6/2012	4223.45	14.23	7.11	1.80	254	3.13	<1.0	<1.0	67
Duplicate "RW-777" (from RW-600)	6/6/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	63
RW-600	8/21/2012	4222.39	16.35	7.64	1.71	>800	3.18	<1.0	NA	68
RW-600	12/4/2012	4222.53	16.31	6.87	1.79	>800	2.39	<1.0	NA	31
RW-600	3/12/2013	4223.08	14.05	7.05	1.75	277	2.89	<1.0	NA	61
RW-600	5/15/2013	4223.16	14.56	7.16	1.71	257	4.03	<1.0	<1.0	79
RW-600	12/11/2013	4222.14	15.87	7.27	1.76	>1000	4.45	<1.0	<1.0	31 HT
RW-600	1/9/2014	4222.06	16.16	7.28	1.67	648	4.86	NA	NA	55
RW-600	6/3/2014	4222.87	14.56	6.97	1.65	>1000	3.64	<1.0	<1.0	55
RW-600	12/5/2014	4222.44	16.86	7.13	1.58	867	1.81	<1.0	<1.0	36 J
RW-600	5/21/2015	4232.34	14.73	7.23	1.34	319	3.17	<1.0	<1.0	35
RW-600	12/4/2015	4222.64	17.74	6.99	1.83	>1000	6.94	<1.0	<1.0	23
RW-600	6/9/2016	4222.88	15.39	7.14	2.19	479	3.37	<1.0	<1.0	24
RW-600	12/9/2016	4222.62	17.08	7.02	1.73	436	2.37	<1.0	<1.0	8.1 J
RW-600	6/2/2017	4223.04	15.01	7.04	2.08	351	3.20	<1.0	<1.0	13
RW-600	12/8/2017	4222.34	17.33	6.94	1.96	401	1.16	0.46 J	0.63 J	5.3 JJ
RW-600	6/11/2018	4222.51	15.87	7.12	1.98	164	2.78	0.32 J	0.51 J	<10
RW-600	12/10/2018	4222.39	17.32	6.89	1.87	428	2.39	<1.0	0.42 J	8.9 J
RW-600	5/24/2019	4223.28	14.03	7.28	2.10	297	3.38	0.3 J	<1.0	20
RW-600	12/11/2019	4222.26	16.33	6.91	1.88	286	2.64	1.80	<2.00	11.0
RW-600	6/4/2020	4222.38	14.97	6.91	2.24	616	2.45	<1.00	<2.00	16.0
RW-600	12/4/2020	4221.31	17.11	7.06	1.95	727	2.39	<1.00	<2.00	16.3 J

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	-	-	-	-	-	-	5*	1.460**	200*
RW-601	3/20/2008	4221.96	13.7	7.22	1.94	153	1.10	0.31 J	NT	ND
RW-601	6/26/2008	4222.19	18.7	7.50	1.74	171	1.82	0.17 J	NT	ND
RW-601	9/3/2008	4222.13	17.1	7.20	1.86	129	2.02	ND	NT	ND
RW-601	11/19/2008	4222.25	17.1	7.34	1.77	152	1.04	1.7	NT	<10
RW-601	3/6/2009	4222.68	11.4	7.19	2.08	105	1.57	3.1	NT	<10 U
RW-601	6/9/2009	4222.72	14.1	7.36	1.70	281	2.16	0.47 J	<1.0	<10 J
Duplicate "RW-777" (from RW-601)	6/9/2009	NA	NA	NA	NA	NA	NA	0.52 J	0.82 J	<10 J
RW-601	8/13/2009	4222.44	17.9	7.14	1.86	51	1.75	0.28 J	NA	<10
RW-601	12/1/2009	4222.15	15.0	7.32	1.60	173	2.47	0.28 J	NA	<10
RW-601	3/9/2010	4222.74	11.1	7.16	1.82	305	3.89	0.24 J	NA	<10
RW-601	6/8/2010	4223.25	16.2	7.15	1.65	149	3.61	<1.0	<1.0	<10
RW-601	8/24/2010	4222.57	17.5	7.08	1.52	632	5.33	<1.0	NA	<10
RW-601	12/2/2010	4224.29	15.3	7.18	1.43	130	5.63	0.7 J	NA	<10
RW-601	3/2/2011	4223.81	11.2	6.94	1.43	245	5.19	<1.0	NA	<10
RW-601	6/1/2011	4225.06	14.16	7.21	1.31	315	4.88	0.35 J	<1.0	<10
RW-601	8/23/2011	4223.72	17.7	6.89	1.46	304	3.89	<1.0	NA	<10
RW-601	12/7/2011	4223.78	13.2	7.10	1.46	17	3.95	<1.0	NA	<10
RW-601	3/5/2012	4223.98	12.1	7.09	1.40	91	4.30	<1.0	NA	<10
RW-601	6/5/2012	4223.77	12.48	7.14	1.36	168	3.83	<1.0	<1.0	<10
RW-601	8/21/2012	4223.08	18.61	6.99	1.29	220	4.52	<1.0	NA	<10
RW-601	12/4/2012	4222.90	15.02	7.15	1.28	302	3.30	<1.0	NA	4.6 J
RW-601	3/12/2013	4223.50	10.79	7.17	1.42	99.3	4.45	<1.0	NA	<10
RW-601	5/15/2013	4223.77	14.62	7.36	1.40	251	10.84	<1.0	<1.0	<10
RW-601	12/11/2013	4222.79	16.39	7.43	1.32	931	4.52	<1.0	<1.0	<10 HT
RW-601	1/9/2014	4222.78	15.67	7.39	1.26	270	5.18	NA	NA	6.1 J
RW-601	6/3/2014	4223.62	15.28	7.09	1.34	742	4.35	<1.0	<1.0	12
RW-601	12/5/2014	4223.01	15.82	7.32	1.34	389	5.25	<1.0	<1.0	<10 J
RW-601	5/21/2015	4232.33	15.04	7.57	1.24	285	3.47	<1.0	<1.0	<10
RW-601	12/4/2015	4223.58	16.59	7.28	1.30	399	8.04	<1.0	<1.0	<10
RW-601	6/9/2016	4223.87	15.72	7.19	1.23	439	5.27	<1.0	<1.0	<10
RW-601	12/9/2016	4223.53	14.90	7.40	1.27	331	5.59	<1.0	<1.0	<10
RW-601	6/2/2017	4224.18	14.82	7.34	1.15	416	4.35	<1.0	0.39 J	5.2 J
RW-601	12/8/2017	4223.48	14.77	7.11	1.25	965	3.49	2.5	1.8	<10 J
RW-601	6/11/2018	4223.78	15.12	7.29	1.18	46.6	4.21	0.99 J	0.78 J	<10
RW-601	12/10/2018	4223.38	13.56	6.99	1.31	252	3.00	0.85 J	1.1	<10
RW-601	5/24/2019	4224.08	12.97	7.27	1.24	142	3.48	0.82 J	0.48 J	<10
RW-601	12/11/2019	4222.93	13.89	7.07	1.26	240	4.04	1.58	<2.00	<5.00
RW-601	6/4/2020	4223.73	15.65	7.16	1.38	103	2.76	<1.00	<2.00	<5.00
RW-601	12/4/2020	4222.42	13.89	7.08	1.88	150	2.66	2.56	<2.00	<5.00

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	-	-	-	-	-	-	-	5*	1,460**	200*
RW-602	9/3/2008	4222.99	17.9	7.90	1.52	85	2.89	5,000	NT	890
RW-602	11/19/2008	4223.13	15.5	7.37	1.81	436	1.39	5,200	NT	790
Duplicate "RW-777" (from RW-602)	11/19/2008	NA	NA	NA	NA	NA	NA	4,800	NT	760
RW-602	3/5/2009	4223.47	13.4	7.42	1.73	120	0.94	5,200	NT	710
RW-602	6/9/2009	4223.59	14.9	7.29	1.77	413	1.23	5,300	560 J	740 J
RW-602	8/13/2009	4223.25	15.2	7.07	1.79	173	2.21	5,600	690	750 J
Duplicate "RW-777" (from RW-602)	8/13/2009	NA	NA	NA	NA	NA	NA	5,200	910	750 J
RW-602	12/1/2009	4222.99	13.9	7.17	1.74	251	1.05	5,200	980 J	460
Duplicate "RW-777" (from RW-602)	12/1/2009	NA	NA	NA	NA	NA	NA	4,500	1,100 J	580
RW-602	3/9/2010	4223.32	12.9	7.15	1.80	342	3.73	5,100	810	750
Duplicate "RW-777" (from RW-602)	3/9/2010	NA	NA	NA	NA	NA	NA	5,000	900	770
RW-602	6/8/2010	4224.03	17.2	7.20	1.75	227	4.72	4,700	1,200	750
RW-602	8/24/2010	4223.99	17.3	7.19	1.72	149	6.37	5,200	1,100	680
Duplicate "RW-777" (from RW-602)	8/24/2010	NA	NA	NA	NA	NA	NA	5,400	1,200	680
RW-602	12/2/2010	4224.43	12.2	7.15	1.65	>800	5.87	5,200	1,800	680
Duplicate "RW-777" (from RW-602)	12/2/2010	NA	NA	NA	NA	NA	NA	5,000	1,900	670
RW-602	3/2/2011	4224.36	13.7	7.09	1.63	595	5.93	4,300	2,100	620
Duplicate "RW-777" (from RW-602)	3/2/2011	NA	NA	NA	NA	NA	NA	4,300	2,000	600
RW-602	6/1/2011	4225.79	14.67	7.27	1.57	727	6.26	3,500	2,000	610
RW-602	8/23/2011	4224.25	16.5	7.19	1.59	244	3.49	3,800	1,800	580
Duplicate "RW-777" (from RW-602)	8/23/2011	NA	NA	NA	NA	NA	NA	4,000	2,100	590
RW-602	12/7/2011	4224.27	13.4	7.26	1.66	205	5.62	3,700	2,000	560
Duplicate "RW-777" (from RW-602)	12/7/2011	NA	NA	NA	NA	NA	NA	3,400	800	570
RW-602	3/5/2012	4224.42	14.5	7.19	1.58	324	7.92	2,900	1,700 J	560
Duplicate "RW-777" (from RW-602)	3/5/2012	NA	NA	NA	NA	NA	NA	3,400	1,600 J	460
RW-602	6/5/2012	4224.26	12.58	7.13	1.60	165	4.13	2,700	1,900	480
RW-602	8/20/2012	4223.75	18.17	6.94	1.53	210	7.33	2,800	1,800	490
Duplicate "RW-777" (from RW-602)	8/20/2012	NA	NA	NA	NA	NA	NA	2,700	1,600	520
RW-602	12/3/2012	4223.69	14.28	7.04	1.60	749	4.84	3,600	2,300	460
Duplicate "RW-777" (from RW-602)	12/3/2012	NA	NA	NA	NA	NA	NA	3,500	2,300	450
RW-602	3/11/2013	4224.23	14.45	7.17	1.60	348	6.24	3,100 J	1,700 J	470 J
Duplicate "RW-777" (from RW-602)	3/11/2013	NA	NA	NA	NA	NA	NA	3,100 J	1,900 J	460 J
RW-602	5/14/2013	4224.39	16.44	7.26	1.54	54.4	10.58	2,400	1,500	390
RW-602	12/10/2013	4223.59	14.54	7.38	1.60	319	5.56	2,500	1,000	250 HT
RW-602	1/8/2014	4223.57	14.48	7.30	1.54	216	6.28	NA	NA	380
RW-602	6/3/2014	4224.12	18.27	7.36	1.43	137	4.87	1,800	720	270 J
Duplicate "RW-777" (from RW-602)	6/3/2014	NA	NA	NA	NA	NA	NA	1,900	660	270 J
RW-602	12/4/2014	4223.79	16.32	7.21	1.48	214	4.16	1,300	400	260 J
RW-602	5/20/2015	4224.28	16.04	7.09	1.39	103	3.89	1,200	170 J	250
Duplicate "RW-777" (from RW-602)	5/20/2015	NA	NA	NA	NA	NA	NA	1,200	240	250
RW-602	12/3/2015	4224.07	15.32	7.08	1.46	54.9	5.98	1,400	74	260
RW-602	6/8/2016	4224.35	15.51	7.22	1.36	158	5.62	1,200	36	230
RW-602	12/8/2016	4224.04	14.78	7.08	1.37	139	6.50	1,200	35	210
RW-602	6/1/2017	4224.63	16.00	7.41	1.33	285	3.03	1,000	28	190
RW-602	12/7/2017	4223.97	15.58	7.20	1.32	279	2.35	1,100	36	180 J
RW-602	6/11/2018	4224.21	16.42	7.10	1.26	3.22	2.42	740	22	160
Duplicate "RW-777" (from RW-602)	6/11/2018	NA	NA	NA	NA	NA	NA	810	20	160
RW-602	12/10/2018	4223.98	14.60	7.13	1.33	85.9	3.24	880	32	140
RW-602	5/23/2019	4224.69	13.02	7.45	1.30	401	5.27	730	32	140
RW-602	12/10/2019	4223.72	15.18	7.01	1.30	113	7.35	674 -	30.8	116
RW-602	6/3/2020	4223.96	17.13	6.84	1.33	1.54	4.97	477 -	25.2	107
RW-602	12/3/2020	4223.11	15.47	7.14	1.27	252	3.33	451	31.2	75.7 J
Duplicate "RW-777" (from RW-602)	12/3/2020	NA	NA	NA	NA	NA	NA	453	28.2	96.2 J

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	-	-	-	-	-	-	5*	1,460**	200*
RW-603	9/3/2008	4225.09	17.8	7.78	1.93	869	1.06	2,700	NT	2,100
RW-603	11/19/2008	4224.97	17.0	6.94	2.19	209	1.71	3,200	NT	1,900
RW-603	3/5/2009	4225.28	13.3	7.06	2.09	66	1.95	3,300	NT	1,800 J
RW-603	6/9/2009	4225.42	15.5	7.04	2.16	387	1.48	2,000	53 J	1,500 J
RW-603	8/13/2009	4225.09	15.9	6.92	2.19	386	3.14	3,000	55	1,700 J
RW-603	12/1/2009	4224.70	14.5	6.90	2.13	196	2.93	4,500	120 J	1,400
RW-603	3/9/2010	4224.88	13.3	6.86	2.04	103	4.02	2,400	37	1,500
RW-603	6/8/2010	4226.25	16.2	7.00	2.09	212	5.85	1,300	27	1,800
RW-603	8/24/2010	4227.01	18.1	7	2.04	>800	8.02	1,100	15	1,500
RW-603	12/2/2010	4225.91	12.4	7.09	1.92	711	4.65	1,400	19	1,400
RW-603	3/2/2011	4225.80	13.4	6.96	1.94	792	8.09	1,800	33	1,000
RW-603	6/1/2011	4227.73	14.47	7.00	2.05	381	6.13	820	16	1,300
RW-603	8/23/2011	4225.85	16.1	7.02	1.97	61	5.31	1,700	29	1,500
RW-603	12/7/2011	4225.75	13.6	6.99	1.96	199	6.20	2,000	19	1,300
RW-603	3/5/2012	4225.84	13.9	6.70	1.96	386	7.18	2,900	22 J	1,600
RW-603	6/5/2012	4225.71	12.92	6.93	1.99	193	6.84	2,500	52	1,700
RW-603	8/20/2012	4225.40	17.77	6.83	1.95	213	10.20	3,200	37	1,700
RW-603	12/3/2012	4225.36	14.37	6.95	2.13	150	5.46	3,100	36	1,200
RW-603	3/11/2013	4225.98	14.31	7.01	2.03	677	6.47	2,300 J	32 J	1,300 J
RW-603	5/14/2013	4225.89	17.19	7.06	2.06	76.9	12.24	2,200	48	1,200
RW-603	12/10/2013	4225.27	15.01	7.12	2.06	112	7.15	3,300	25	830 HT
RW-603	1/8/2014	4225.26	14.91	7.08	1.95	262	6.49	NA	NA	1,400
RW-603	6/3/2014	4225.65	18.19	6.92	1.90	150	6.52	2,600	34	1,400 J
RW-603	12/4/2014	4225.40	16.72	7.01	1.98	19.7	6.23	3,300	71	1,400 J
RW-603	5/20/2015	4225.94	15.98	7.02	1.87	109	4.51	3,200	50	1,300
RW-603	12/3/2015	4225.42	15.26	6.86	2.01	110	8.37	5,100	61	1,100
RW-603	6/8/2016	4225.67	17.05	6.88	1.88	74.5	5.02	3,700	38	1,500
RW-603	12/8/2016	4225.38	15.49	6.93	1.91	178	6.21	4,600	54	1,300
RW-603	6/1/2017	4226.01	17.41	7.29	1.93	140	5.98	2,300	35	1,200
RW-603	12/7/2017	4225.36	15.83	6.87	1.93	36.2	3.39	4,000	88	1400 J
RW-603	6/11/2018	4225.60	17.48	6.74	1.85	67.3	8.66	2,100	25	1,200
RW-603	12/10/2018	4225.31	14.92	7.04	1.97	126	4.16	1,600	47	1,300
RW-603	5/23/2019	4226.24	13.33	7.24	1.93	240	5.14	1,700	27	1,100
RW-603	12/10/2019	4225.27	15.09	6.88	1.96	49.7	5.83	2,630 ~	49.2	1,420 [2] J
RW-603	6/3/2020	4225.40	16.32	6.82	2.00	115	3.38	1,800	22.8	1,560
RW-603	12/3/2020	4224.70	13.68	6.82	1.92	42.7	3.68	3,300 ~	36.7	1250 J

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	-	-	-	-	-	-	5*	1,460**	200*
RW-604	9/3/2008	4222.94	14.8	7.65	1.12	803	2.82	78	NT	32
Duplicate "RW-777" (from RW-604)	9/3/2008	NA	NA	NA	NA	NA	NA	82	NT	36
RW-604	11/19/2008	4222.77	14.4	7.50	1.37	369	4.26	68	NT	29
RW-604	3/5/2009	4223.05	13.1	7.52	1.29	>999	1.31	64	NT	24
Duplicate "RW-777" (from RW-604)	3/5/2009	NA	NA	NA	NA	NA	NA	65	NT	25
RW-604	6/9/2009	4223.09	14.0	7.36	1.29	142	3.01	54	6.6 J	27 J
RW-604	8/13/2009	4222.48	16.4	6.86	1.28	113	0.87	68	8.8	25 J
RW-604	12/1/2009	4222.51	13.6	7.26	1.29	260	0.90	68	9.5 J	24
RW-604	3/9/2010	4222.78	13.9	7.26	1.43	138	2.80	80	8.0	39
RW-604	6/8/2010	4223.57	14.8	7.21	1.41	307	2.98	90	8.8	48
RW-604	8/24/2010	4223.68	15.1	7.16	1.47	798	3.64	110	9	43
RW-604	12/2/2010	4223.78	13.3	7.00	1.45	41	5.43	95	11	52
RW-604	3/2/2011	4223.85	13.6	7.11	1.51	145	8.14	80	9.6	48
RW-604	6/1/2011	4225.18	15.39	7.19	1.51	245	3.80	67	5.5	57
RW-604	8/23/2011	4223.78	16.0	7.11	1.53	35	3.32	150	8.1	60
RW-604	12/7/2011	4223.78	14.0	7.13	1.67	21	4.84	250	7.8	90
RW-604	3/6/2012	4223.94	13.5	7.19	1.67	27	7.00	610	5.3 J	140
RW-604	6/5/2012	4223.86	13.28	7.16	1.62	28.1	4.39	1,200	9.8	190
RW-604	8/20/2012	4223.26	17.08	7.12	1.53	23	6.28	1,600	10	220 J
RW-604	12/3/2012	4223.30	13.34	7.21	1.49	11.4	6.12	2,600	34	240
RW-604	3/12/2013	4223.80	14.42	7.40	1.44	31.7	4.13	2,800	120	260
RW-604	5/14/2013	4223.93	15.44	7.30	1.51	93.7	6.93	2,800	110	260
RW-604	12/11/2013	4223.01	14.50	7.39	1.84	159	3.28	1,400	340	140 HT
Duplicate "RW-777" (from RW-604)	12/11/2013	NA	NA	NA	NA	NA	NA	1,700	370	130 HT
RW-604	1/8/2014	4223.00	14.39	7.30	1.78	897	6.72	NA	NA	170
Duplicate "RW-777" (from RW-604)	1/8/2014	NA	NA	NA	NA	NA	NA	NA	NA	160
RW-604	6/3/2014	4223.64	15.78	7.38	1.85	415	3.85	600	630	120
RW-604	12/4/2014	4223.29	15.61	7.21	1.98	46.5	5.93	420	1,000	150 J
Duplicate "RW-777" (from RW-604)	12/4/2014	NA	NA	NA	NA	NA	NA	400	990	140 J
RW-604	5/20/2015	4223.87	14.99	7.23	1.90	45.7	5.07	340	610	120
RW-604	12/3/2015	4223.53	14.66	7.10	2.03	805	4.89	260	130	160
Duplicate "RW-777" (from RW-604)	12/3/2015	NA	NA	NA	NA	NA	NA	260	140	150
RW-604	6/8/2016	4223.80	15.58	7.25	1.94	57.8	3.24	210	36	140
RW-604	12/8/2016	4223.49	14.78	7.06	2.03	52.3	3.00	200	20	150
Duplicate "RW-777" (from RW-604)	12/8/2016	NA	NA	NA	NA	NA	NA	210	25	150
RW-604	6/1/2017	4224.01	15.36	7.27	2.05	64.1	3.39	410	11	200
RW-604	12/7/2017	4223.34	14.48	6.81	2.09	70.0	3.26	700	15	210 J
RW-604	6/11/2018	4223.58	16.00	7.03	1.95	55.9	3.58	1,100	32	250
RW-604	12/10/2018	4223.43	14.82	7.24	1.82	77.9	2.92	2,400	18	290
Duplicate "RW-777" (from RW-604)	12/10/2018	NA	NA	NA	NA	NA	NA	2,400	18	300
RW-604	5/23/2019	4224.20	14.06	7.34	1.62	170	3.21	2,700	21	290
RW-604	12/10/2019	4223.21	15.07	7.04	1.63	80.1	9.16	2,970 ~	93.6	411
RW-604	6/3/2020	4223.31	16.61	6.46	1.73	208	4.08	2,460	92.6	454 [1] J
Duplicate "RW-777" (from RW-604)	6/3/2020	NA	NA	NA	NA	NA	NA	2,570 ~	106	452
RW-604	12/3/2020	4222.52	14.14	7.16	1.66	28.3	4.84	2,470	223	222 [1] J

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American Barrel Site

Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	-	-	-	-	-	-	-	5*	1,460**	200*
RW-605	9/3/2008	4223.62	17.8	7.98	2.55	249	1.13	7,800	NT	1,400
RW-605	11/19/2008	4223.70	16.0	7.51	2.59	683	2.41	6,800	NT	1,400
RW-605	3/6/2009	4223.90	13.1	7.29	2.53	350	1.51	6,500	NT	1,400
RW-605	6/9/2009	4224.00	15.8	7.35	2.53	334	1.64	6,400	3,300 J	1,300 J
RW-605	8/13/2009	4223.76	17.6	7.08	2.53	35	1.08	7,200	2,700	1,400 J
RW-605	12/1/2009	4223.46	14.3	7.16	2.52	64	1.31	6,000	3,400 J	1,300
RW-605	3/9/2010	4223.68	12.9	7.21	2.64	221	3.77	7,900	3,600	1,500
RW-605	6/8/2010	4224.46	16.3	7.28	2.46	109	4.25	6,000	3,800	1,500
RW-605	8/24/2010	4224.64	16.2	7.2	2.62	191	5.35	5,900	2,900	1,500
RW-605	12/2/2010	4224.50	14.0	7.02	2.51	236	4.87	5,500	3,700	1,400
RW-605	3/2/2011	4224.61	13.2	7.20	2.55	238	6.70	6,600	3,400	1,400
RW-605	6/1/2011	4226.15	15.64	7.27	2.53	144	5.87	7,000	3,500	1,700
RW-605	8/23/2011	4224.56	16.0	7.23	2.53	36	3.71	9,000	4,900	1,500
RW-605	12/7/2011	4224.5	13.1	7.24	2.50	124	5.43	6,500	2,900	1,400
RW-605	3/5/2012	4224.61	13.8	7.24	2.39	342	8.75	7,100	2,900 J	1,400
RW-605	6/5/2012	4224.50	13.38	7.23	2.40	193	5.27	8,500	4,700	1,300
RW-605	8/20/2012	4224.14	17.90	7.12	2.29	204	8.66	7,100	3,600	1,200
RW-605	12/3/2012	4224.05	14.21	7.34	2.42	118	5.23	8,400	5,100	1,100
RW-605	3/11/2013	4224.56	14.20	7.32	2.40	77	5.99	8,300 J	5,000 J	1100 J
RW-605	5/14/2013	4224.62	16.18	7.30	2.34	27.2	10.94	8,400	5,100	1,100
RW-605	12/10/2013	4223.93	13.82	7.36	2.51	181	6.41	7,800	4,200	560 HT
RW-605	1/8/2014	4223.92	14.99	7.32	2.42	119	5.46	NA	NA	1,100
RW-605	6/3/2014	4224.41	17.62	7.12	2.28	87.5	13.54	6,100	4,000	940
RW-605	12/4/2014	4224.15	16.08	7.23	2.36	104	4.72	5,000	5,200	920 J
RW-605	5/20/2015	4224.64	16.01	7.28	2.21	139	3.81	5,000	5,800	760
RW-605	12/3/2015	4224.27	15.82	7.31	2.29	99.2	6.99	5,300	4,800	830
RW-605	6/9/2016	4224.54	16.50	7.25	2.14	84.3	6.16	4,900	3,700	810
RW-605	12/8/2016	4224.24	15.69	7.10	2.16	157	3.32	5,900	4,600	460
RW-605	6/1/2017	4224.77	16.06	7.18	2.16	187	3.20	4,900	4,200	690
RW-605	12/7/2017	4224.14	16.12	7.08	2.13	23.0	2.21	5,300	4,800	690 J
RW-605	6/11/2018	4224.43	17.68	7.09	2.09	17.7	3.65	3,900	2,900	660
RW-605	12/10/2018	4224.18	14.96	7.18	2.21	18.3	2.23	5,600	4,800	720
RW-605	5/23/2019	4224.96	13.85	7.47	2.13	184	5.62	5,100	3,800	760
RW-605	12/10/2019	4224.05	15.90	7.13	2.21	17.9	4.89	5,760	4,200	884
RW-605	6/3/2020	4224.20	16.56	7.06	2.30	20.5	2.75	5,170 [1] J	2,720 [1] J	1,050
RW-605	12/3/2020	4223.54	14.16	7.09	2.27	118	2.81	6,080	3,570	764 J
RW-606	12/4/2015	4227.57	17.09	7.16	1.48	22.6	4.54	<1.0	<1.0	<10
RW-606	6/8/2016	4228.49	17.46	7.22	1.89	175	6.72	<1.0	<1.0	<10
RW-606	12/9/2016	4226.79	16.11	7.17	2.71	58.5	6.08	<1.0	<1.0	8.6 J
RW-606	6/2/2017	4229.36	15.72	7.08	2.17	>1000	9.97	<1.0	<1.0	7.2 J
RW-606	12/7/2017	4226.12	14.62	7.09	3.27	795	10.06	<1.0	<1.0	9.1 JJ
RW-606	6/11/2018	4228.22	21.21	7.04	2.44	285	6.22	<1.0	0.37 J	<10
RW-606	12/10/2018	4226.12	13.82	6.76	3.38	761	2.92	<1.0	<1.0	<10
RW-606	5/23/2019	4229.15	13.92	6.84	2.84	893	7.04	<1.0	<1.0	<10
RW-606	12/10/2019	4226.60	14.13	7.34	3.91	>1000	8.30	<1.00	<2.00	18.3 [1] J
RW-606	6/3/2020	4227.11	22.52	7.15	3.81	327	9.19	<1.00	<2.00	22.5
RW-606	12/3/2020	4225.95	14.86	6.92	3.83	>1000	7.09	<1.00	<2.00	19.8 J
RW-607	12/4/2015	4223.94	17.89	7.16	1.45	806	3.29	310	37	50
RW-607	6/9/2016	4224.24	18.84	7.22	1.34	681	5.60	200	18	59
RW-607	12/9/2016	4224.27	16.34	7.31	1.18	650	3.94	100	5.7	21
RW-607	6/2/2017	4224.70	18.14	7.37	0.53	864	8.65	<1.0	0.94 J	24
RW-607	12/8/2017	4223.82	17.24	7.06	1.12	212	1.69	66	3.1	20 J
RW-607	6/11/2018	4224.05	16.50	7.24	1.91	131	2.76	39	2.2	71
RW-607	12/11/2018	4223.72	17.05	7.20	5.21	118	3.61	21	2.8	33
RW-607	5/24/2019	4223.49	13.41	7.80	1.56	119	4.16	10	1.4	110
RW-607	12/11/2019	4223.41	15.45	6.99	1.43	61.8	2.79	17.9	4.50	18.5
RW-607	6/4/2020	4223.83	15.99	7.42	0.787	227.0	5.84	<1.00	<2.00	14.0
RW-607	12/4/2020	4222.77	16.66	7.11	1.19	260	1.70	10.0	2.58	26.2 J

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Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	5*	1.460**	200*
Trip Blank	3/20/2008	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	6/26/2008	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	9/3/2008	NA	NA	NA	NA	NA	NA	ND	NT	NA
Trip Blank	11/19/2008	NA	NA	NA	NA	NA	NA	<1	NT	NA
Trip Blank	3/5/2009	NA	NA	NA	NA	NA	NA	<1	NT	NA
Trip Blank	6/9/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	8/13/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/1/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	3/9/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	6/8/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	8/24/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/2/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	3/2/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank [1]	6/1/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank [2]	6/9/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	8/23/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/7/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	3/5/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0 J	NA
Trip Blank	8/21/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/3/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	3/11/2013	NA	NA	NA	NA	NA	NA	<1.0 J	<1.0 J	NA
Trip Blank	5/14/2013	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/10/2013	NA	NA	NA	NA	NA	NA	0	<1.0	0
Trip Blank	6/3/2014	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/4/2014	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	5/21/2015	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/4/2015	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	6/9/2016	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/8/2016	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	6/2/2017	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/8/2017	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	6/11/2018	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/11/2018	NA	NA	NA	NA	NA	NA	NA	NA	NA
Trip Blank	5/23/2019	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Trip Blank	12/11/2019	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA
Trip Blank	6/4/2020	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA
Trip Blank	12/4/2020	NA	NA	NA	NA	NA	NA	<1.00	<2.00	NA

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American Barrel Site

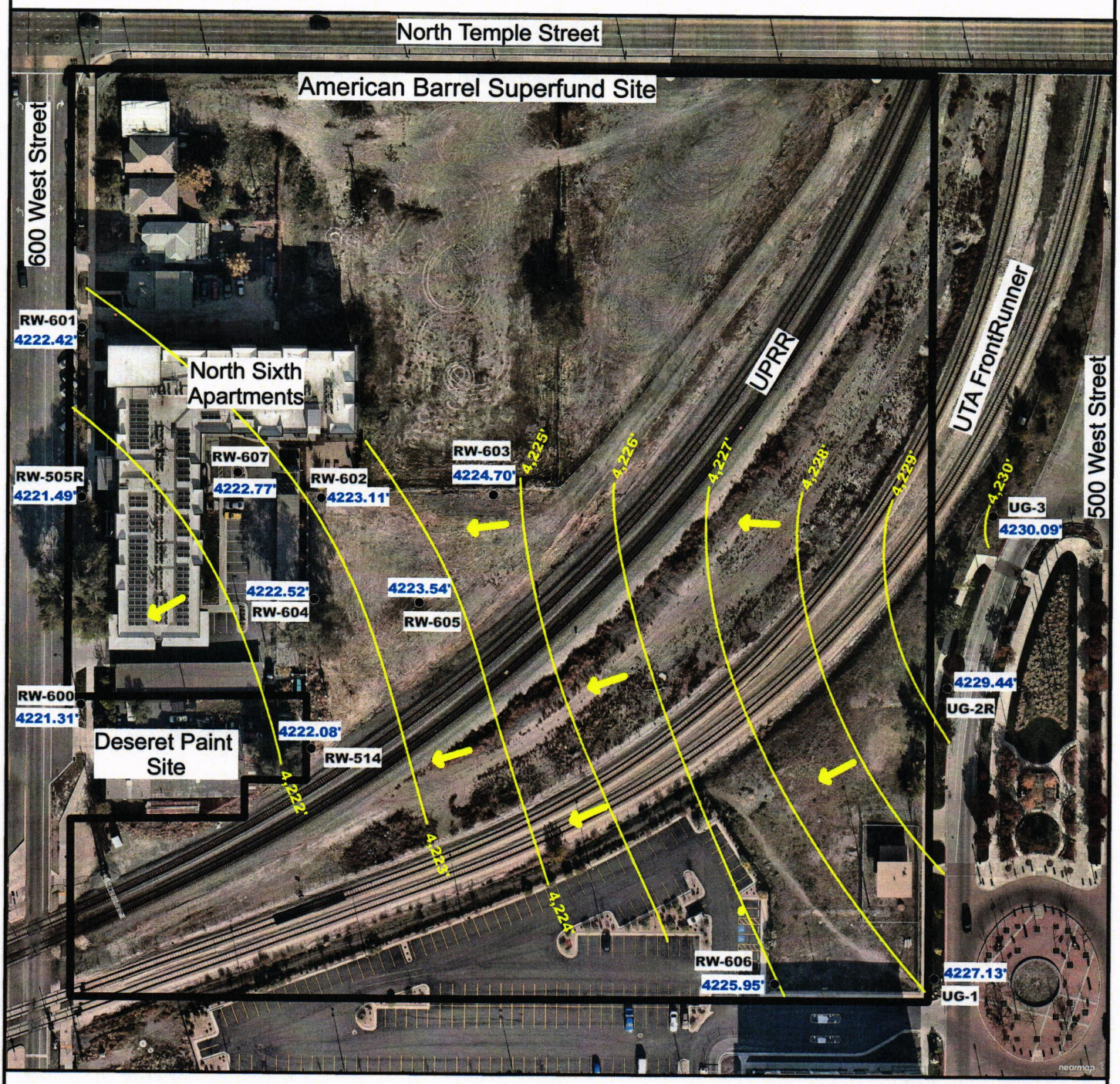
Table 3. Historical Groundwater Field Parameters, Benzene, Naphthalene and Cyanide Concentrations; 2008-Present

Well / Sample Identification:	Sample Date	Field Parameters						Contaminants of Concern		
		Groundwater elevation (ft-AMSL)	Temperature (°C)	pH (standard units)	Specific Conductance (mS/cm)	Turbidity (NTU)	Dissolved Oxygen (mg/L)	Benzene (µg/L) EPA 8260C	Naphthalene (µg/L) EPA 8260C	Cyanide (µg/L) EPA 9012A
Remediation Level	--	--	--	--	--	--	--	5*	1.460**	200*
Field Blank	3/20/2008	NA	NA	NA	NA	NA	NA	ND	NT	ND
Field Blank	6/26/2008	NA	NA	NA	NA	NA	NA	ND	NT	28
Field Blank	9/3/2008	NA	NA	NA	NA	NA	NA	ND	NT	ND
Field Blank	11/19/2008	NA	NA	NA	NA	NA	NA	<!	NT	<10
Field Blank	3/5/2009	NA	NA	NA	NA	NA	NA	<1	NT	<10
Field Blank	6/9/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	NA
Field Blank	8/13/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/1/2009	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	3/9/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	6/8/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	8/24/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/2/2010	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	3/2/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	6/1/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	8/23/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/7/2011	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	3/5/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0 J	<10
Field Blank	6/5/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	8/20/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/3/2012	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	3/11/2013	NA	NA	NA	NA	NA	NA	<1.0 J	<1.0 J	<10 J
Field Blank	5/14/2013	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/11/2013	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10 HT
Field Blank	1/9/2014	NA	NA	NA	NA	NA	NA	NA	NA	<10
Field Blank	6/3/2014	NA	NA	NA	NA	NA	NA	NA	NA	9.6 J
Field Blank	12/4/2014	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	5/20/2015	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/4/2015	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	6/9/2016	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/9/2016	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	6/1/2017	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/8/2017	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10 J
Field Blank	6/11/2018	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/11/2018	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	5/24/2019	NA	NA	NA	NA	NA	NA	<1.0	<1.0	<10
Field Blank	12/11/2019	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
Field Blank	6/4/2020	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00
Field Blank	12/3/2020	NA	NA	NA	NA	NA	NA	<1.00	<2.00	<5.00

Key:

ft-AMSL = Feet above mean sea level
NM = Not measured
NA = Not analyzed or Not applicable
ND = Not detected
NT = Not detected, and not tabulated for the respective quarter's dataset
* = Maximum Contaminant Level (MCL)
** = Exposure Level (EL), as calculated in the initial risk assesment for the site
[1] = Matrix Spike recovery indicates matrix interference. The method is in control as indicated by the LCS.
[2] = Analyte concentration is too high for accurate matrix spike recovery and/or RPD.
[#] = High RPD due to low analyte concentration. In this range, high RPDs are expected.
[~] = The reporting limits were raised due to high analyte concentrations.

< = Not Detected above the PQL(for Benzene, Naphthalene, and Cyanide)
BOLD = Contaminant detected above Remediation Level (RL)
BOLD = Compound detected above analytical reporting limit
HT = Run out of Holding Time, Resampled January 2014
J = Please refer to respective dataset for flag definitions
J = Please refer to respective data vaildation report for flag definitions



N
W
E
S

RW-505R
4223.36'

Monitoring Well Locations
with potentiometric surface elevations

Potentiometric Surface Elevation Contour
(1 foot contour interval)

Groundwater Flow Direction

BARR

PacifiCorp
American Barrel Site
2nd Semi-Annual 2020
Groundwater Monitoring Report

Figure 1

Groundwater Potentiometric Surface Contour Map
Measured on December 3-4, 2020

Figure 2: Hydrographs for Upgradient Wells UG-1, UG-2R, and UG-3

Note that UG-2 was discovered damaged on December 10, 2013; As a result water levels were not collected from this well in December 2013 and January 2014. Well UG-2 was replaced on 1/20/14 with Well UG-2R. For graphing purposes well UG-2 data has been included with well UG-2R

Figure 3: Boundary Well RW-505R
Benzene in Groundwater Trends 2008-Present

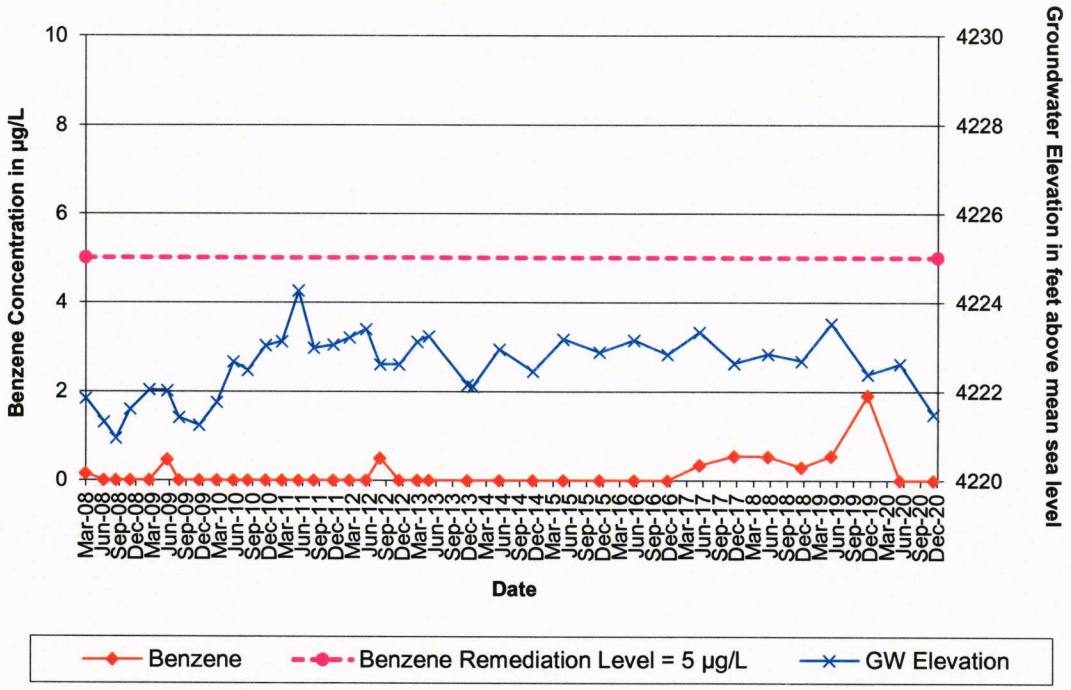


Figure 4: Boundary Well RW-505R
Naphthalene in Groundwater Trends 2009-Present

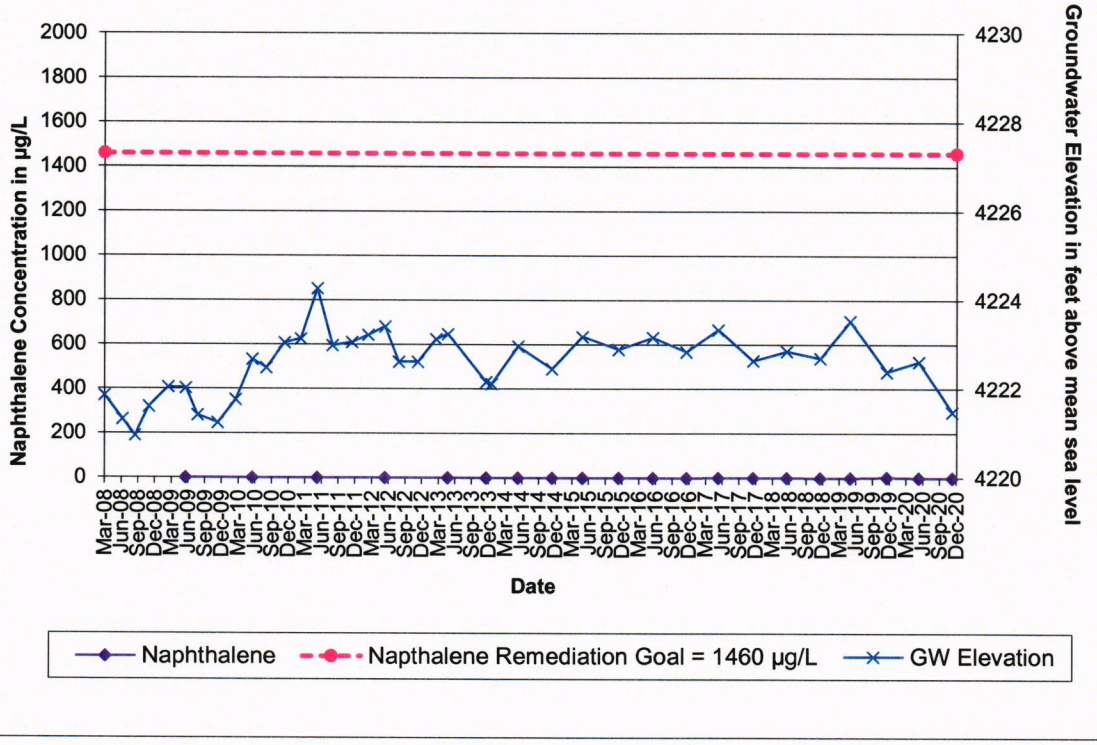


Figure 5: Boundary Well RW-505R
Cyanide in Groundwater Trends 2008-Present

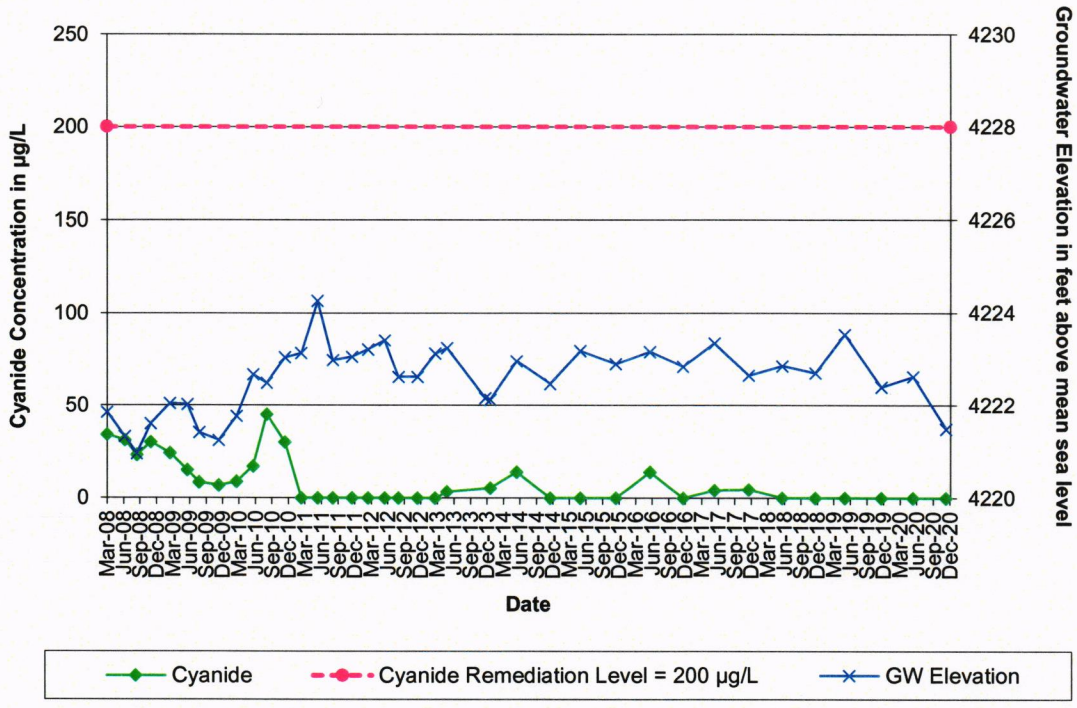


Figure 6: Boundary Well RW-600
Benzene in Groundwater Trends 2008-Present

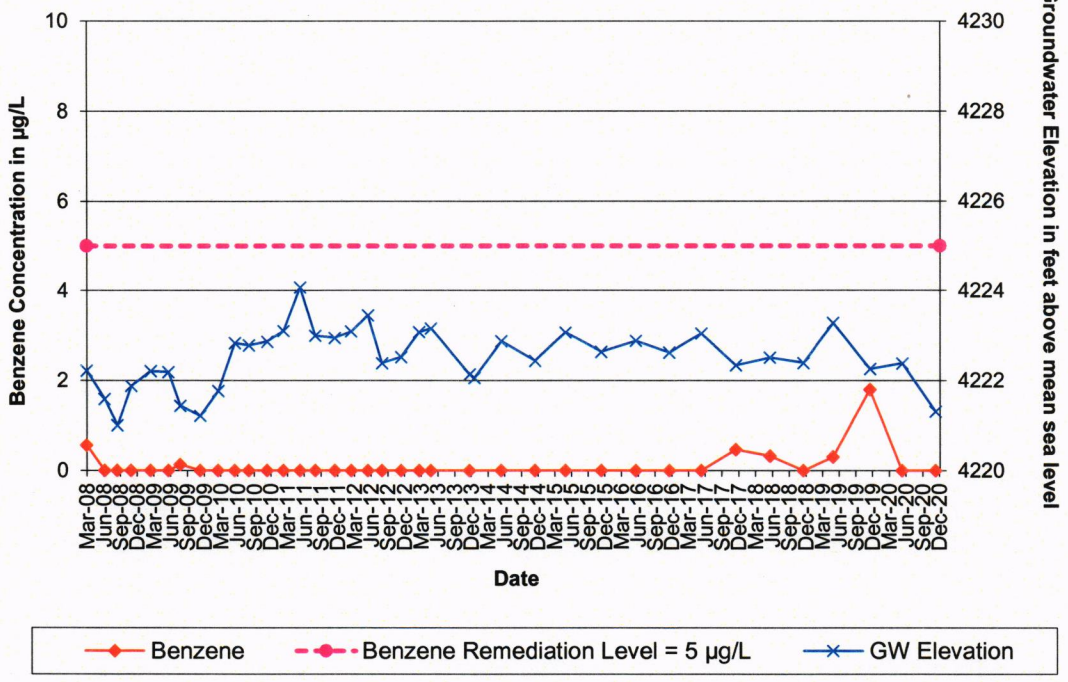
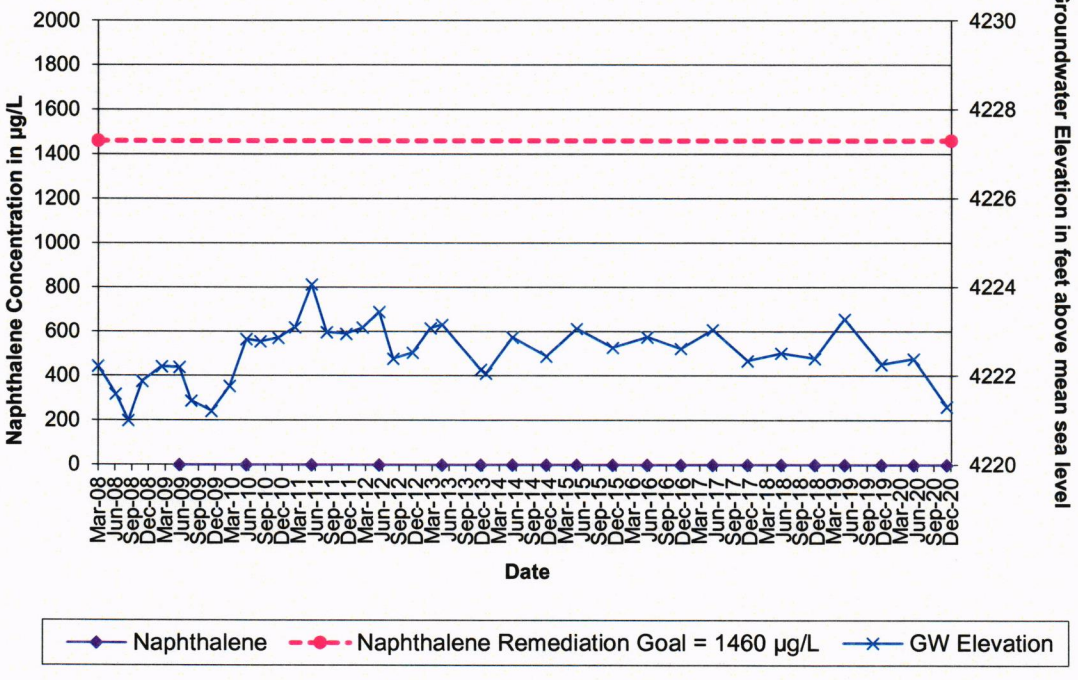


Figure 7: Boundary Well RW-600
Naphthalene in Groundwater Trends 2009-Present



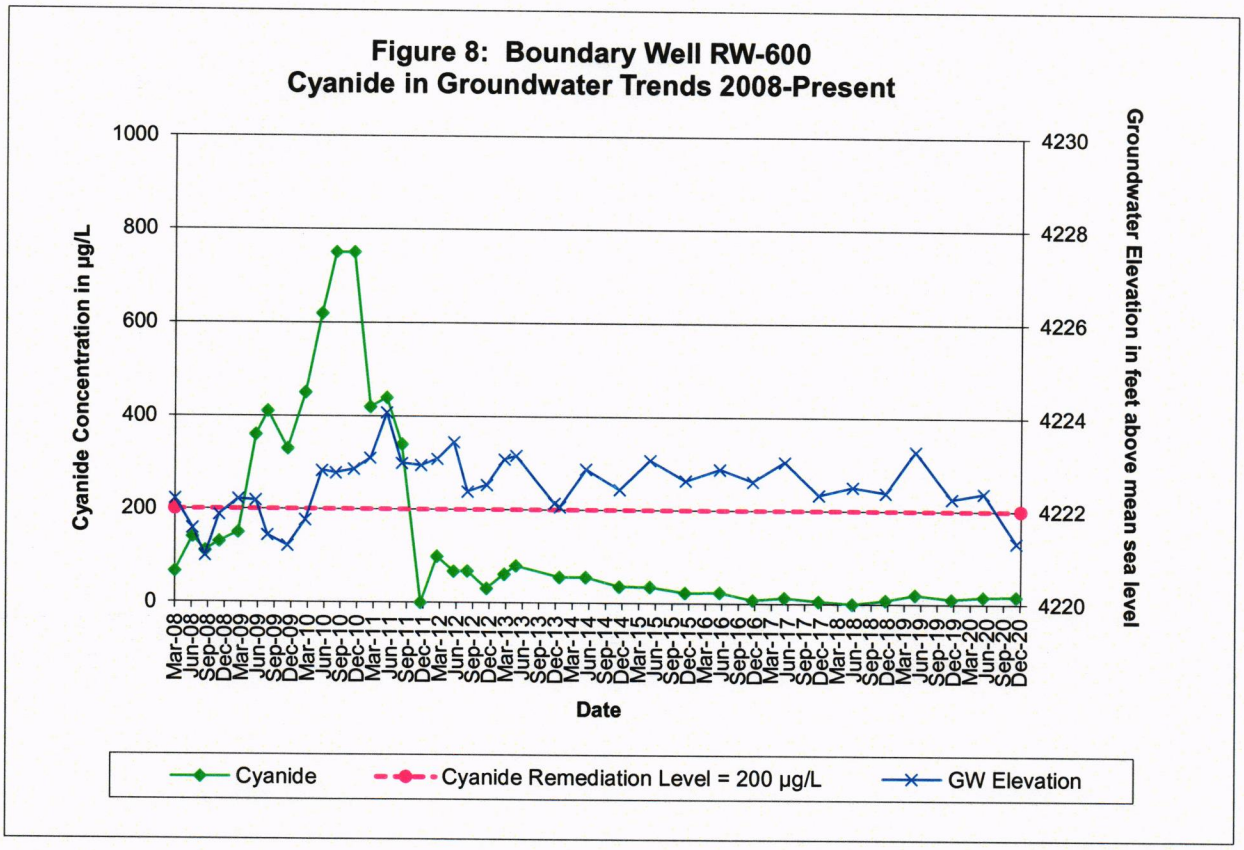


Figure 8: Boundary Well RW-600
Cyanide in Groundwater Trends 2008-Present
Cyanide Concentration in µg/L
Groundwater Elevation in feet above mean sea level
1000
800
600
400
200
0
4230
4228
4226
4224
4222
4220
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
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Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
Dec-20
Date
Cyanide
Cyanide Remediation Level = 200 µg/L
GW Elevation

Figure 9: Boundary Well RW-601
Benzene in Groundwater Trends 2008-Present

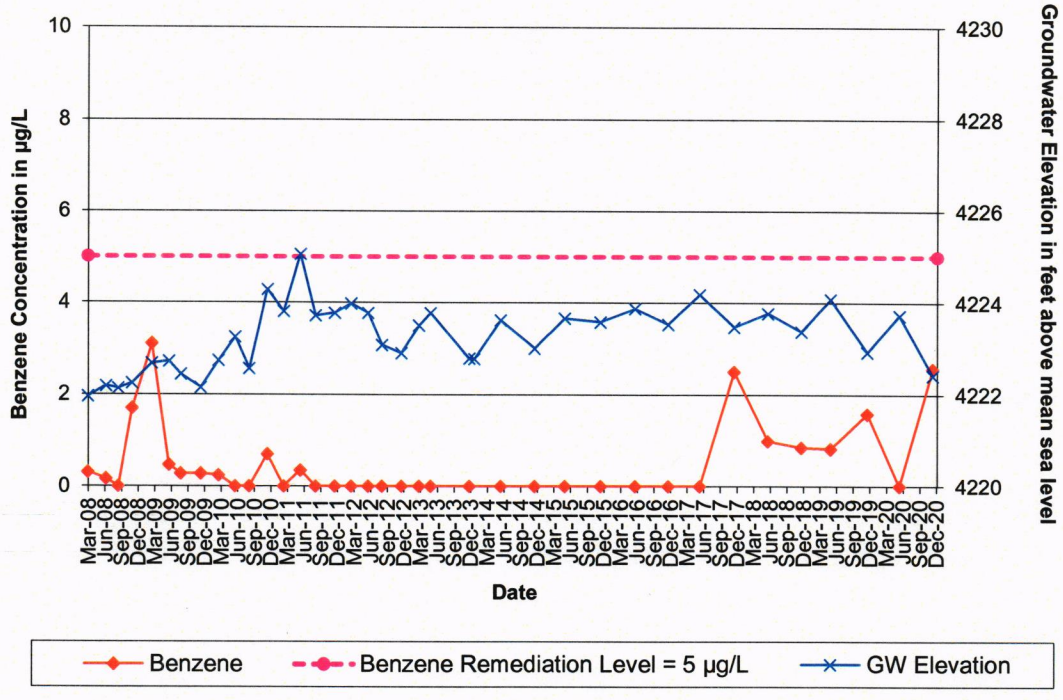


Figure 10: Boundary Well RW-601
Naphthalene in Groundwater Trends 2009-Present

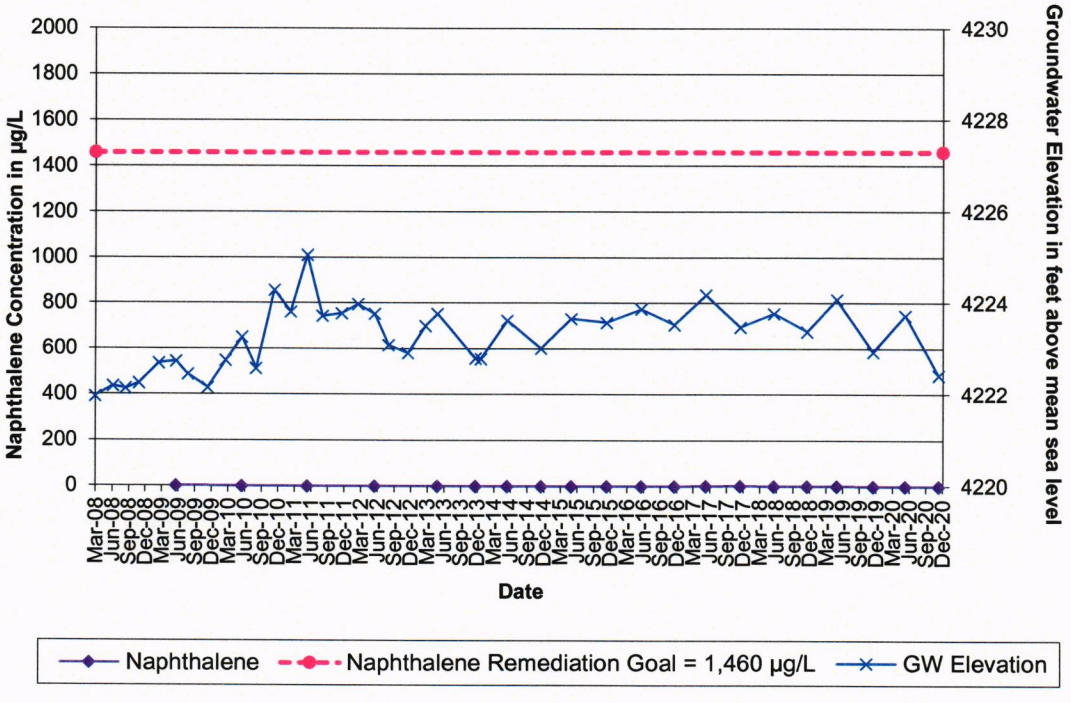


Figure 11: Boundary Well RW-601
Cyanide in Groundwater Trends 2008-Present

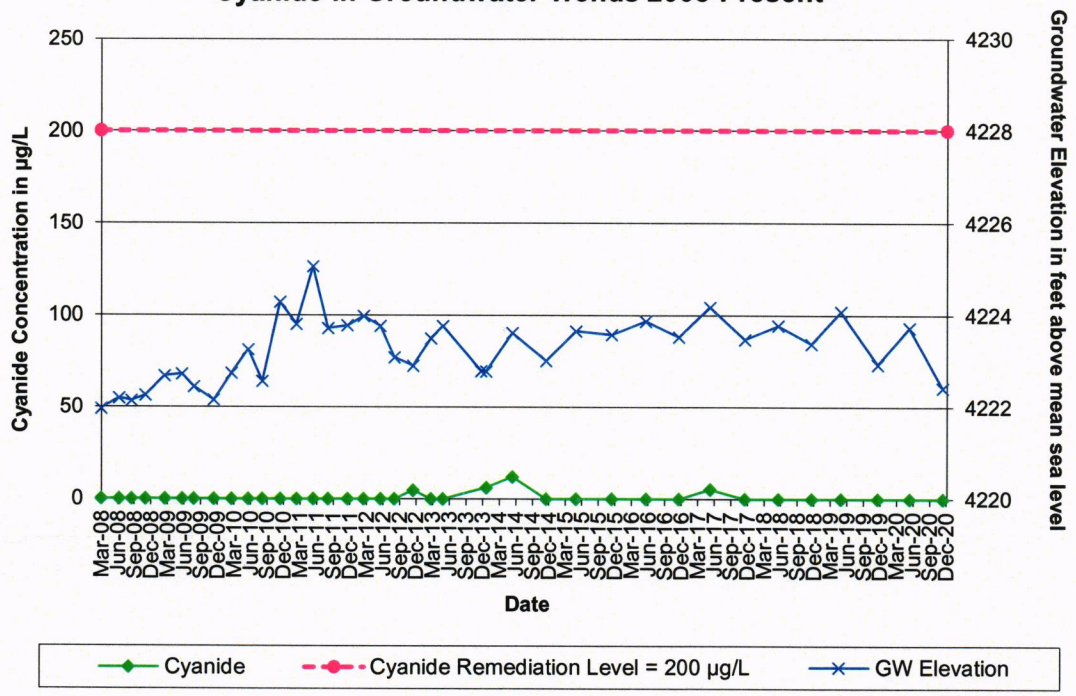


Figure 12: Boundary Well RW-606
Benzene in Groundwater Trends 2015-Present

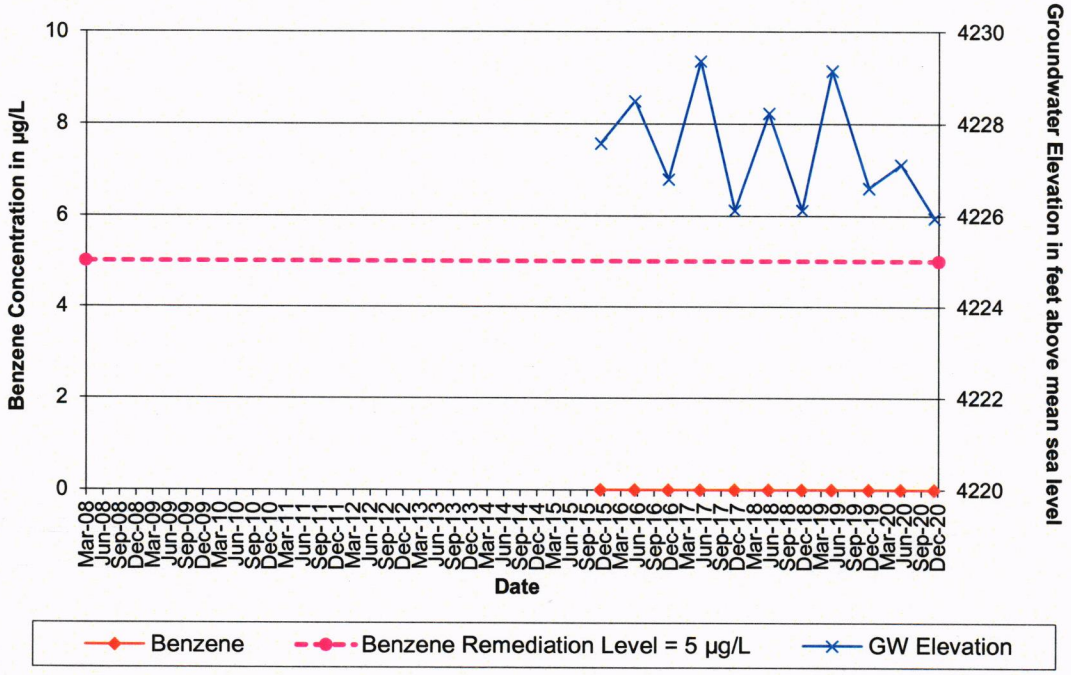
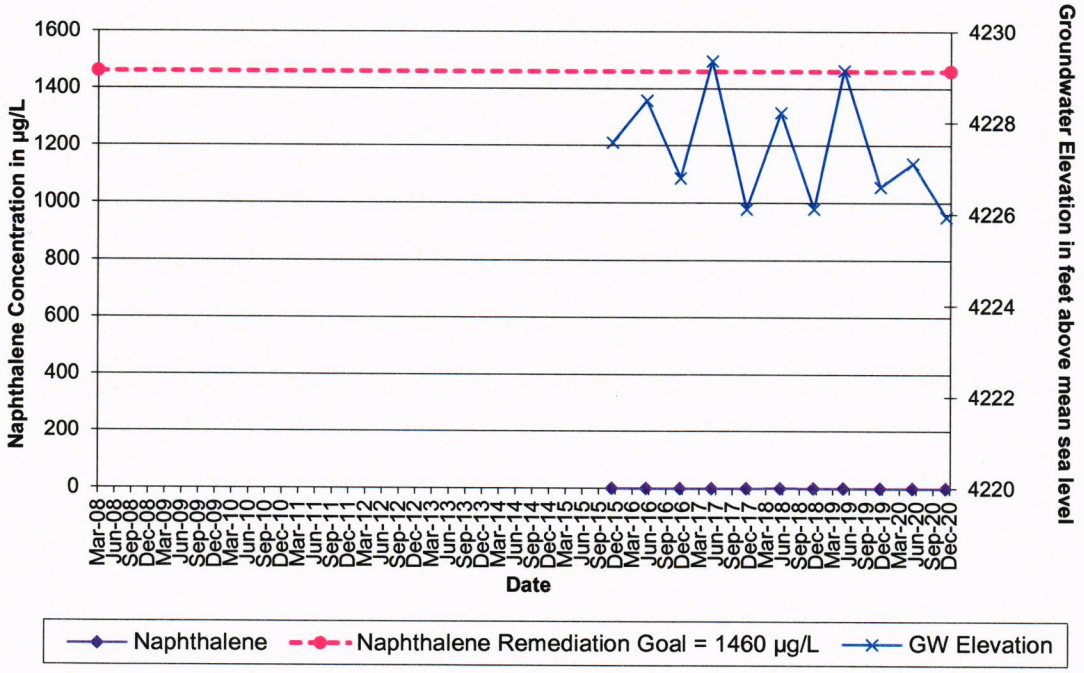


Figure 13: Boundary Well RW-606
Naphthalene in Groundwater Trends 2015-Present



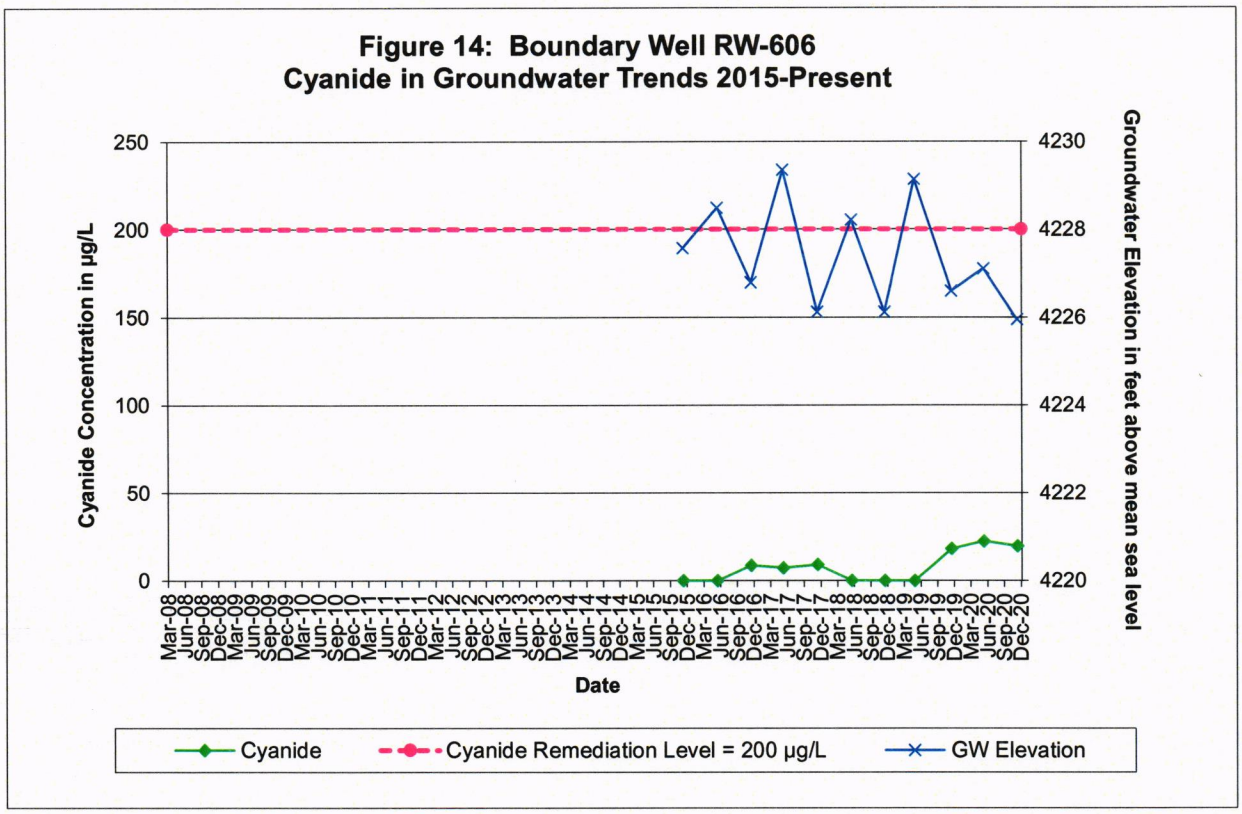


Figure 14: Boundary Well RW-606
Cyanide in Groundwater Trends 2015-Present
Cyanide Concentration in µg/L
Groundwater Elevation in feet above mean sea level
250
200
150
100
50
0
4230
4228
4226
4224
4222
4220
Mar-08
Jun-08
Sep-08
Dec-08
Mar-09
Jun-09
Sep-09
Dec-09
Mar-10
Jun-10
Sep-10
Dec-10
Mar-11
Jun-11
Sep-11
Dec-11
Mar-12
Jun-12
Sep-12
Dec-12
Mar-13
Jun-13
Sep-13
Dec-13
Mar-14
Jun-14
Sep-14
Dec-14
Mar-15
Jun-15
Sep-15
Dec-15
Mar-16
Jun-16
Sep-16
Dec-16
Mar-17
Jun-17
Sep-17
Dec-17
Mar-18
Jun-18
Sep-18
Dec-18
Mar-19
Jun-19
Sep-19
Dec-19
Mar-20
Jun-20
Sep-20
Dec-20
Date
Cyanide
Cyanide Remediation Level = 200 µg/L
GW Elevation

Figure 15: Onsite Well RW-514
Benzene in Groundwater Trends 2013-Present

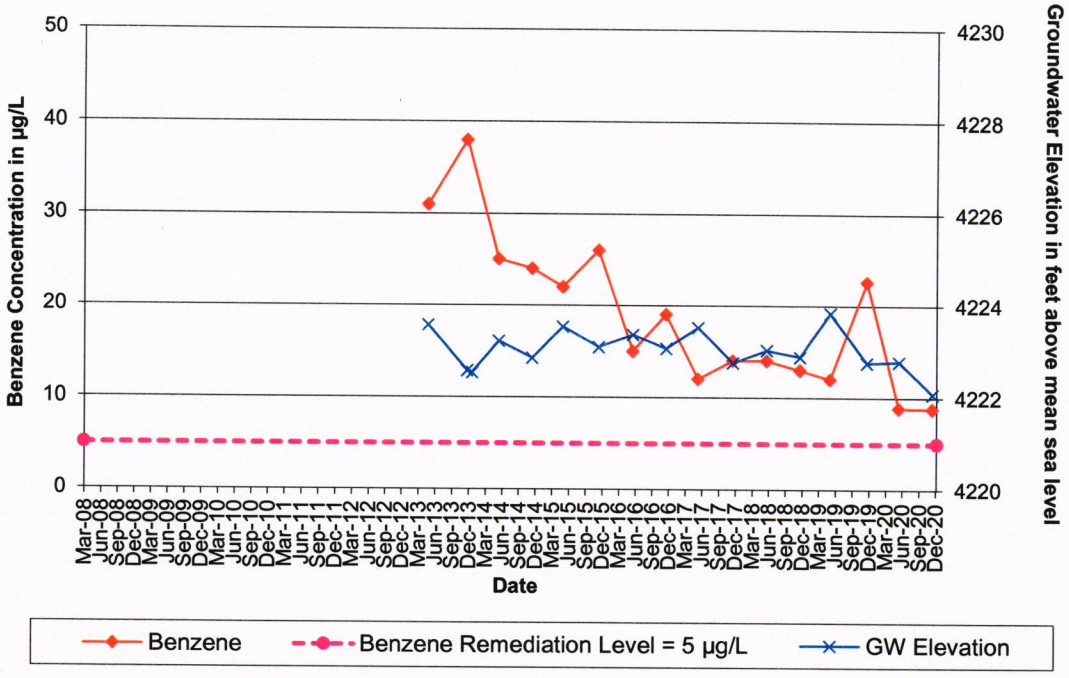


Figure 16: Onsite Well RW-514
Naphthalene in Groundwater Trends 2013-Present

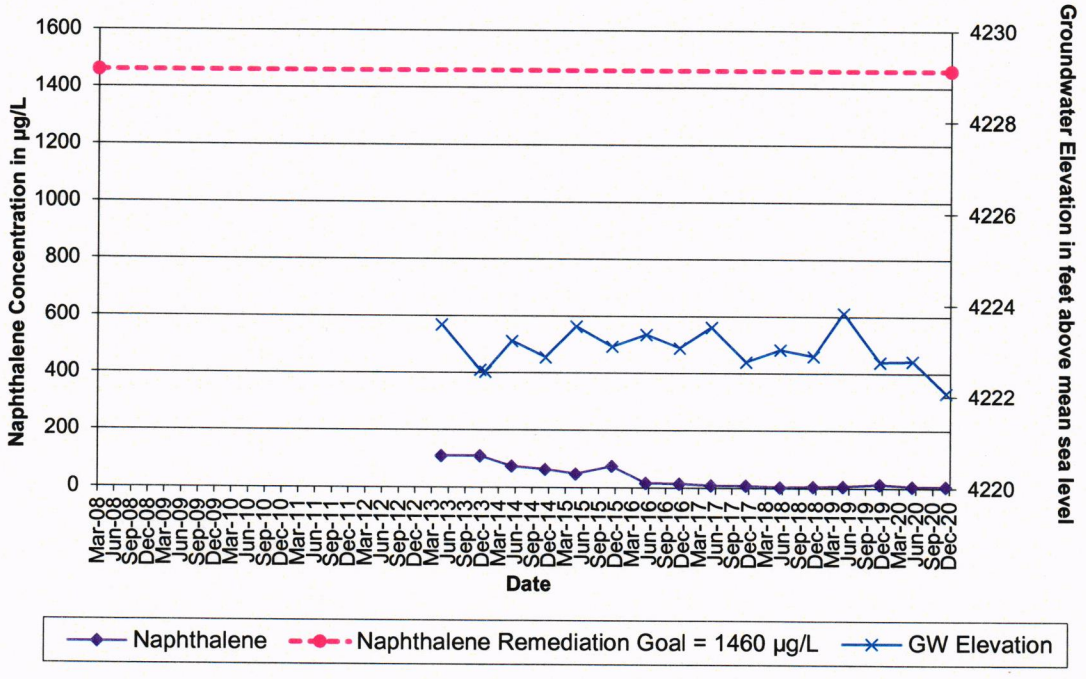


Figure 17: Onsite Well RW-514
Cyanide in Groundwater Trends 2013-Present

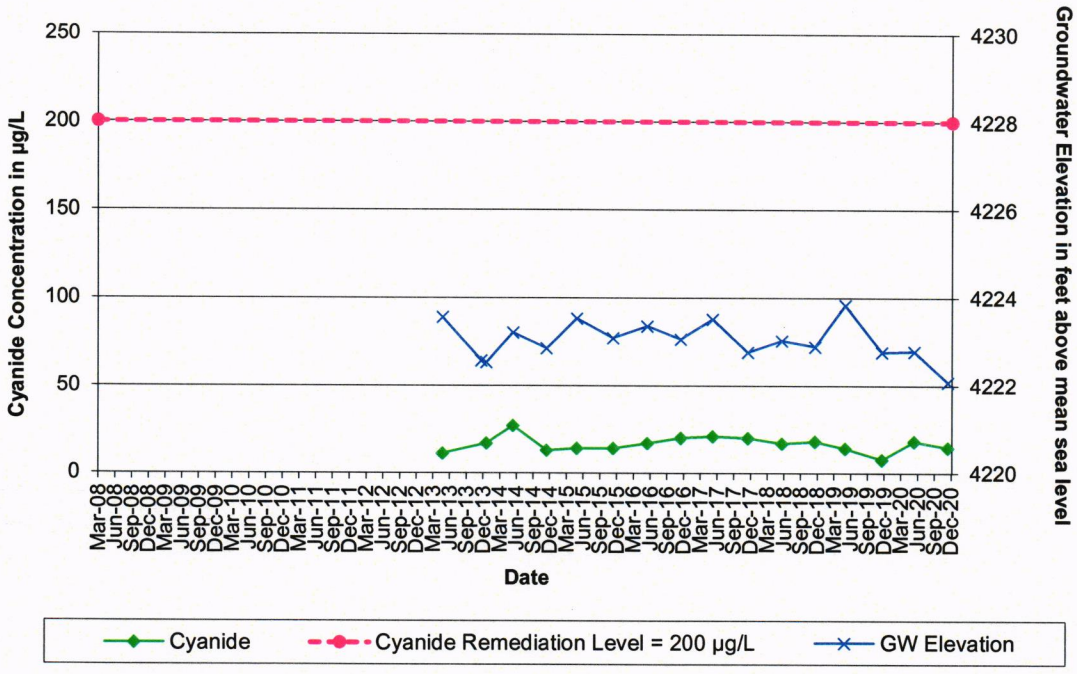


Figure 18: Onsite Well RW-607
Benzene in Groundwater Trends 2015-Present

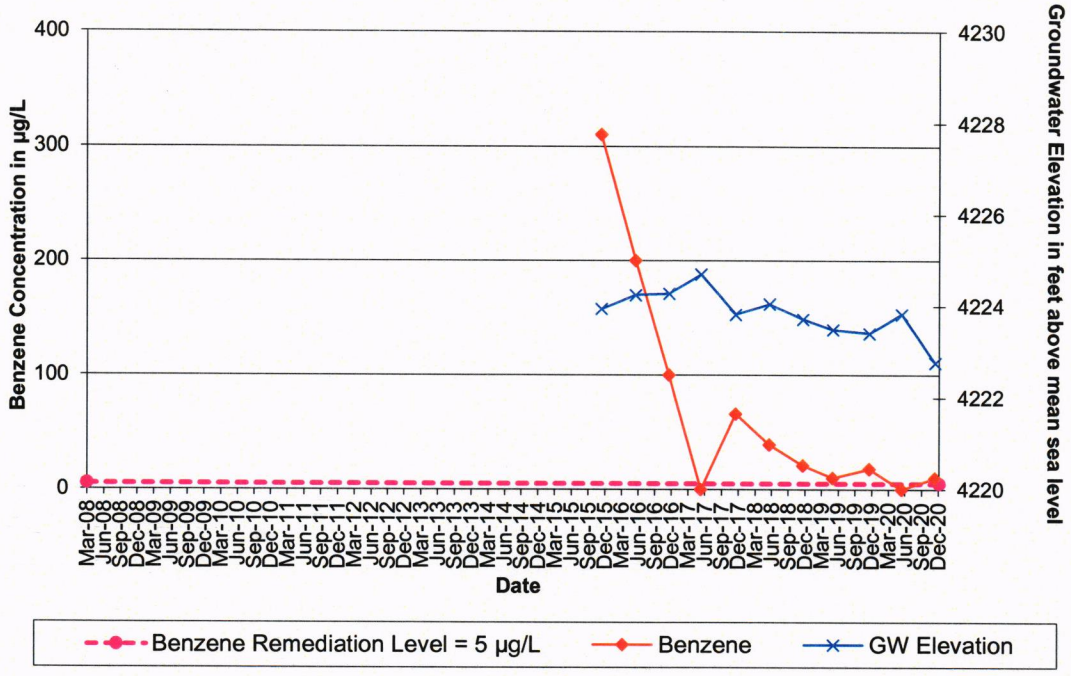


Figure 19: Onsite Well RW-607
Naphthalene in Groundwater Trends 2015-Present

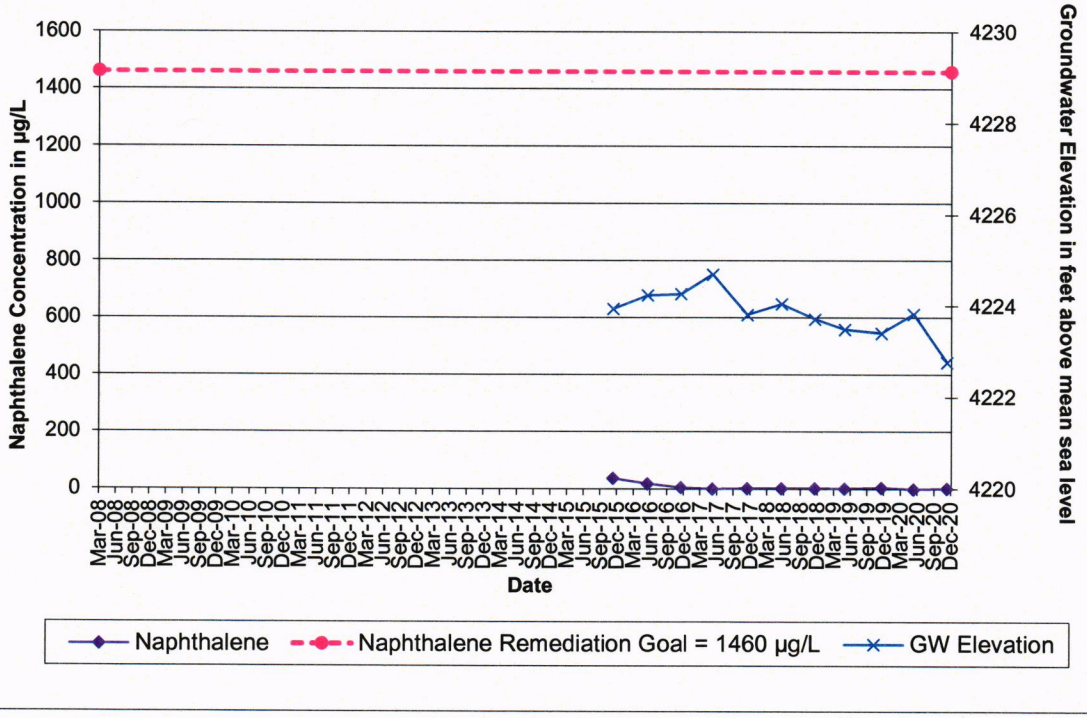


Figure 20: Onsite Well RW-607
Cyanide in Groundwater Trends 2015-Present

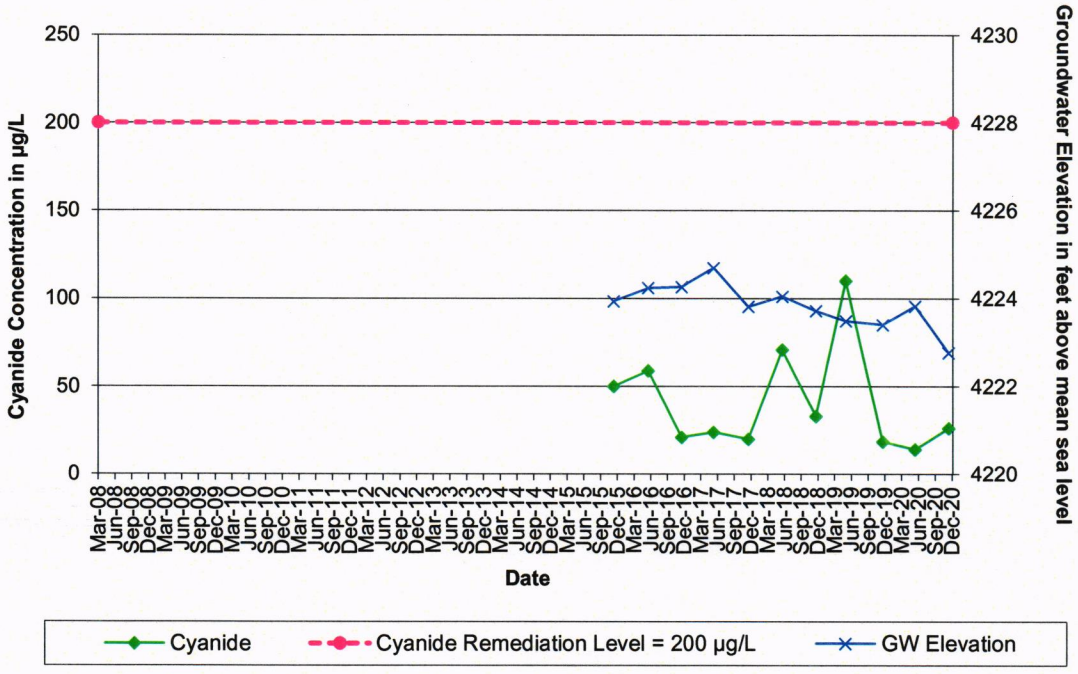


Figure 21: Source Well RW-602
Benzene in Groundwater Trends 2008-Present

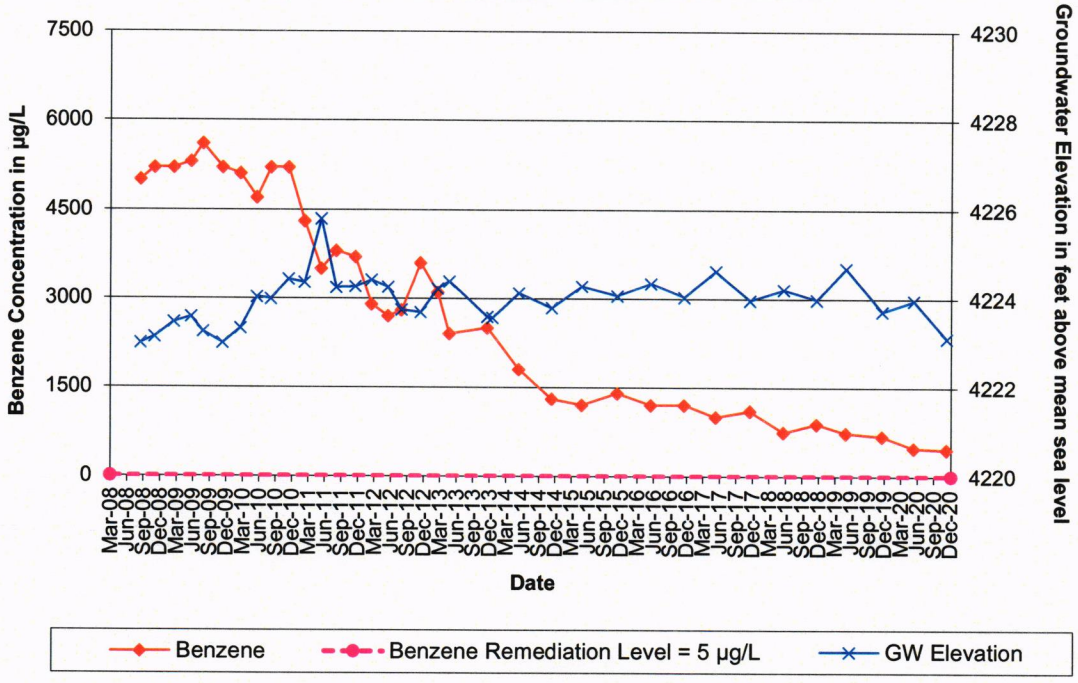


Figure 22: Source Well RW-602
Naphthalene in Groundwater Trends 2009-Present

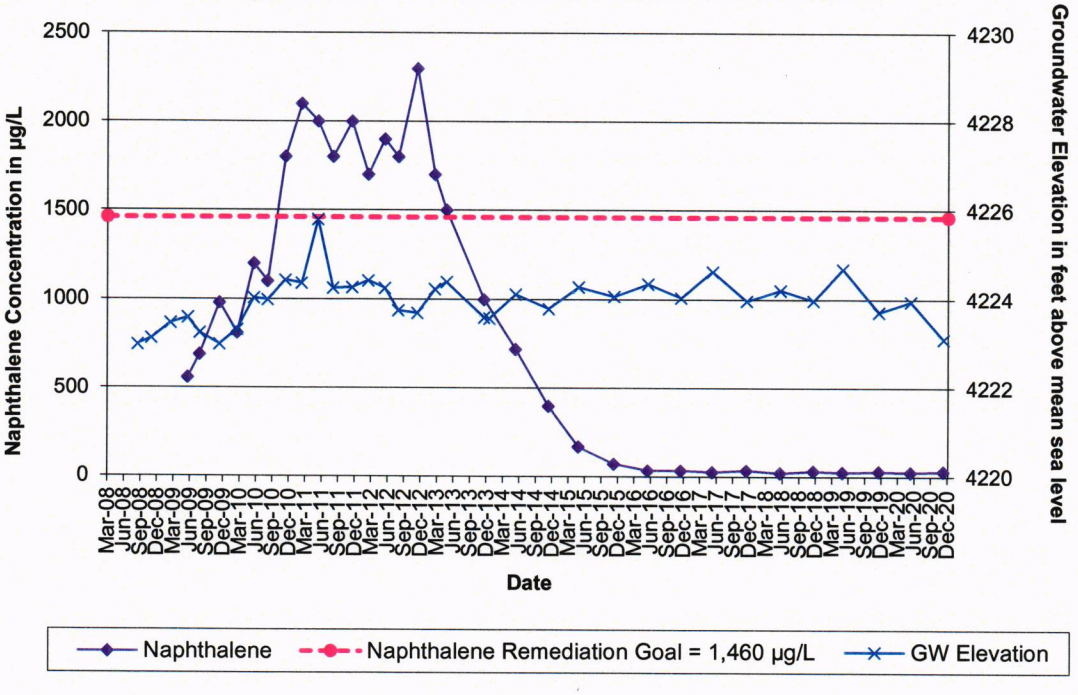


Figure 23: Source Well RW-602
Cyanide in Groundwater Trends 2008-Present

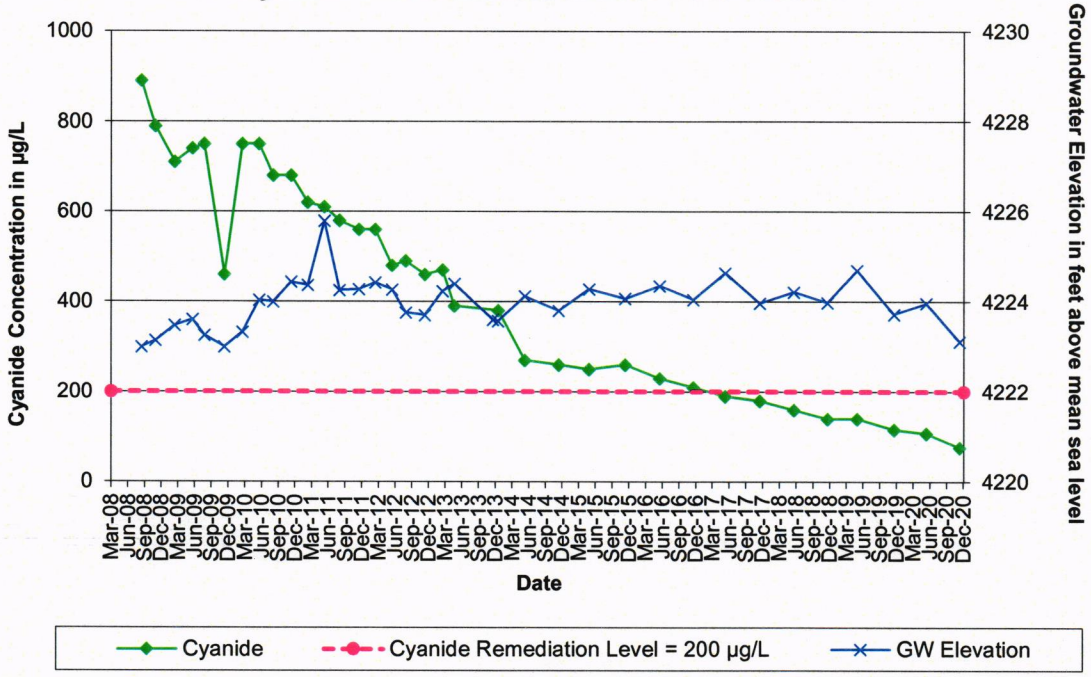


Figure 24: Source Well RW-603
Benzene in Groundwater Trends 2008-Present

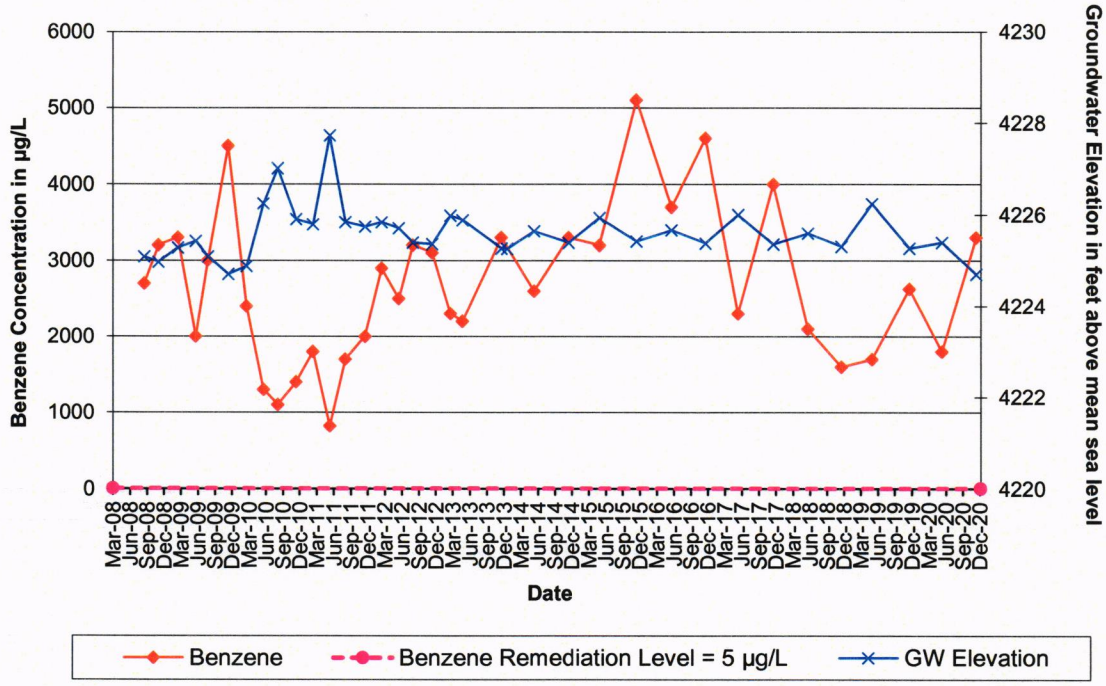


Figure 25: Source Well RW-603
Naphthalene in Groundwater Trends 2009-Present

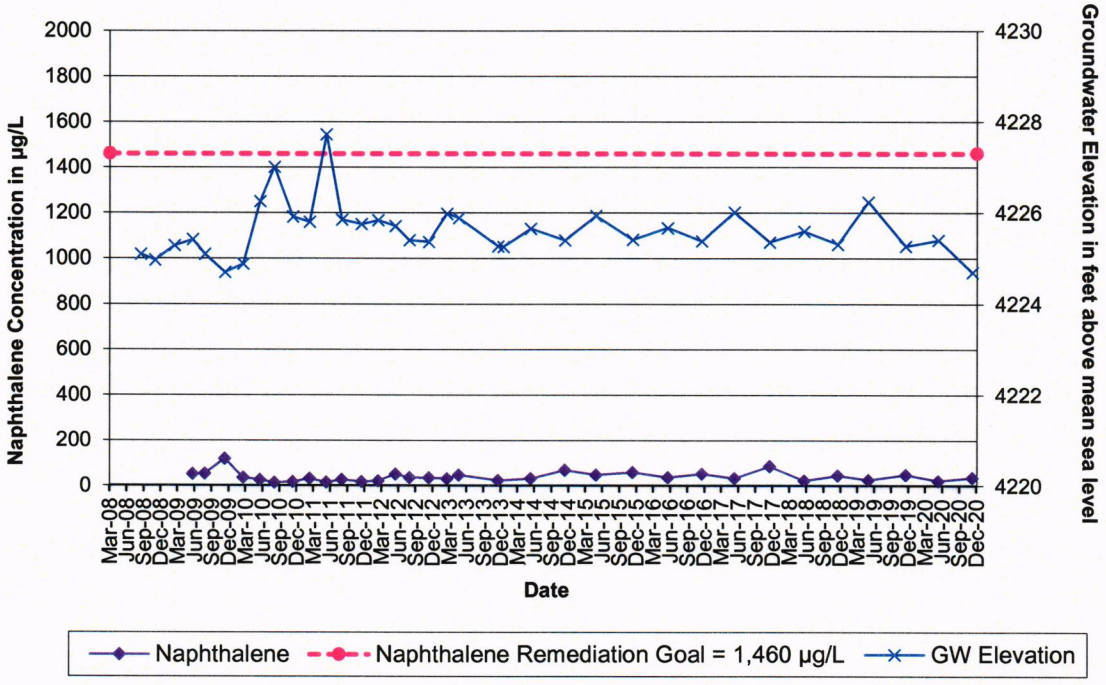


Figure 26: Source Well RW-603
Cyanide in Groundwater Trends 2008-Present

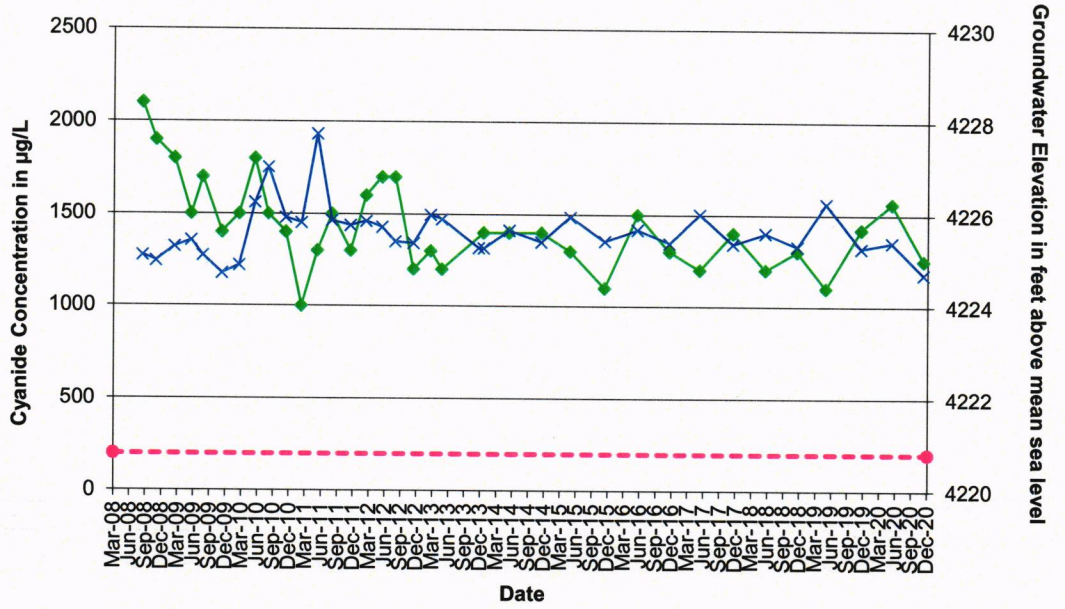


Figure 27: Source Well RW-604
Benzene in Groundwater Trends 2008-Present

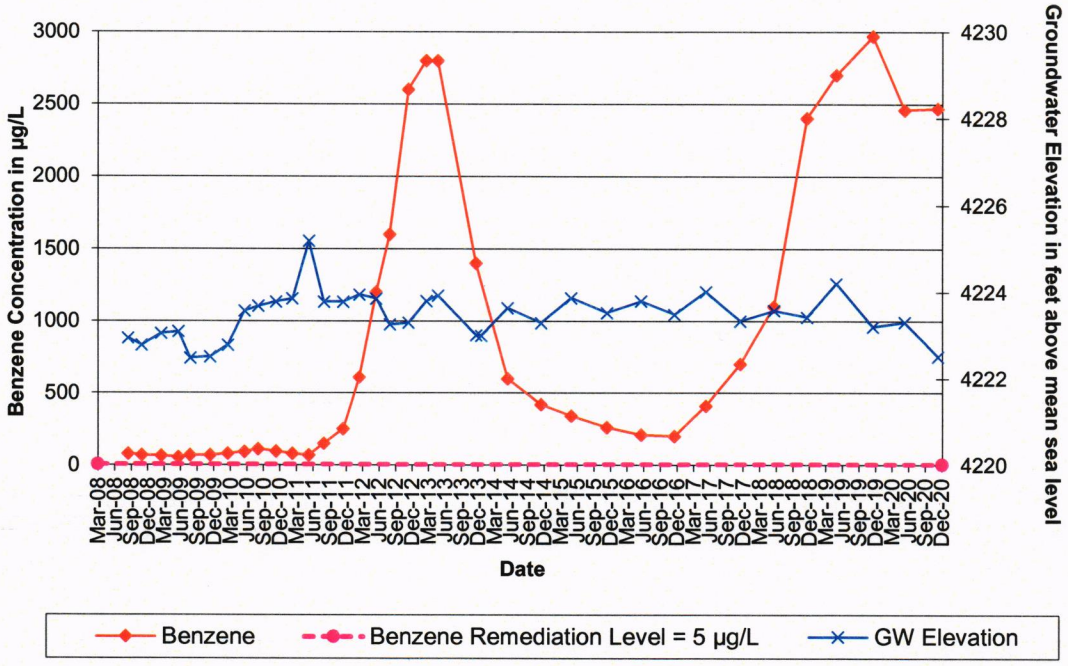


Figure 28: Source Well RW-604
Naphthalene in Groundwater Trends 2009-Present

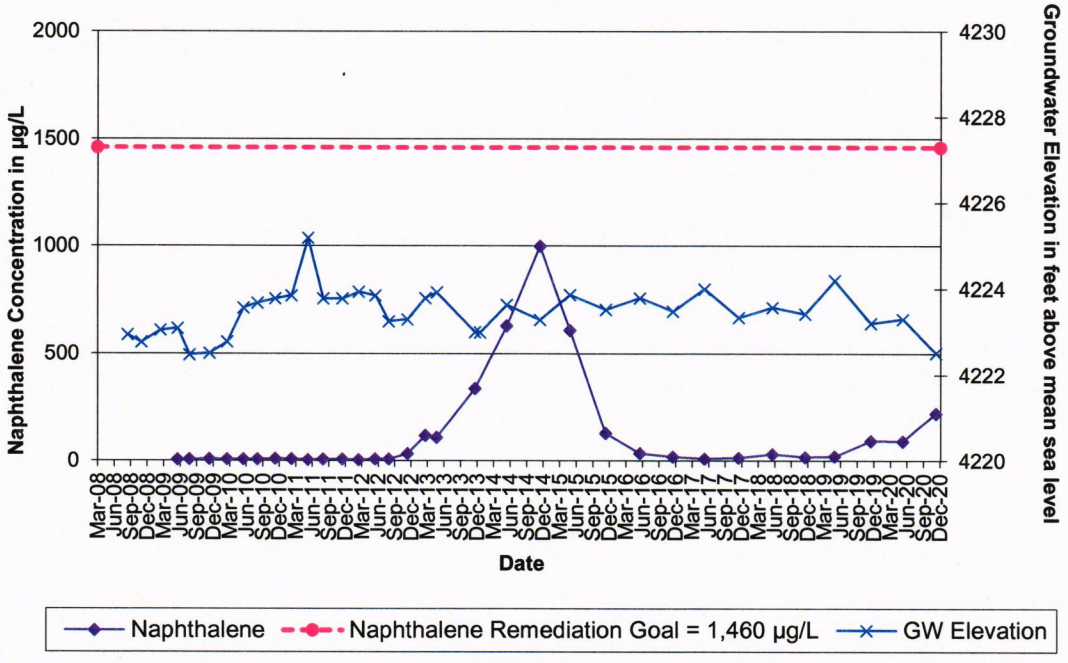


Figure 29: Source Well RW-604
Cyanide in Groundwater Trends 2008-Present

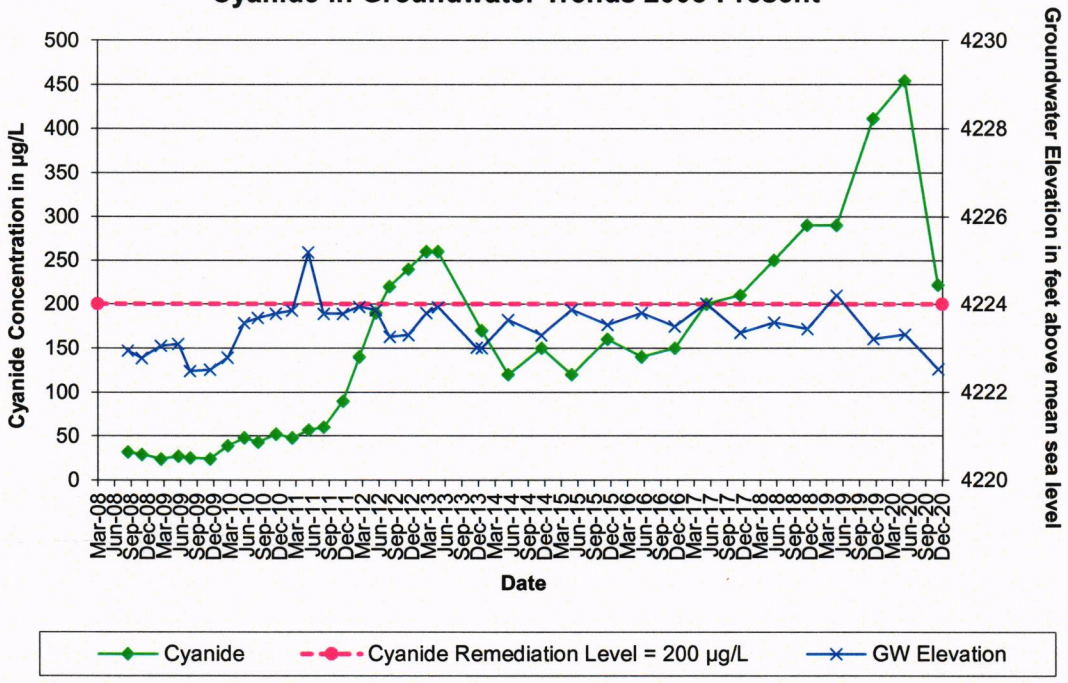


Figure 30: Source Well RW-605
Benzene in Groundwater Trends 2008-Present

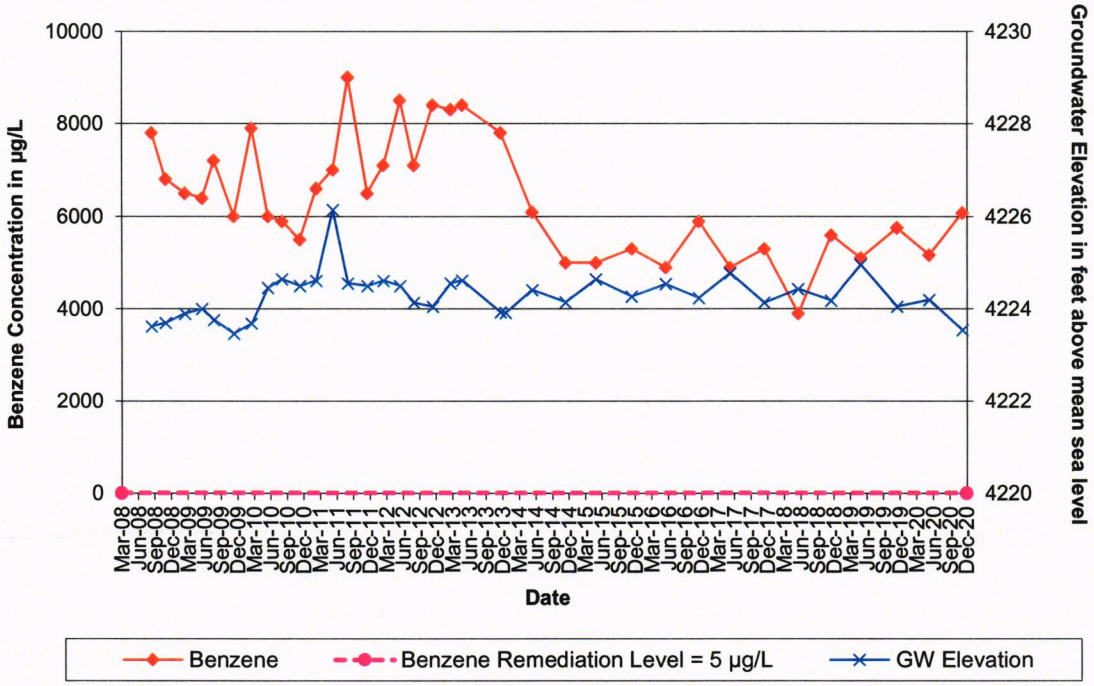


Figure 31: Source Well RW-605
Naphthalene in Groundwater Trends 2009-Present

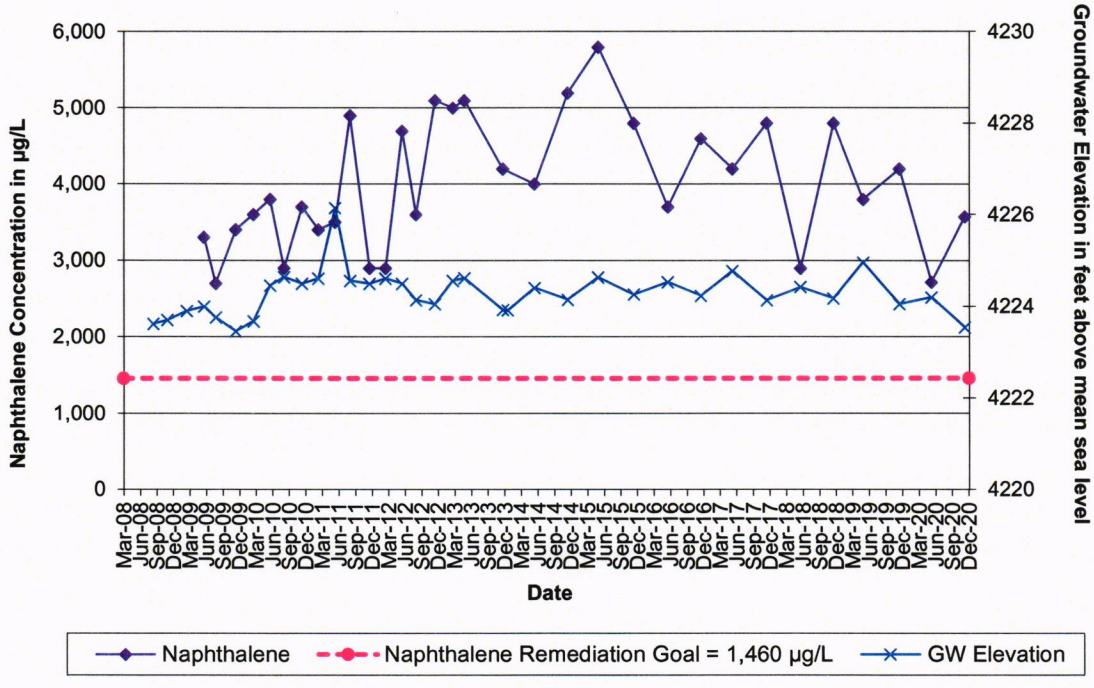


Figure 32: Source Well RW-605
Cyanide in Groundwater Trends 2008-Present